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Residential Mortgage Lending in 2016: Evidence from the Home Mortgage Disclosure Act Data

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This article provides an overview of residential mortgage lending in 2016 and discusses a number of changes in mortgage market activity over time based on data reported under the Home Mortgage Disclosure Act of 1975 (HMDA). Mortgage debt is by far the largest component of household debt in the United States, and mortgage transactions can have important implications for households' financial well-being. The HMDA data are the most comprehensive source of publicly available information on the U.S. mortgage market, providing unique details on how much mortgage credit gets extended each year, who obtains this credit, and which institutions provide this credit.

HMDA requires most mortgage lending institutions with offices in metropolitan areas to disclose to the public detailed information about their home-lending activity each year. The HMDA data include the disposition of each application for mortgage credit; the type, purpose, and characteristics of each home mortgage that lenders originate or purchase during the calendar year; the census-tract designations of the properties related to those loans; loan pricing information; personal demographic and other information about loan applicants, including their race or ethnicity and income; and information about loan sales (see appendix A for a full list of items reported under HMDA).[1]

HMDA was enacted to help members of the public determine whether financial institutions are serving the housing needs of their local communities and treating borrowers and loan applicants fairly, to provide information that could facilitate the efforts of public entities to distribute funds to local communities for the purpose of attracting private investment, and to help households decide where they may want to deposit their savings.[2] The data have proven to be valuable for research and are often used in public policy deliberations related to the mortgage market.[3]

1 The 2016 HMDA data reflect property locations using the census-tract geographic boundaries created for the 2010 decennial census as well as recent updates to the list of metropolitan statistical areas (MSAs) published by the Office of Management and Budget. The first year for which the HMDA data use this most recent list of MSAs is 2014. For further information, see Federal Financial Institutions Examination Council (2013), "OMB Announcement—Revised Delineations of MSAs," press release, February 28, www.ffiec.gov/hmda/OMB_MSA.htm.

2 A brief history of HMDA is available at Federal Financial Institutions Examination Council, "History of HMDA," webpage, www.ffiec.gov/hmda/history2.htm.

3 On July 21, 2011, rulemaking responsibility for HMDA was transferred from the Federal Reserve Board to the newly established Consumer Financial Protection Bureau. The Federal Financial Institutions Examination Council (FFIEC; www.ffiec.gov) continues to be responsible for collecting the HMDA data from reporting institutions and facilitating public access to the information. In September of each year, the FFIEC releases to the public summary disclosure tables pertaining to lending activity from the previous calendar year for each reporting lender as well as aggregations of home-lending activity for each metropolitan statistical area and for the nation as a whole. The FFIEC also makes available to the public a data file containing virtually all of the reported information for each lending institution as well as a file that includes key demographic and housing-related data for each census tract drawn from census sources.

Mortgage lending during 2016 occurred in the context of rising house prices, the continuation of an upward trend in prices evident since 2012.[4] Mortgage interest rates remained low for most of the year, hovering just slightly above their historical lows reached in late 2012 and early 2013. Mortgage rates jumped sharply, however, following the November elections. Mortgage credit conditions continued to slowly ease, but credit remained more difficult to obtain for individuals with lower credit scores or hard-to-document incomes. According to the Senior Loan Officer Opinion Survey on Bank Lending Practices, much of the easing in mortgage underwriting that occurred over the course of 2016 was for loans that were eligible for purchase by the government-sponsored enterprises (GSEs).[5] Growth in new housing construction remained sluggish despite the gains in house prices and strengthening demand for both new and existing homes.[6]

This article presents findings from the HMDA data describing mortgage market activity and lending patterns over time, including the incidence of higher-priced lending and rates of denial on mortgage applications, across different demographic groups and lender types.[7] Some of the key findings are as follows:

1. The number of mortgage originations in 2016 rose 13 percent, to 8.4 million from 7.4 million in 2015. For loans secured by one- to four-family properties, growth was strong in both home-purchase originations—which increased to 4.0 million from 3.7 million in 2015—and refinance originations—which increased to 3.8 million from 3.2 million in 2015.
2. Black and Hispanic white borrowers increased their share of home-purchase loans for one- to four-family, owner-occupied, site-built properties in 2016, the third consecutive annual rise for both groups. The HMDA data indicate that 6.0 percent of such loans went to black borrowers, up from 5.5 percent in 2015, while 8.8 percent went to Hispanic white borrowers, up from 8.3 percent in 2015. The share of home-purchase loans to low- or moderate-income (LMI) borrowers decreased to 26 percent in 2016 from 28 percent in 2015.
3. The average value of home-purchase loans rose 3.2 percent in 2016, to $257,000, with similar increases for loans made to borrowers of different racial and ethnic groups. The average value of home-purchase loans to Hispanic white borrowers remained well below the 2006 peak, while the averages for Asian, black, and non-Hispanic white borrowers were all above their 2006–07 peaks.
4. Black and Hispanic white borrowers continued to be much more likely to use nonconventional loans (that is, loans with mortgage insurance from the Federal Housing Administration (FHA) or guarantees from the Department of Veterans Affairs (VA), the Farm Service Agency (FSA), or the Rural Housing Service (RHS)) than conventional loans compared with other racial and ethnic groups. In 2016, among home-purchase borrowers, 69 percent of blacks and 60 percent of Hispanic whites took out a nonconventional loan, whereas about 35 percent of non-Hispanic whites and just 16 percent of Asians did so.

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4 For additional analysis of how rapid house price growth in some parts of the country could be deterring lower-income families' homebuying, see Neil Bhutta, Steven Laufer, and Daniel Ringo (2017), "Are Rising Home Values Restraining Homebuying for Lower-Income Families?" FEDS Notes (Washington: Board of Governors of the Federal Reserve System, September 28), https://www.federalreserve.gov/econres/notes/feds-notes/are-rising-home-values-restraining-home-buying-for-lower-income-families-20170928.htm.

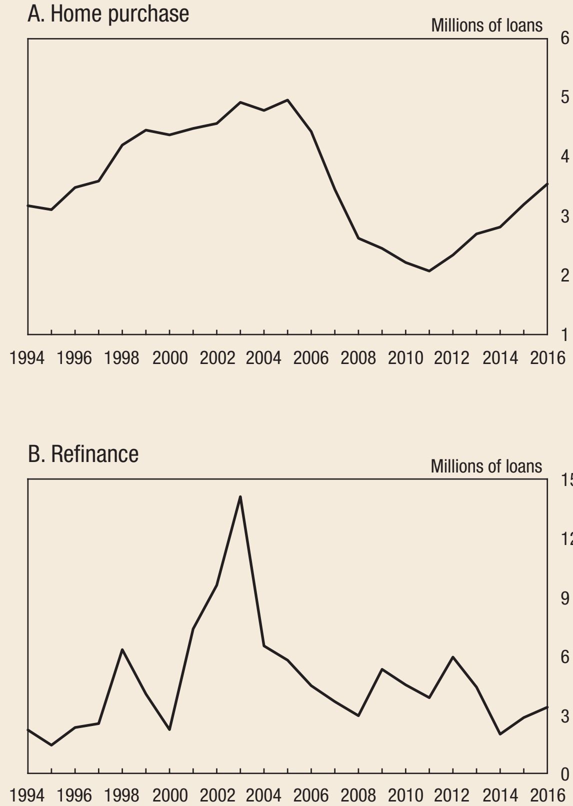
5 The survey is available on the Board's website at www.federalreserve.gov/boarddocs/snloansurvey.

6 For more information on credit and economic conditions during 2016, see Board of Governors of the Federal Reserve System (2017), *Monetary Policy Report* (Washington: Board of Governors, February 14), www.federalreserve.gov/monetarypolicy/mpr_default.htm.

7 Some lenders file amended HMDA reports, which are not reflected in the initial public data release. The data used to prepare this article are drawn from the initial public releases for 2016 and 2015 and from amended HMDA data for previous years. Consequently, numbers in this article for the years 2014 and earlier may differ somewhat from numbers calculated from the public release files.

5. The share of mortgages originated by nondepository, independent mortgage companies has increased sharply in recent years. In 2016, this group of lenders accounted for 53 percent of first-lien owner-occupant home-purchase loans, up from 50 percent in 2015.[8] Independent mortgage companies also originated 52 percent of first-lien owner-occupant refinance loans, an increase from 48 percent in 2015. For the first time since at least 1995, nondepository, independent mortgage companies accounted for a majority of each of these types of loans.

Figure 1. Number of home-purchase and refinance mortgage originations reported under the Home Mortgage Disclosure Act, 1994–2016



Note: The data are annual. Mortgage originations for one- to four-family owner-occupied properties, with junior-lien loans excluded in 2004 and later.

Mortgage Applications and Originations

In 2016, 6,762 financial institutions—banks, savings associations, credit unions, and nondepository mortgage lenders—reported data under HMDA on the nearly 14 million home mortgage applications they received (including about 2.4 million applications that were closed by the lender for incompleteness or were withdrawn by the applicant before a decision was made), which resulted in about 8.4 million originations. The number of originations in 2016 was up from 7.4 million originations in 2015 (table 1).

Refinance mortgages for one- to four-family properties increased by 530,000, or 16 percent, from 2015 to 2016. One- to four-family home-purchase originations grew by 384,000, or 10 percent, from 2015. Most one- to four-family home-purchase loans are first liens for owner-occupied properties. In the past five years, the number of such loans grew over 70 percent, from less than 2.1 million in 2011 to 3.5 million in 2016. However, the number of such home-purchase originations remained well below its peak in 2005 and was near levels observed in the mid-1990s (figure 1).[9] The number of first-lien home-purchase loans

[8] For additional analysis comparing patterns of lending to LMI borrowers by nonbanks and banks, see Neil Bhutta, Steven Laufer, and Daniel Ringo (2017), "The Decline in Lending to Lower-Income Borrowers by the Biggest Banks," FEDS Notes (Washington: Board of Governors of the Federal Reserve System, September 28), https://www.federalreserve.gov/econres/notes/feds-notes/the-decline-in-lending-to-lower-income-borrowers-by-the-biggest-banks-20170928.htm.

[9] The HMDA data prior to 2004 did not provide lien status for loans, and thus the number of loans prior to 2004 includes both first- and junior-lien loans. That said, including junior-lien home-purchase loans in 2016 does not change the conclusion that home-purchase lending in 2016 was similar to that in the mid-1990s, particularly 1994.

Table 1. Applications and originations, 2004–16

Numbers of loans, in thousands, except as noted

Characteristic of loan and of property	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
1–4 Family													
Home purchase													
Applications[1]	9,804	11,685	10,929	7,609	5,060	4,217	3,848	3,650	4,023	4,586	4,679	5,181	5,693
Originations	6,437	7,391	6,740	4,663	3,139	2,793	2,547	2,430	2,742	3,139	3,248	3,662	4,046
First lien, owner occupied	4,789	4,964	4,429	3,454	2,628	2,455	2,218	2,073	2,343	2,703	2,815	3,200	3,545
Site-built, conventional	4,107	4,425	3,912	2,937	1,581	1,089	1,005	999	1,251	1,630	1,741	1,894	2,123
Site-built, nonconventional	553	411	386	394	951	1,302	1,151	1,019	1,033	1,007	1,006	1,230	1,340
FHA share (percent)	74.6	68.6	66.0	65.8	78.9	77.0	77.4	70.9	68.0	62.8	58.3	64.6	64.6
VA share (percent)	21.6	26.7	29.0	27.1	15.2	13.9	15.2	18.2	19.9	24.2	28.3	26.1	26.9
FSA/RHS share (percent)	3.9	4.7	5.0	7.1	5.9	9.0	7.4	10.9	12.0	13.1	13.3	9.4	8.5
Manufactured, conventional	106	100	101	95	68	43	44	40	44	51	51	56	59
Manufactured, nonconventional	24	27	30	29	28	21	17	15	14	14	16	20	22
First lien, non-owner occupied	857	1,053	880	607	412	292	285	314	355	388	378	403	436
Junior lien, owner occupied	738	1,224	1,269	552	93	44	42	41	43	46	53	58	65
Junior lien, non-owner occupied	53	150	162	50	6	2	2	1	1	1	2	2	2
Refinance													
Applications	16,085	15,907	14,046	11,566	7,805	9,983	8,433	7,422	10,526	8,564	4,526	5,940	7,178
Originations	7,591	7,107	6,091	4,818	3,491	5,772	4,969	4,330	6,668	5,141	2,370	3,228	3,755
First lien, owner occupied	6,497	5,770	4,469	3,659	2,934	5,301	4,516	3,856	5,930	4,393	2,001	2,841	3,371
Site-built, conventional	6,115	5,541	4,287	3,407	2,363	4,264	3,835	3,315	4,971	3,634	1,608	2,152	2,527
Site-built, nonconventional	297	151	110	180	506	979	646	508	917	715	363	658	810
FHA share (percent)	68.3	77.3	87.5	91.5	92.2	83.7	79.3	63.2	61.2	61.2	47.6	59.5	49.4
VA share (percent)	31.4	22.4	12.3	8.3	7.6	15.9	20.3	35.9	37.8	37.6	51.9	40.3	50.3
FSA/RHS share (percent)	.2	.3	.2	.1	.2	.4	.4	.9	.9	1.2	.5	.3	.4
Manufactured, conventional	77	70	60	56	42	36	25	25	31	32	22	21	20
Manufactured, nonconventional	7	8	12	16	22	22	10	9	11	12	8	10	14
First lien, non-owner occupied	618	582	547	474	330	350	359	394	660	673	310	328	329
Junior lien, owner occupied	464	729	1,036	661	219	115	88	74	73	70	55	55	52
Junior lien, non-owner occupied	13	25	39	23	9	7	6	5	5	5	4	4	3
Home improvement													
Applications	2,200	2,544	2,481	2,218	1,413	832	670	675	779	833	846	921	1,005
Originations	964	1,096	1,140	958	573	390	341	335	382	425	411	474	537
Multifamily[2]													
Applications	61	58	52	54	43	26	26	35	47	51	46	52	50
Originations	48	45	40	41	31	19	19	27	37	40	35	41	40
Total applications	**28,151**	**30,193**	**27,508**	**21,448**	**14,320**	**15,057**	**12,977**	**11,782**	**15,375**	**14,034**	**10,097**	**12,094**	**13,926**
Total originations	**15,040**	**15,638**	**14,011**	**10,480**	**7,234**	**8,974**	**7,876**	**7,122**	**9,828**	**8,744**	**6,064**	**7,404**	**8,378**
Memo													
Purchased loans	5,142	5,868	6,236	4,821	2,935	4,301	3,229	2,939	3,163	2,788	1,800	2,102	2,232
Requests for preapproval[3]	1,068	1,260	1,175	1,065	735	559	445	429	474	474	496	531	530
Requests for preapproval that were approved but not acted on	167	166	189	197	99	61	53	55	64	69	64	63	60
Requests for preapproval that were denied	171	231	222	235	177	155	117	130	149	123	125	114	115

Note: Components may not sum to totals because of rounding. FHA is Federal Housing Administration; VA is U.S. Department of Veterans Affairs; FSA is Farm Service Agency; RHS is Rural Housing Service.

1 Applications by year of action, as opposed to year of application submission. Applications include those withdrawn and those closed for incompleteness.

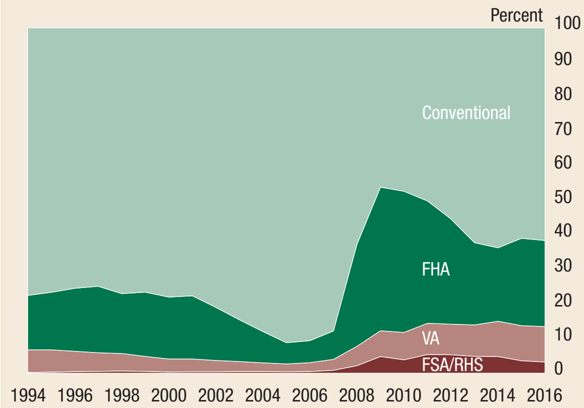
2 A multifamily property consists of five or more units.

3 Consists of all requests for preapproval. Preapprovals are not related to a specific property and thus are distinct from applications.

Source: Here and in subsequent tables and figures, except as noted, Federal Financial Institutions Examination Council, data reported under the Home Mortgage Disclosure Act (www.ffiec.gov/hmda).

for non-owner-occupied properties—which are primarily used as rental properties and second homes—increased 8 percent, from 403,000 in 2015 to 436,000 in 2016.

Figure 2. Nonconventional share of home-purchase mortgage originations, 1994–2016



Note: The data are annual. Home-purchase mortgage originations for one- to four-family owner-occupied properties, with junior-lien loans excluded in 2004 and later. Nonconventional loans are those insured by the Federal Housing Administration (FHA) or backed by guarantees from the U.S. Department of Veterans Affairs (VA), the Farm Service Agency (FSA), or the Rural Housing Service (RHS).

In table 1, the volume of first-lien lending for owner-occupied properties is further disaggregated by loan and property type. (Versions of table 1 containing loan counts and dollar values *by month* are available in the Excel file posted online with this article.)[10] In addition to lien and occupancy status, the HMDA data provide details on the type of property securing the loan (site-built or manufactured home) and on the type of loan (conventional or not).[11] As noted earlier, nonconventional lending involves loans with mortgage insurance or other guarantees from federal government agencies, including the FHA, the VA, the RHS, and the FSA. Conventional lending encompasses all other loans, including those sold to the GSEs Fannie Mae and Freddie Mac as well as those held in banks' portfolios.

Nonconventional loans usually involve high loan-to-value (LTV) ratios—that is, the borrowers provide relatively small down payments. For site-built properties, nonconventional home-purchase loans increased about 9 percent in 2016, while conventional loans rose about 12 percent. The nonconventional share of first-lien home-purchase loans for one- to four-family, owner-occupied, site-built properties stood at about 39 percent in 2016, little changed from 2015 and down from a peak of 54 percent in 2009 (figure 2).[12]

Figure 2 shows that the marked decline in the nonconventional share since 2009 reflects a decrease in the FHA share of loans, while the VA and FSA/RHS shares have been steadier. One factor that appears to help explain the fluctuations in the FHA share concerns changes in the up-front and annual mortgage insurance premiums (MIPs) that the FHA charges borrowers. For example, between October 2010 and April 2013, the annual MIP for

[10] In addition to the monthly data at the national level posted online, a data set providing the count of home-purchase and refinance applications and originations, and the dollar volume of home-purchase and refinance originations, by month and county since 1994 for the 500 largest counties each year is provided online as well. Both files are available on the Board's website at https://www.federalreserve.gov/publications/bulletin.htm.

[11] Manufactured-home lending differs from lending on site-built homes, in part because most of the homes are sold without land and are treated as chattel-secured lending, which typically carries higher interest rates and shorter terms to maturity than those on loans to purchase site-built homes (for pricing information on manufactured home loans, see table 8). This article focuses almost entirely on site-built mortgage originations, which constitute the vast majority of originations (as shown in table 1). That said, it is important to keep in mind that, because manufactured homes typically are less expensive than site-built homes, they provide a low-cost housing option for households with more moderate incomes.

[12] For a more detailed discussion of the post-crisis rise in nonconventional lending, see Robert B. Avery, Neil Bhutta, Kenneth P. Brevoort, and Glenn B. Canner (2010), "The 2009 HMDA Data: The Mortgage Market in a Time of Low Interest Rates and Economic Distress," *Federal Reserve Bulletin,* vol. 96 (December), pp. A39–A77, https://www.federalreserve.gov/pubs/bulletin/2010/articles/2009HMDA/default.htm.

a typical home-purchase loan more than doubled, from 0.55 percent of the loan amount to 1.35 percent.[13] Drops in the FHA's market share have been observed each time the FHA has raised premiums. In January 2015, the annual MIP was reduced to 0.85 percent for most borrowers, and the FHA share of home-purchase loans subsequently increased.[14]

The remainder of table 1 provides additional details on the breakdown of one- to four-family home-purchase and refinance loans by lien and occupancy status and by property and loan type.[15] Table 1 also provides the number of applications for and originations of home-improvement loans for one- to four-family properties, many of which are junior liens or unsecured, and loans for the purchase of multifamily properties (consisting of five or more units). Finally, the HMDA data include details about preapproval requests for home-purchase loans and loans purchased by reporting institutions during the reporting year, although the purchased loans may have been originated at any point in time. Lenders reported roughly 530,000 preapproval requests; roughly 67 percent of these requests turned into an actual loan application for a specific property in 2016.[16] Table 1 also shows that, for 2016, lenders purchased 2.2 million loans from other institutions.

The HMDA Data's Coverage of the Mortgage Market

It is important to note that the HMDA data do not provide universal coverage of residential mortgage lending in the United States. There are two main reasons HMDA coverage is not universal. First, not all lenders are required to report data. Among deposit-taking institutions like banks, the smallest institutions as well as institutions without any branches in a metropolitan statistical area (MSA) do not have to report data. Among institutions that take no deposits, nonprofits, smaller institutions, and those that operate entirely outside of an MSA also do not have to report data.[17]

Second, not all types of mortgage originations are reported. In particular, lenders do not report mortgages that are not for the purpose of purchasing a residential property, refinancing an outstanding mortgage, or making home improvements. Thus, a mortgage taken out solely to finance education expenses, for example, would not be reported. In addition,

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13 Changes to the FHA's up-front and annual MIPs over time have been documented in Urban Institute, Housing Finance Policy Center (2014), *Housing Finance at a Glance: A Monthly Chartbook* (Washington: Urban Institute, March), www.urban.org/research/publication/housing-finance-glance-monthly-chartbook-1. A typical FHA home-purchase loan has an LTV of over 95 percent and a loan term in excess of 15 years. The up-front premium, on net, was unchanged between 2010 and 2013; it was briefly increased from 1.75 percent to 2.25 percent and lowered back to 1.00 percent in 2010, and then it was raised back to 1.75 percent in 2012.

14 For a study of the effect of MIP changes on FHA market shares and total lending, see Neil Bhutta and Daniel Ringo (2016), "Changing FHA Mortgage Insurance Premiums and the Effects on Lending," FEDS Notes (Washington: Board of Governors of the Federal Reserve System, September 29), https://www.federalreserve.gov/econresdata/notes/feds-notes/2016/changing-fha-mortgage-insurance-premiums-and-the-effects-on-lending-20160929.html. Also see Neil Bhutta and Daniel Ringo (2017), "The Effect of Interest Rates on Home Buying: Evidence from a Discontinuity in Mortgage Insurance Premiums," Finance and Economics Discussion Series 2017-086 (Washington: Board of Governors of the Federal Reserve System, August), https://www.federalreserve.gov/econres/feds/files/2017086pap.pdf.

15 Note that under the regulations that govern HMDA reporting, many standalone junior-lien loans are not reported because either the lender does not know the purpose of the loan or the reasons cited for the loan are not ones that trigger a reporting requirement. Unless a junior lien is used for home purchase or explicitly for home improvements, or to refinance an existing lien, it is not reported under HMDA. Further, home equity lines of credit, many of which are junior liens and could also be used to help purchase a home, do not have to be reported in the HMDA data regardless of the purpose of the loan.

16 Reporters can, but are not required to, report preapproval requests that they approve but are not acted on by the potential borrower.

17 Under the current rules, depositories with less than $44 million in assets and nondepositories that had less than $10 million in assets and originated fewer than 100 home-purchase and refinance loans in the previous year are not required to report. For additional details, see Federal Financial Institutions Examination Council (2017), "A Guide to HMDA Reporting: Getting It Right!" webpage, https://www.ffiec.gov/hmda/guide.htm.

home equity lines of credit (HELOCs), regardless of their purpose, are not required to be reported under current rules.[18]

One way to assess the coverage of the HMDA data is to compare the number of loans reported under HMDA with the number of loans reported in consumer credit files. In contrast to the HMDA data, all mortgage loans regardless of purpose can be reported in consumer credit files, and all financial institutions have an incentive to report their mortgage loans to consumer credit bureaus, since reporting encourages borrowers to make on-time payments.[19] According to estimates based on the consumer credit records maintained by Equifax, one of the three nationwide consumer credit-reporting agencies, about 8.4 million first-lien home-purchase and refinance loans were originated during 2016, compared with nearly 7.7 million first-lien home-purchase and refinance loans for one- to four-family properties reported under HMDA.[20] Thus, the number of first-lien home-purchase and refinance loans in the HMDA data is approximately 90 percent of the number reported in consumer credit files.[21]

In addition, Equifax estimates that about 874,000 home equity loans and 1.4 million HELOCs were originated in 2016. Many of these loans may not be reported under HMDA for the reasons stated earlier. If they were reported under HMDA, they would be classified as home-improvement loans or as junior-lien home-purchase or junior-lien refinance loans. Lenders reported about 658,000 such loans in the 2016 HMDA data, less than 30 percent of the number of home equity loans and HELOCs reported by Equifax.

Mortgage Outcomes by Income and by Race and Ethnicity

A key attribute of the HMDA data is that they help policymakers and the broader public better understand the distribution of mortgage credit across different demographic groups. The next set of tables provides information on loan shares, product usage, denial rates and reasons, and mortgage pricing for population groups defined by applicant income, neighborhood income, and applicant race and ethnicity (tables 2–8). With the exception of table 8, which includes loans for manufactured homes (and contains information by type of loan rather than by applicant or neighborhood characteristic), these tables focus on first-lien home-purchase and refinance loans for one- to four-family, owner-occupied, site-built properties. Such loans accounted for about 81 percent of all HMDA originations in 2016.

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[18] Beginning on January 1, 2018, covered loans under the HMDA rule (Regulation C) generally will include closed-end mortgage loans and open-end lines of credit secured by a dwelling. For more information, see Consumer Financial Protection Bureau (2017), "Home Mortgage Disclosure Act Rule Implementation: Resources to Help Industry Understand, Implement, and Comply with the Home Mortgage Disclosure Act and Regulation C," webpage, https://www.consumerfinance.gov/policy-compliance/guidance/implementation-guidance/hmda-implementation.

[19] In some cases, institutions may be required to report loans to the credit bureaus; for example, the GSEs require servicers to report data on GSE loans to all of the major credit bureaus. In other cases, home-purchase and refinance loans taken out by companies that are reported under HMDA may not be reported in consumer credit bureau data. For example, the HMDA data indicate that in 2016, about 97,000 first-lien home-purchase and refinance mortgages for one- to four-family non-owner-occupied properties were issued to applicants whose sex and race were reported as "not applicable," which implies that the borrower was not a "natural person" (an individual, as opposed to a company, government agency, or nongovernmental organization) and that the loan may not appear on any individual's credit record.

[20] See Equifax (2017), *Quarterly U.S. Consumer Credit Trends* (Atlanta: Equifax, July), https://investor.equifax.com/~/media/Files/E/Equifax-IR/reports-and-presentations/events-and-presentation/consumer-credit-trends-report-2q-2017.pdf.

[21] The dollar volume of first-lien home-purchase and refinance loans for one- to four-family properties reported under HMDA is about 94 percent of the dollar volume of first-lien home-purchase and refinance originations estimated by Equifax for 2016.

The Distribution of Home Loans across Demographic Groups

Table 2 shows different groups' shares of home-purchase and refinance loans and how these shares have changed over time. For example, black borrowers' share of home-purchase loans (conventional and nonconventional loans combined) was 6.0 percent in 2016, up from 5.5 percent in 2015. Similarly, the Hispanic white share of home-purchase loans was 8.8 percent in 2016, up from 8.3 percent in 2015. Both shares remain well below their 2006 peaks (8.7 percent and 11.7 percent for black and Hispanic white borrowers, respectively) but have now increased for two years in a row.[22]

In terms of borrower income, the share of home-purchase loans to LMI borrowers slipped from 28.0 percent in 2015 to 26.2 percent in 2016.[23] In accordance with definitions used by the federal bank supervisory agencies to enforce the Community Reinvestment Act, LMI borrowers are defined as those with incomes of less than 80 percent of estimated current area median family income (AMFI); AMFI is estimated based on the incomes of residents of the metropolitan area or nonmetropolitan portion of the state in which the loan-securing property is located.[24]

The HMDA data also shed light on borrowing patterns across neighborhoods, defined as census tracts. From 2015 to 2016, the share of home-purchase loans originated in high-income census tracts decreased slightly from 41.0 percent to 40.0 percent.[25] LMI and middle-income tracts both saw small gains. In table 2, it is important to note that shares by neighborhood income in 2012 and thereafter are not perfectly comparable with those in 2011 and earlier because census-tract definitions and census-tract median family income estimates were revised in 2012. The current tract demographic measures are based on 2010 census data and 2006–10 American Community Survey data, whereas the 2004–11 data relied on 2000 census income and population data.[26] In addition, the Office of Management and Budget published new metropolitan area delineations in 2014, so caution should be exercised in comparing relative income measurements between 2013 and later years.

Average Loan Size by Demographic Group

Table 3 shows the average dollar value of home-purchase and refinance loans by different groups and how these averages have changed over time. All dollar amounts are reported in nominal terms. The data reveal significant differences in the value of loans to different racial and ethnic groups. Asian borrowers took out the largest loans, averaging $373,000 for

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22 The bottom of table 2 provides the total loan counts for each year, and thus the number of loans to a given group in a given year can be easily derived. For example, the number of home-purchase loans to Asians in 2016 was about 190,000, derived by multiplying 3.4 million loans by 5.5 and then dividing by 100.

23 Note that the sum of refinance shares across borrower-income groups is significantly less than 100 percent because income is not always relied on in underwriting decisions, particularly in recent years, which appears to reflect increased usage of nonconventional streamline refinance programs. Indeed, in 2016, about 90 percent of refinance loans for which borrower income was not reported were nonconventional.

24 Middle-income borrowers have incomes of at least 80 percent and less than 120 percent of AMFI, and high-income borrowers have incomes of at least 120 percent of AMFI. For AMFI estimates, see Federal Financial Institutions Examination Council (2017), "FFIEC Median Family Income Report," webpage, https://www.ffiec.gov/Medianincome.htm. Note that AMFI estimates tend to reflect lagged income levels. During times when incomes are changing rapidly, such as during the Great Recession, AMFI estimates can be significantly understated or overstated.

25 Definitions for LMI, middle-income, and high-income neighborhoods are identical to those for LMI, middle-income, and high-income borrowers but are based on the ratio of census-tract median family income to AMFI measured from the 2006–10 American Community Survey data.

26 For more information on the transition to the new census-tract data, see Robert B. Avery, Neil Bhutta, Kenneth P. Brevoort, and Glenn B. Canner (2012), "The Mortgage Market in 2011: Highlights from the Data Reported under the Home Mortgage Disclosure Act," *Federal Reserve Bulletin,* vol. 98 (December), pp. 1–46, https://www.federalreserve.gov/pubs/bulletin/2012/articles/HMDA/default.htm.

Table 2. Distribution of home loans, by purpose of loan, 2004–16
Percent except as noted

Characteristic of borrower and of neighborhood	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
A. Home purchase													
Borrower race and ethnicity[1]													
Asian	4.8	5.0	4.5	4.5	4.9	5.3	5.5	5.2	5.3	5.7	5.4	5.3	5.5
Black or African American	7.1	7.7	8.7	7.6	6.3	5.7	6.0	5.5	5.1	4.8	5.2	5.5	6.0
Hispanic white	7.6	10.5	11.7	9.0	7.9	8.0	8.1	8.3	7.7	7.3	7.9	8.3	8.8
Non-Hispanic white	57.1	61.7	61.2	65.4	67.5	67.9	67.6	68.7	70.0	70.2	69.1	68.1	66.4
Other minority[2]	1.4	1.3	1.1	1.0	.9	.9	.9	.8	.8	.7	.8	.8	.8
Joint	2.3	2.3	2.3	2.5	2.8	2.8	2.7	2.8	2.9	3.1	3.4	3.5	3.6
Missing	19.8	11.5	10.5	10.1	9.6	9.3	9.1	8.6	8.2	8.2	8.3	8.5	8.9
All	100	100	100	100	100	100	100	100	100	100	100	100	100
Borrower income[3]													
Low or moderate	27.7	24.6	23.6	24.7	28.1	36.7	35.5	34.4	33.3	28.5	27.0	28.0	26.2
Middle	26.9	25.7	24.7	25.2	27.1	26.7	25.6	25.2	25.2	25.2	25.6	26.1	26.4
High	41.4	45.5	46.7	47.0	43.1	34.7	37.4	38.8	40.0	44.7	46.1	44.8	46.4
Income not used or not applicable	4.0	4.2	5.0	3.1	1.7	1.9	1.5	1.6	1.5	1.6	1.2	1.2	1.0
All	100	100	100	100	100	100	100	100	100	100	100	100	100
Neighborhood income[4]													
Low or moderate	14.5	15.1	15.7	14.4	13.1	12.6	12.1	11.0	12.8	12.7	13.3	13.5	14.1
Middle	48.7	49.2	49.5	49.6	49.8	50.2	49.4	49.4	43.6	43.7	44.7	45.2	45.8
High	35.8	34.7	33.7	35.1	35.9	35.8	37.7	39.1	43.2	43.2	41.8	41.0	40.0
All	100	100	100	100	100	100	100	100	100	100	100	100	100
B. Refinance													
Borrower race and ethnicity[1]													
Asian	3.5	2.9	3.0	3.1	3.1	4.1	5.2	5.4	5.5	4.7	4.3	5.0	5.5
Black or African American	7.4	8.3	9.6	8.4	6.0	3.5	2.9	3.1	3.3	4.4	5.4	5.0	5.0
Hispanic white	6.2	8.6	10.1	8.7	5.3	3.2	3.0	3.3	3.9	5.0	6.2	6.3	6.2
Non-Hispanic white	57.2	60.9	59.6	62.7	70.7	74.6	74.3	73.5	72.5	70.5	67.8	67.2	65.2
Other minority[2]	1.4	1.4	1.3	1.1	.8	.6	.5	.6	.6	.7	.9	.8	.9
Joint	2.1	2.1	1.9	2.0	2.2	2.6	2.7	2.8	3.1	3.1	3.2	3.3	3.4
Missing	22.1	15.7	14.6	14.1	11.9	11.4	11.4	11.3	11.1	11.6	12.2	12.4	13.8
All	100	100	100	100	100	100	100	100	100	100	100	100	100
Borrower income[3]													
Low or moderate	26.2	25.5	24.7	23.3	23.5	19.6	19.0	19.2	19.6	21.1	22.1	19.0	16.9
Middle	26.3	26.8	26.1	25.6	25.5	22.5	22.5	21.3	21.8	21.7	21.9	21.0	20.3
High	38.8	40.8	43.7	46.1	44.8	45.8	49.6	48.1	47.7	46.3	44.9	45.1	47.5
Income not used or not applicable	8.7	6.9	5.5	5.0	6.2	12.1	8.9	11.4	10.9	10.9	11.1	14.9	15.3
All	100	100	100	100	100	100	100	100	100	100	100	100	100
Neighborhood income[4]													
Low or moderate	15.3	16.5	17.9	16.1	11.9	7.7	7.2	7.4	10.1	12.1	13.3	12.3	12.0
Middle	50.0	51.3	52.0	52.2	51.9	47.5	46.1	46.1	41.9	43.7	45.3	43.8	43.4
High	33.9	31.6	29.4	31.0	35.2	43.5	46.0	46.0	47.6	43.9	41.3	43.7	44.4
All	100	100	100	100	100	100	100	100	100	100	100	100	100
Memo													
Number of home-purchase loans (thousands)	4,660	4,836	4,298	3,331	2,533	2,391	2,157	2,018	2,284	2,638	2,747	3,124	3,463
Number of refinance loans (thousands)	6,412	5,692	4,397	3,588	2,869	5,243	4,481	3,823	5,888	4,349	1,971	2,810	3,338

Note: First-lien mortgages for one- to four-family, owner-occupied, site-built homes. Rows may not sum to 100 because of rounding or, for the distribution by neighborhood income, because property location is missing.

1 Applications are placed in one category for race and ethnicity. The application is designated as *joint* if one applicant was reported as white and the other was reported as one or more minority races or if the application is designated as white with one Hispanic applicant and one non-Hispanic applicant. If there are two applicants and each reports a different minority race, the application is designated as *two or more minority races*. If an applicant reports two races and one is white, that applicant is categorized under the minority race. Otherwise, the applicant is categorized under the first race reported. “Missing” refers to applications in which the race of the applicant(s) has not been reported or is not applicable or the application is categorized as white but ethnicity has not been reported.

2 Consists of applications by American Indians or Alaska Natives, Native Hawaiians or other Pacific Islanders, and borrowers reporting two or more minority races.

3 The categories for the borrower-income group are as follows: Low- or moderate-income (or LMI) borrowers have income that is less than 80 percent of estimated current area median family income (AMFI), middle-income borrowers have income that is at least 80 percent and less than 120 percent of AMFI, and high-income borrowers have income that is at least 120 percent of AMFI.

4 The categories for the neighborhood-income group are based on the ratio of census-tract median family income to area median family income from the 2006–10 American Community Survey data for 2012–16 and from the 2000 census for 2004–11, and the three categories have the same cutoffs as the borrower-income groups (see note 3).

Table 3. Average value of home loans, by purpose of loan, 2004–16
Thousands of dollars, nominal, except as noted

Characteristic of borrower and of neighborhood	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
A. Home purchase													
Borrower race and ethnicity[1]													
Asian	280	316	326	334	299	276	293	291	304	328	344	360	373
Black or African American	166	183	197	197	184	172	174	174	179	193	199	209	217
Hispanic white	189	224	238	220	186	168	168	168	176	190	198	209	220
Non-Hispanic white	193	211	216	222	209	195	204	204	213	226	231	239	246
Other minority[2]	206	240	257	245	216	196	201	198	206	219	229	241	249
Joint	233	255	261	269	255	248	263	261	274	289	293	303	311
Missing	216	248	261	280	265	242	256	262	279	298	293	303	308
Borrower income[3]													
Low or moderate	114	116	117	123	128	129	128	125	131	132	132	141	146
Middle	165	170	170	176	182	187	189	184	192	194	193	204	209
High	281	306	313	317	297	291	303	302	313	323	328	340	345
Income not used or not applicable	208	235	254	266	218	195	214	225	233	260	277	315	314
Neighborhood income[4]													
Low or moderate	159	180	189	188	175	160	164	163	158	171	178	188	199
Middle	172	190	197	196	186	174	177	173	178	191	196	206	216
High	258	284	294	301	277	257	270	271	282	300	306	316	324
Memo													
All home-purchase loans	201	221	228	232	217	202	210	210	221	235	240	249	257
Conventional jumbo loans (percent of originations)[5]	11.2	12.7	9.4	6.8	2.3	1.3	1.7	2.2	2.9	4.0	4.8	5.3	5.2
Conventional jumbo loans (percent of loaned dollars)[5]	29.4	32.5	26.8	21.9	10.1	6.2	7.4	9.5	11.9	14.5	16.5	17.3	16.8
B. Refinance													
Borrower race and ethnicity[1]													
Asian	274	325	370	368	321	298	313	309	308	304	341	363	368
Black or African American	151	180	199	192	173	184	180	174	181	171	174	199	212
Hispanic white	178	219	252	244	193	190	191	183	190	180	190	214	228
Non-Hispanic white	180	205	221	222	205	209	210	208	212	206	216	239	251
Other minority[2]	190	229	269	258	211	217	218	207	213	201	213	240	252
Joint	210	246	265	262	243	247	254	249	254	249	266	292	305
Missing	194	226	246	250	242	243	248	253	253	244	245	268	277
Borrower income[3]													
Low or moderate	114	124	124	126	129	138	133	128	135	128	123	136	143
Middle	162	181	183	181	180	185	179	174	182	171	174	193	202
High	256	294	320	311	275	268	274	280	277	276	301	324	330
Income not used or not applicable	150	178	240	240	194	204	203	185	212	193	198	231	243
Neighborhood income[4]													
Low or moderate	142	169	188	185	164	172	172	167	163	153	157	182	196
Middle	158	184	201	198	182	184	182	175	181	173	180	201	214
High	245	282	313	311	272	259	265	269	269	270	290	311	321
Memo													
All refinance loans	185	212	232	231	212	216	220	218	221	213	222	247	259
Conventional jumbo loans (percent of originations)[5]	9.2	11.4	10.2	7.5	2.0	.9	1.6	2.4	2.2	3.0	4.2	4.9	4.6
Conventional jumbo loans (percent of loaned dollars)[5]	25.8	29.6	28.3	23.0	9.0	4.1	6.9	10.7	9.1	12.7	16.5	16.8	15.7

Note: First-lien mortgages for one- to four-family, owner-occupied, site-built homes.

1 See table 2, note 1.

2 See table 2, note 2.

3 See table 2, note 3.

4 See table 2, note 4.

5 Fraction of conventional plus nonconventional loans that are conventional and have loan amounts in excess of the single-family conforming loan-size limits for eligibility for purchase by the government-sponsored enterprises.

home purchases and $368,000 for refinancings in 2016, whereas loans to black borrowers averaged $217,000 for home purchases and $212,000 for refinancings.[27]

Over time, home-purchase dollar values have followed the historical trend of home prices, rising during the mid-2000s, falling sharply through 2008 and 2009, and then beginning to recover since about 2011. The trends differ substantially by race and ethnicity, however. The average home-purchase loan to a Hispanic white borrower in 2016 was for $220,000, up from $209,000 in 2015 but still well below the peak of $238,000 in 2006. In contrast, the average home-purchase loan amount for a non-Hispanic white borrower was about $246,000 in 2016, higher than the pre-crisis peak in 2007 of about $222,000. The values of loans to Asian and black borrowers in 2016 were also higher than their 2006–07 peaks.

In terms of borrower income, for LMI borrowers, the average home-purchase loan amount increased to $146,000 in 2016 from $141,000 in 2015; loan amounts increased by a similar magnitude for middle- and high-income borrowers. Average loan values also increased across all borrower-income groups for refinance loans.

Jumbo Lending

The share of conventional jumbo loans—those with loan amounts in excess of the GSEs' conforming loan limits and no other government guarantee—was about 5 percent in 2016, little changed from 2015. As shown in table 3, conventional jumbo loans made up 5.2 percent of all first-lien home-purchase loans for owner-occupied, one- to four-family, site-built homes in 2016, roughly the same as in 2015.[28] Among refinance loans, the conventional jumbo fraction decreased to 4.6 percent from 4.9 percent in 2015. Because of their larger size, jumbo loans make up a correspondingly larger share of the dollar volume of mortgages, accounting for 16.8 percent of home-purchase loans and 15.7 percent of refinance loans in 2016. Since the financial crisis, most new jumbo loans have been held on the originating bank's portfolio, as the market for mortgage-backed securities without a government guarantee is thin.[29]

Variation across Demographic Groups in Nonconventional Loan Use

Table 4 shows that black and Hispanic white borrowers are much more likely to use nonconventional loans (FHA, VA, RHS, and FSA loans) than conventional loans compared with other racial and ethnic groups. In 2016, among home-purchase borrowers, about 69 percent of blacks and 60 percent of Hispanic whites took out a nonconventional loan, whereas about 35 percent of non-Hispanic whites and just 16 percent of Asians did so. These numbers have declined from their peaks in 2009 and 2010, when well over three-fourths of black and Hispanic white borrowers and over one-half of non-Hispanic white borrowers took out nonconventional loans.

[27] Median loan amounts (not shown in tables) followed similar trends as average loan amounts.

[28] A loan qualifies as jumbo in table 3 if the loan amount is above the GSEs' conforming loan-size limit for a single-family home for that year and location. The conforming loan-size limit was mostly uniform across the nation prior to 2008. The limits in Alaska, Hawaii, the U.S. Virgin Islands, and Guam are 50 percent higher than in the nation at large. For the years 2008 and thereafter, designated higher-cost areas have elevated limits. For 2016, the general conforming loan-size limit was $417,000, and the maximum high-cost area loan-size limit was $625,000 (and 50 percent higher in Alaska, Hawaii, the U.S. Virgin Islands, and Guam). Conforming loan-size limits increase with the number of units that make up the property, but the HMDA data do not differentiate between properties with anywhere from one to four units. Some loans in the table may therefore have been misclassified as jumbo despite being eligible for purchase by a GSE.

[29] See Neil Bhutta, Jack Popper, and Daniel R. Ringo (2015), "The 2014 Home Mortgage Disclosure Act Data," *Federal Reserve Bulletin,* vol. 101 (November), pp. 1–43, https://www.federalreserve.gov/pubs/bulletin/2015/default.htm.

Table 4. Nonconventional share of home loans, by purpose of loan, 2004–16
Percent except as noted

Characteristic of borrower and of neighborhood	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
A. Home purchase													
Borrower race and ethnicity[1]													
Asian	2.9	1.8	2.1	2.6	13.4	26.1	26.6	25.8	21.9	16.1	14.7	16.6	15.6
Black or African American	21.7	14.3	13.6	21.7	64.1	82.0	82.9	80.3	77.2	70.8	68.0	70.2	68.5
Hispanic white	13.7	7.5	7.0	12.4	51.4	75.4	77.0	74.1	70.7	63.1	59.6	62.6	59.8
Non-Hispanic white	11.1	8.9	9.5	11.5	35.4	52.0	50.3	47.4	42.2	35.5	33.4	36.0	35.2
Other minority[2]	14.0	9.3	9.4	14.8	48.4	67.6	68.8	65.9	62.2	55.5	54.0	55.1	54.2
Joint	16.9	12.8	14.4	17.2	46.4	59.4	56.3	53.6	48.9	42.1	41.3	43.7	43.1
Missing	11.3	5.1	5.7	8.8	32.7	50.6	49.4	45.9	39.4	31.9	32.2	35.0	34.7
Borrower income[3]													
Low or moderate	20.3	15.2	14.9	16.0	46.1	65.3	66.6	64.5	59.7	52.5	50.3	53.3	51.7
Middle	14.3	11.0	12.6	16.8	46.1	60.4	59.3	57.0	51.5	45.6	44.8	47.6	47.5
High	5.3	3.9	4.9	7.5	26.7	38.5	37.2	34.3	29.5	25.1	24.2	26.3	26.7
Neighborhood income[4]													
Low or moderate	15.8	9.7	9.6	13.8	45.5	64.4	65.1	61.2	57.9	49.9	48.1	50.3	48.7
Middle	14.1	10.2	10.8	14.2	42.7	59.8	59.4	56.9	52.0	44.7	43.0	45.6	44.6
High	7.1	5.4	6.1	7.6	27.4	43.4	42.0	39.5	34.6	28.2	26.1	28.9	28.4
Memo													
All borrowers	11.9	8.5	9.0	11.8	37.6	54.4	53.4	50.5	45.2	38.2	36.6	39.4	38.7
B. Refinance													
Borrower race and ethnicity[1]													
Asian	1.2	.7	.6	1.0	4.6	5.7	4.7	4.3	5.9	6.7	6.8	9.8	8.3
Black or African American	11.1	5.8	4.4	10.2	39.2	53.8	42.0	37.8	38.6	37.1	39.1	49.4	53.0
Hispanic white	5.6	2.6	1.9	3.9	20.5	36.2	28.1	22.9	26.9	25.8	21.2	32.0	30.5
Non-Hispanic white	4.0	2.4	2.6	4.9	15.9	16.8	13.6	12.2	14.2	14.8	16.3	21.0	21.7
Other minority[2]	5.5	3.4	2.4	4.9	20.0	28.3	23.3	21.9	25.5	24.9	25.0	32.6	36.6
Joint	7.5	3.7	3.4	6.2	19.5	21.1	16.6	16.3	20.1	20.5	25.5	28.0	29.2
Missing	4.2	1.9	1.7	4.1	18.7	19.0	12.5	13.6	16.5	16.7	21.5	25.5	27.6
Borrower income[3]													
Low or moderate	2.3	1.6	2.9	5.7	18.3	16.6	14.0	11.5	9.3	9.3	13.0	16.5	18.3
Middle	1.7	1.3	2.7	6.2	19.6	13.2	12.2	10.9	8.9	9.5	13.2	14.8	15.2
High	.8	.6	1.1	2.7	10.5	7.2	6.7	6.3	5.5	6.1	8.8	9.2	9.2
Neighborhood income[4]													
Low or moderate	5.9	3.2	2.9	6.3	24.6	31.3	23.1	19.7	22.2	22.1	22.4	29.5	30.4
Middle	5.2	3.0	2.9	5.8	20.2	22.3	17.5	16.1	18.4	19.0	20.9	26.8	28.1
High	2.9	1.7	1.6	3.0	11.3	12.1	10.0	9.3	11.7	12.4	14.5	18.4	18.9
Memo													
All borrowers	4.6	2.6	2.5	5.0	17.6	18.7	14.4	13.3	15.6	16.4	18.4	23.4	24.3

Note: First-lien mortgages for one- to four-family, owner-occupied, site-built homes. Excludes applications where no credit decision was made. Nonconventional loans are those insured by the Federal Housing Administration or backed by guarantees from the U.S. Department of Veterans Affairs, the Farm Service Agency, or the Rural Housing Service.

1 See table 2, note 1.

2 See table 2, note 2.

3 See table 2, note 3.

4 See table 2, note 4.

Nonconventional usage is also more prevalent for borrowers with lower incomes and in neighborhoods with lower incomes. In 2016, about 52 percent of LMI home-purchase borrowers and 49 percent of those borrowing to purchase homes in LMI neighborhoods used nonconventional loans, compared with about 27 percent of high-income borrowers and 28 percent of borrowers in high-income neighborhoods. While black and Hispanic white borrowers tend to have lower incomes, on average, than non-Hispanic white borrowers, the previously mentioned racial and ethnic differences in nonconventional loan use persist within income groups.[30] With respect to refinance loans, minority and lower-income borrowers are again more likely to use nonconventional than conventional loans. In general, however, nonconventional loans are less prevalent in refinance lending.[31]

Greater reliance on nonconventional loans may reflect the relatively low down-payment requirements of the FHA and VA lending programs, which serve the needs of borrowers who have few assets to meet down-payment and closing-cost requirements.[32] The patterns of product incidence could also reflect the behavior of lenders to some extent; for example, concerns have been raised about the possibility that lenders steer borrowers in certain neighborhoods toward such loans.[33]

Denial Rates and Denial Reasons

In 2016, the overall denial rate on applications for home-purchase loans was 11.4 percent, somewhat lower than in 2015 (table 5). The decrease in 2016 continues a trend of declining denial rates for home-purchase mortgages over the past decade.[34] In addition, denial rates have exhibited significant variation, and changes in denial rates have differed by type of loan. For example, for conventional home-purchase loan applications, the denial rate of 10.2 percent in 2016 was 8.3 percentage points lower than in 2006, while for nonconventional home-purchase loan applications, the denial rate of 13.4 percent in 2016 was 1.3 percentage points higher than in 2006. Variations in raw denial rates over time reflect not only changes in credit standards, but also changes in the demand for credit and in the composition of borrowers applying for mortgages. For example, the denial rate on applications for conventional home-purchase loans was lower in 2016 than during the housing boom years, even though most measures of credit availability suggest that credit standards are tighter today.[35] This result may stem from a relatively large drop in applications from riskier applicants.

As in past years, black, Hispanic white, and "other minority" borrowers had notably higher denial rates in 2016 than non-Hispanic white borrowers, while denial rates for Asian

30 See Bhutta, Popper, and Ringo, "The 2014 Home Mortgage Disclosure Act Data," in note 29.

31 The reported nonconventional share of refinance loans is lower than the true share for the groups categorized by borrower income because, in most nonconventional refinance loans, income is not reported. Thus, when income is reported on a refinance loan, the loan is likely to be conventional.

32 Findings of the Federal Reserve Board's Survey of Consumer Finances for 2013 indicate that liquid asset levels and financial wealth holdings for minorities and lower-income groups are substantially smaller than they are for non-Hispanic white borrowers or higher-income populations. See Board of Governors of the Federal Reserve System, "2013 Survey of Consumer Finances," webpage, www.federalreserve.gov/econresdata/scf/scfindex.htm.

33 See, for example, Glenn B. Canner, Stuart A. Gabriel, and J. Michael Woolley (1991), "Race, Default Risk and Mortgage Lending: A Study of the FHA and Conventional Loan Markets," *Southern Economic Journal*, vol. 58 (July), pp. 249–62.

34 Denial rates are calculated as the number of denied loan applications divided by the total number of applications, excluding withdrawn applications and application files closed for incompleteness.

35 Both the Mortgage Bankers Association and the Urban Institute publish indexes of mortgage credit availability suggesting that standards have been much tighter since the crisis. See Wei Li, Laurie Goodman, Ellen Seidman, Jim Parrott, Jun Zhu, and Bing Bai (2014), "Measuring Mortgage Credit Accessibility," working paper (Washington: Urban Institute, November), www.urban.org/research/publication/measuring-mortgage-credit-accessibility.

Table 5. Denial rates, by purpose of loan, 2004–16
Percent

Type of loan and race and ethnicity of borrower	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
A. Home purchase													
Conventional and nonconventional[1]													
All applicants	14.4	16.0	18.0	18.7	18.0	15.5	15.6	15.8	14.9	14.4	13.3	12.1	11.4
Asian	13.7	15.9	16.9	17.5	19.2	16.3	15.8	16.5	15.8	15.3	14.1	12.6	11.6
Black or African American	23.6	26.5	30.3	33.5	30.6	25.5	24.8	26.0	26.0	25.5	23.0	20.8	19.8
Hispanic white	18.3	21.1	25.1	29.5	28.3	22.2	21.8	21.1	20.2	20.5	18.4	16.1	14.9
Non-Hispanic white	11.1	12.2	12.9	13.3	14.0	12.8	12.9	13.1	12.5	12.0	11.1	10.0	9.4
Other minority[2]	19.4	20.8	24.0	26.7	25.5	21.2	21.9	20.9	20.8	21.2	19.0	17.2	16.6
Conventional only													
All applicants	14.6	16.3	18.5	19.0	18.3	15.8	15.2	15.1	13.6	12.9	11.9	10.8	10.2
Asian	13.7	16.0	17.1	17.5	19.1	15.8	14.8	15.5	14.4	14.2	13.3	11.9	10.9
Black or African American	25.0	27.8	31.9	35.7	37.6	35.8	33.6	33.2	32.0	28.5	25.1	23.3	22.0
Hispanic white	18.6	21.4	25.7	30.5	32.5	26.9	24.9	24.2	22.4	21.5	18.9	17.2	15.4
Non-Hispanic white	11.2	12.3	13.2	13.3	14.1	13.3	12.9	12.7	11.6	10.8	9.9	9.1	8.4
Other minority[2]	19.7	21.2	24.8	27.8	29.0	25.9	28.0	24.6	23.6	22.5	20.2	18.3	16.8
Nonconventional only[1]													
All applicants	13.3	12.5	12.1	16.2	17.4	15.3	16.0	16.5	16.3	16.8	15.8	13.9	13.4
Asian	12.6	11.6	10.6	15.5	20.2	17.7	18.6	19.3	20.2	20.6	18.9	16.1	14.9
Black or African American	17.7	16.8	16.2	22.8	25.3	22.6	22.7	23.9	24.0	24.1	21.9	19.7	18.7
Hispanic white	16.3	17.2	15.7	20.5	23.1	20.4	20.7	19.9	19.3	19.9	18.0	15.5	14.6
Non-Hispanic white	10.7	10.2	10.0	13.1	13.9	12.5	13.0	13.6	13.7	14.1	13.4	11.7	11.2
Other minority[2]	16.8	16.3	15.2	18.6	20.9	18.7	18.7	18.8	18.9	20.1	17.9	16.3	16.4
B. Refinance													
Conventional and nonconventional[1]													
All applicants	29.5	32.6	35.4	39.6	37.7	24.0	23.3	23.8	19.9	23.3	31.0	27.4	29.8
Asian	18.8	23.5	27.5	32.6	32.5	21.4	19.5	20.1	17.3	21.0	28.1	23.8	25.0
Black or African American	39.9	42.2	44.1	52.0	56.0	42.2	41.7	40.0	32.8	35.0	45.8	43.3	45.9
Hispanic white	28.7	30.1	33.2	43.0	49.1	36.4	33.4	33.2	27.5	29.6	36.7	32.6	33.8
Non-Hispanic white	24.1	26.9	30.1	33.7	32.2	20.7	20.6	21.3	17.8	20.5	27.5	24.1	26.9
Other minority[2]	33.7	35.5	40.6	52.0	57.4	37.3	35.3	34.4	30.0	32.1	41.6	40.2	44.2
Conventional only													
All applicants	30.1	32.9	35.6	39.9	37.0	22.1	21.3	22.3	19.4	22.5	29.6	26.4	28.8
Asian	18.8	23.5	27.5	32.5	31.5	20.2	18.5	19.4	17.0	20.5	27.2	23.1	23.7
Black or African American	41.7	43.0	44.7	53.3	60.9	48.6	41.4	40.6	34.8	36.0	47.0	47.8	52.3
Hispanic white	29.3	30.2	33.3	43.2	50.2	38.9	33.6	33.5	28.9	30.6	37.3	34.7	35.2
Non-Hispanic white	24.6	27.1	30.4	33.9	31.5	19.1	18.9	20.1	17.4	19.9	26.2	23.2	25.7
Other minority[2]	34.5	35.7	40.9	52.6	59.4	38.4	34.8	34.4	31.1	32.6	40.9	41.3	45.9
Nonconventional only[1]													
All applicants	15.0	20.1	21.9	31.6	40.9	31.1	33.3	32.2	22.2	26.7	36.5	30.3	32.9
Asian	15.0	20.0	22.0	38.5	48.9	37.2	34.2	32.7	22.2	26.9	37.5	29.6	36.6
Black or African American	17.5	23.6	24.6	33.7	43.5	35.1	42.2	39.1	29.5	33.1	43.9	37.8	38.8
Hispanic white	15.7	23.6	26.3	34.6	43.4	31.4	33.0	32.3	23.3	26.6	34.5	27.7	30.3
Non-Hispanic white	12.0	17.6	19.7	28.3	36.1	27.4	29.3	29.0	19.7	23.8	33.7	27.3	30.9
Other minority[2]	15.2	25.8	22.2	34.8	45.4	34.1	37.0	34.4	26.6	30.6	43.8	37.9	41.1

Note: First-lien mortgages for one- to four-family, owner-occupied, site-built homes. For a description of how borrowers are categorized by race and ethnicity, see table 2, note 1.

1 Nonconventional loans are those insured by the Federal Housing Administration or backed by guarantees from the U.S. Department of Veterans Affairs, the Farm Service Agency, or the Rural Housing Service.

2 See table 2, note 2.

borrowers were more similar to those for non-Hispanic white borrowers. For example, the denial rates for conventional home-purchase loans were about 22 percent for black borrowers, 15 percent for Hispanic white borrowers, 11 percent for Asian borrowers, 17 percent for other minority borrowers, and 8 percent for non-Hispanic white borrowers.

Previous research and experience gained in the fair lending enforcement process show that differences in denial rates and in the incidence of higher-priced lending (the topic of the next subsection) among racial or ethnic groups stem, at least in part, from factors related to credit risk that are not available in the HMDA data, such as credit history (including credit score), ratio of total debt service payments to income (DTI), and LTV ratio. Differential costs of loan origination and the local competitive environment, as well as illegal discrimination, may also bear on the differences in pricing.

Despite these limitations, the HMDA data play an important role in fair lending enforcement. The data are regularly used by bank examiners to facilitate the fair lending examination and enforcement processes. When examiners for the federal banking agencies evaluate an institution's fair lending risk, they analyze HMDA price data and loan application outcomes in conjunction with other information and risk factors that can be drawn directly from loan files or electronic records maintained by lenders, as directed by the Interagency Fair Lending Examination Procedures.[36] The availability of broader information allows the examiners to draw stronger conclusions about institution compliance with the fair lending laws.

Lenders can, but are not required to, report up to three reasons for denying a mortgage application, selecting from nine potential denial reasons (as shown in table 6). Among denied first-lien applications for one- to four-family, owner-occupied, site-built properties in 2016, about 72 percent of denied home-purchase applications and about 46 percent of denied refinance applications had at least one reported denial reason. The two most frequently cited denial reasons for both home-purchase and refinance loans were the applicant's credit history and DTI ratio (note that the sum across columns in table 6 can add up to more than 100 percent because lenders can cite more than one denial reason). For both home-purchase and refinance applications, the DTI ratio and collateral are more likely to be cited as denial reasons on conventional than nonconventional applications.

Denial reasons vary across racial and ethnic groups to some degree. For example, among denied home-purchase loan applications in 2016, credit history was cited as a denial reason for about 24 percent of denied black applicants, 17 percent of denied Hispanic white applicants, 18 percent of denied non-Hispanic white applicants, and just 11 percent of denied Asian applicants. The DTI ratio was cited most often as a denial reason for home-purchase applicants in all racial and ethnic groups. For Asian home-purchase applicants, collateral was the second most common reason cited for denial, while for other groups, credit history was the second most common reason cited.

The Incidence of Higher-Priced Lending

Current price-reporting rules under HMDA, in effect since October 2009, define higher-priced first-lien loans as those with an annual percentage rate (APR) of at least 1.5 percentage points above the average prime offer rate (APOR) for loans of a similar type (for example, a 30-year fixed-rate mortgage).[37] The spread for junior-lien loans must be at

[36] The Interagency Fair Lending Examination Procedures are available at www.ffiec.gov/PDF/fairlend.pdf.

[37] For more information about the rule changes related to higher-priced lending and the ways in which they affect the incidence of reported higher-priced lending over time, see Avery and others, "The 2009 HMDA Data," in note 12.

Table 6. Reasons for denial, by purpose of loan, 2016
Percent

Type of loan and race and ethnicity of borrower	Debt-to-income ratio	Employ-ment history	Credit history	Collateral	Insuf-ficient cash	Unveri-fiable informa-tion	Credit applica-tion incom-plete	Mortgage insurance denied	Other	No reason given
A. Home purchase										
Conventional and nonconventional[1]										
All applicants	23.1	3.8	18.5	13.8	7.1	5.8	9.0	.4	10.1	27.6
Asian	29.5	5.0	11.0	11.7	9.4	9.6	11.1	.3	11.2	23.3
Black or African American	26.1	3.2	24.0	10.4	7.9	4.6	6.7	.4	10.1	28.7
Hispanic white	25.4	4.4	17.2	11.7	7.3	7.2	6.7	.4	11.7	29.5
Non-Hispanic white	21.7	3.8	18.2	15.0	6.7	5.5	9.1	.5	9.9	27.9
Other minority[2]	24.8	4.1	20.9	10.7	8.0	4.9	7.0	.6	10.6	29.8
Conventional only										
All applicants	24.7	3.2	19.2	15.8	7.9	6.1	9.8	.7	9.9	23.4
Asian	29.9	4.7	10.6	12.1	10.2	9.9	11.9	.4	11.0	21.8
Black or African American	27.6	2.6	29.3	12.8	9.3	4.2	6.7	.9	10.7	22.0
Hispanic white	27.2	3.2	19.7	14.6	8.2	7.0	6.9	.8	11.9	24.0
Non-Hispanic white	23.4	3.2	18.6	16.8	7.4	5.9	9.7	.7	9.3	24.4
Other minority[2]	26.5	3.6	24.3	12.2	9.9	5.1	6.7	1.3	12.1	24.7
Nonconventional only[1]										
All applicants	21.3	4.5	17.7	11.5	6.2	5.4	8.0	.1	10.4	32.5
Asian	27.8	6.1	12.7	10.0	6.2	8.5	8.2	.20	12.0	29.0
Black or African American	25.3	3.6	21.0	9.0	7.1	4.9	6.7	.2	9.8	32.5
Hispanic white	24.1	5.3	15.3	9.6	6.6	7.3	6.7	.2	11.5	33.4
Non-Hispanic white	19.3	4.6	17.7	12.5	5.8	4.9	8.3	.1	10.6	32.8
Other minority[2]	23.4	4.6	18.0	9.5	6.3	4.7	7.3	.0	9.2	34.2
B. Refinance										
Conventional and nonconventional[1]										
All applicants	12.0	.7	12.5	9.7	2.3	2.3	9.5	.1	6.1	53.8
Asian	18.3	1.1	10.3	7.3	2.9	3.9	9.8	.1	7.0	50.1
Black or African American	9.2	.4	15.2	7.8	2.2	1.5	7.0	.0	6.2	58.9
Hispanic white	18.1	.9	17.6	7.8	3.2	3.3	8.8	.1	8.6	44.9
Non-Hispanic white	11.5	.7	11.7	9.8	2.1	2.3	8.4	.1	5.7	56.0
Other minority[2]	10.4	.6	12.6	6.3	1.9	1.9	7.2	.0	5.4	61.8
Conventional only										
All applicants	14.5	.8	13.4	10.0	2.4	2.7	8.7	.1	6.1	51.5
Asian	20.2	1.2	10.6	7.8	3.1	4.2	9.6	.1	7.1	47.7
Black or African American	11.9	.4	16.7	8.0	2.2	1.6	5.7	.1	6.2	57.5
Hispanic white	21.6	.9	19.3	8.4	3.5	3.5	7.7	.1	8.5	41.6
Non-Hispanic white	13.9	.8	12.6	10.5	2.2	2.6	7.8	.1	5.8	53.3
Other minority[2]	12.9	.6	14.1	6.6	2.2	2.2	6.1	.0	5.7	59.2
Nonconventional only[1]										
All applicants	5.5	.5	10.1	8.8	1.9	1.5	11.6	.03	6.2	59.4
Asian	7.8	.5	8.7	4.5	1.7	2.2	10.9	.0	6.3	64.0
Black or African American	5.3	.3	12.9	7.5	2.4	1.3	8.9	.01	6.1	61.0
Hispanic white	8.4	.7	13.0	6.0	2.4	2.7	11.9	.06	9.1	53.9
Non-Hispanic white	4.9	.6	9.2	8.0	1.7	1.4	10.3	.03	5.6	63.4
Other minority[2]	5.3	.4	9.6	5.7	1.4	1.2	9.3	.0	4.9	67.2

Note: Denied first-lien mortgage applications for one- to four-family, owner-occupied, site-built homes. Columns sum to more than 100 because lenders may report up to three denial reasons. For a description of how borrowers are categorized by race and ethnicity, see table 2, note 1.

1 See table 5, note 1.

2 See table 2, note 2.

least 3.5 percentage points for such loans to be considered higher priced. The APR of a mortgage differs from the interest rate because the APR measure incorporates up-front fees and other loan costs such as mortgage insurance. The APOR, which is published weekly by the Federal Financial Institutions Examination Council, is an estimate of the APR on loans being offered to high-quality prime borrowers based on the contract interest rates and discount points reported by Freddie Mac in its Primary Mortgage Market Survey.[38]

In 2016, the fraction of home-purchase loans (again, first liens for one- to four-family, owner-occupied, site-built properties) above the higher-priced threshold was 7.7 percent (table 7.A). Although the overall fraction of higher-priced loans was little changed from 2015, there were moderate changes in the share of higher-priced lending among different types of loans. In particular, the higher-priced share of nonconventional loans declined from 14.5 percent to 13.9 percent, while the higher-priced share of conventional loans rose from 3.2 percent to 3.7 percent.

Table 7.A also shows that, in 2016 as well as earlier years, black and Hispanic white borrowers had the highest incidences of higher-priced loans within both the conventional and nonconventional loan types. This table provides the raw rates of higher-priced lending by group from 2004 to 2016, but, as discussed in detail in previous *Bulletin* articles, the raw rates reported in the public HMDA data can be difficult to compare over longer time horizons for two main reasons. First, a different price-reporting rule was in place prior to October 2009, with the spread between a mortgage's APR and the rate on a Treasury bond of comparable term (rather than the APOR) reported if it rose above 3 percentage points.[39] Second, even data from years prior to 2009 are not easily comparable from year to year, as the price-reporting rule used during this period created unintended distortions in reporting over time (which is why the reporting rule was changed).[40]

Table 7.B provides adjusted rates of higher-priced lending that are intended to be more comparable over time. Using the dates of application and origination (which are not released in the public HMDA data files) and assuming all loans are 30-year fixed-rate mortgages, we can estimate the APR of loans that were originated when the old pricing rule was in effect.[41] This estimated APR can then be compared with the APOR, as is done under the new price-reporting rule. Finally, because the implied threshold spread over the APOR during the previous reporting regime got to as high as about 2.5 percentage points, table 7.B reports the fraction of loans with an estimated APR spread over the APOR (or the actual reported spread for loans made under the new rules) of at least 2.5 percentage points—rather than 1.5 percentage points, as in table 7.A.[42] Higher-priced lending by this measure virtually disappeared by 2008 and has not reemerged, likely reflecting the lack of subprime mortgage lending.

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[38] See Freddie Mac, "Mortgage Rates Survey," webpage, www.freddiemac.com/pmms; and Federal Financial Institutions Examination Council, "FFIEC Rate Spread Calculator," webpage, www.ffiec.gov/ratespread/newcalc.aspx.

[39] The reporting threshold for junior liens was 5 percentage points.

[40] These distortions are related to the fact that changes in long-term Treasury rates do not always lead to parallel changes in mortgage rates. For a discussion of how the old rule could produce misleading data about trends in higher-priced lending, see Neil Bhutta and Daniel R. Ringo (2014), "The 2013 Home Mortgage Disclosure Act Data," *Federal Reserve Bulletin,* vol. 100 (November), pp. 1–32, https://www.federalreserve.gov/pubs/bulletin/2014/articles/hmda/2013-HMDA-Data.htm.

[41] The assumption that all mortgages were fixed rate likely understates the extent of higher-priced lending during the early years of the housing boom. During this period, adjustable-rate mortgages were quite prevalent, and the APRs on such loans are tied to even shorter-term Treasury rates than are the APRs on fixed-rate mortgages. Thus, when the yield curve is relatively steep, as it was in 2004, the bar for adjustable-rate mortgages to be reported as higher priced would have been even higher than for fixed-rate mortgages.

[42] For a more detailed discussion of this adjustment technique, see Avery and others, "The 2009 HMDA Data," in note 12.

Table 7. Incidence of higher-priced lending, by purpose of loan, 2004–16

A. Unadjusted

Percent

Type of loan and race and ethnicity of borrower	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Home purchase													
Conventional and nonconventional[1]													
All borrowers	9.8	22.5	23.2	12.7	8.1	4.6	2.2	3.3	3.1	7.1	11.6	7.6	7.7
Asian	5.5	16.3	16.4	7.6	4.0	2.4	1.0	1.5	1.4	3.1	5.2	3.6	3.7
Black or African American	24.3	46.7	46.4	27.6	14.5	7.1	3.0	5.0	5.3	14.3	25.6	16.2	15.7
Hispanic white	17.5	42.0	43.3	25.9	15.8	8.1	3.9	6.1	5.9	16.9	28.5	18.5	17.9
Non-Hispanic white	7.8	15.5	16.0	9.6	7.2	4.3	2.2	3.1	2.9	6.2	9.5	6.2	6.2
Other minority[2]	14.4	30.3	30.7	16.1	9.1	5.3	2.3	3.5	3.4	8.8	13.7	8.9	9.2
Conventional only													
All borrowers	11.0	24.5	25.3	14.0	7.3	4.6	3.3	3.8	3.2	2.9	3.1	3.2	3.7
Asian	5.6	16.6	16.7	7.7	3.3	1.9	1.0	1.3	1.2	1.1	1.5	2.1	2.5
Black or African American	30.6	54.1	53.4	34.0	17.4	8.7	6.1	8.0	6.7	6.1	7.7	6.8	8.3
Hispanic white	20.0	45.3	46.3	28.9	17.7	11.0	9.6	10.7	8.7	7.3	6.5	8.3	10.1
Non-Hispanic white	8.6	16.9	17.5	10.5	6.5	4.8	3.4	3.9	3.2	2.9	3.0	2.9	3.3
Other minority[2]	16.1	33.3	33.6	18.5	9.5	6.7	4.6	5.5	5.1	4.9	5.0	4.9	5.6
Nonconventional only[1]													
All borrowers	1.2	.9	1.8	3.0	9.5	4.6	1.3	2.7	3.0	13.9	26.3	14.5	13.9
Asian	2.4	.6	.8	1.3	8.2	3.9	.8	2.0	1.9	13.4	26.3	11.4	10.1
Black or African American	1.4	1.6	2.5	4.5	12.8	6.8	2.4	4.3	4.9	17.6	34.0	20.2	19.1
Hispanic white	2.0	1.4	3.5	4.5	14.0	7.1	2.2	4.5	4.8	22.5	43.4	24.6	23.2
Non-Hispanic white	1.0	.7	1.5	2.5	8.4	3.9	1.0	2.3	2.6	12.1	22.5	12.2	11.7
Other minority[2]	4.4	.7	2.1	2.4	8.8	4.7	1.2	2.5	2.4	11.9	21.0	12.2	12.2
Refinance													
Conventional and nonconventional[1]													
All borrowers	14.5	25.0	30.3	21.0	10.9	3.8	1.8	2.1	1.5	1.9	3.3	2.5	2.0
Asian	5.8	15.1	19.5	12.5	3.1	.9	.4	.5	.4	.5	1.1	.7	.6
Black or African American	30.0	46.2	50.7	38.1	22.8	9.0	6.5	6.8	4.1	3.8	5.7	5.1	3.8
Hispanic white	18.2	32.6	36.9	26.5	15.1	7.0	4.4	4.4	2.6	3.1	4.8	3.9	3.1
Non-Hispanic white	12.3	20.4	25.0	17.6	10.2	3.7	1.8	2.2	1.5	2.0	3.4	2.4	2.1
Other minority[2]	17.6	26.9	32.3	23.8	13.9	4.7	2.6	2.6	2.0	2.2	3.1	2.8	2.2
Conventional only													
All borrowers	15.2	25.7	31.0	21.8	10.4	3.1	1.3	1.5	1.2	1.5	2.2	1.6	1.5
Asian	5.8	15.2	19.6	12.5	2.9	.7	.2	.3	.3	.3	.7	.4	.4
Black or African American	33.7	49.0	52.8	41.5	27.6	9.9	4.0	4.2	2.9	3.3	3.8	3.1	3.2
Hispanic white	19.2	33.4	37.5	27.3	16.0	7.2	3.3	3.3	2.3	2.4	2.8	2.4	2.3
Non-Hispanic white	12.8	20.9	25.6	18.2	9.8	3.1	1.3	1.6	1.2	1.6	2.3	1.7	1.6
Other minority[2]	18.2	27.7	32.9	24.5	14.7	4.8	1.9	2.2	1.7	2.0	2.1	2.0	1.7
Nonconventional only[1]													
All borrowers	1.5	.9	3.1	6.6	13.2	6.7	4.9	5.9	3.2	3.9	8.3	5.4	3.8
Asian	3.6	2.1	2.5	4.9	8.9	4.8	3.1	4.0	1.8	2.6	7.2	3.3	2.6
Black or African American	1.0	1.2	4.1	7.8	15.2	8.2	9.8	10.9	6.0	4.6	8.5	7.1	4.4
Hispanic white	2.0	.9	2.6	6.2	11.6	6.6	7.3	7.9	3.6	5.1	12.2	7.0	5.0
Non-Hispanic white	1.3	.7	2.8	6.0	12.1	6.5	4.6	5.9	3.3	4.2	8.9	5.4	3.9
Other minority[2]	8.1	3.9	9.6	9.9	10.5	4.5	4.6	4.3	2.9	2.8	6.0	4.4	2.9

Note: First-lien mortgages for one- to four-family, owner-occupied, site-built homes. For a description of how borrowers are categorized by race and ethnicity, see table 2, note 1.

1 See table 5, note 1.

2 See table 2, note 2.

Table 7. Incidence of higher-priced lending, by purpose of loan, 2004–16

B. Adjusted

Percent

Type of loan and race and ethnicity of borrower	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Home purchase													
Conventional and nonconventional[1]													
All borrowers	7.4	18.3	17.1	6.3	1.3	1.3	.6	.8	.8	.7	.8	.7	.8
Asian	3.8	13.0	11.4	3.1	.5	.5	.3	.3	.3	.3	.4	.5	.6
Black or African American	19.3	40.3	38.5	16.7	1.9	1.3	.6	.7	.9	1.0	1.2	1.2	1.2
Hispanic white	12.3	34.5	32.8	13.0	2.1	1.4	1.0	1.3	1.6	1.5	1.6	1.5	1.6
Non-Hispanic white	5.8	12.1	10.9	4.3	1.3	1.4	.7	.8	.8	.7	.7	.6	.7
Other minority[2]	10.5	24.7	22.7	8.0	1.5	1.4	.8	.9	1.1	.9	.9	.9	.8
Conventional only													
All borrowers	8.2	20.0	18.7	7.1	1.9	2.3	1.3	1.4	1.2	.9	.8	.8	.8
Asian	3.8	13.3	11.6	3.2	.5	.6	.3	.4	.4	.3	.4	.5	.7
Black or African American	24.4	46.9	44.5	21.2	4.7	4.0	2.6	2.6	2.7	1.7	1.4	1.8	1.6
Hispanic white	14.0	37.2	35.2	14.8	3.9	4.6	3.9	4.1	4.5	2.8	2.3	2.8	2.9
Non-Hispanic white	6.5	13.2	12.0	4.9	1.9	2.6	1.3	1.5	1.2	.8	.8	.7	.7
Other minority[2]	11.6	27.2	25.0	9.3	2.7	3.7	2.3	2.5	2.6	1.7	1.3	1.5	1.3
Nonconventional only[1]													
All borrowers	.9	.3	.2	.3	.4	.4	.1	.2	.3	.5	.8	.5	.6
Asian	2.2	.3	.1	.2	.2	.2	.1	.2	.2	.3	.5	.2	.3
Black or African American	1.0	.5	.3	.6	.4	.7	.2	.3	.3	.8	1.1	1.0	1.1
Hispanic white	1.6	.3	.3	.2	.5	.4	.1	.3	.3	.8	1.1	.7	.7
Non-Hispanic white	.8	.2	.2	.2	.3	.3	.1	.2	.3	.5	.7	.5	.6
Other minority[2]	3.9	.3	.2	.2	.3	.3	.1	.1	.2	.3	.6	.4	.4
Refinance													
Conventional and nonconventional[1]													
All borrowers	11.3	20.1	21.3	12.7	4.3	1.4	.6	.8	.7	.7	1.0	.6	.4
Asian	4.1	12.2	12.1	5.4	.8	.2	.1	.2	.1	.1	.2	.1	.1
Black or African American	24.3	38.5	39.0	26.4	10.6	3.5	2.6	3.3	2.5	1.6	2.1	1.3	.6
Hispanic white	13.4	27.0	25.8	14.8	5.6	2.5	1.8	1.8	1.1	.9	1.1	.7	.5
Non-Hispanic white	9.5	15.9	16.9	10.3	4.1	1.4	.6	.8	.7	.7	1.1	.6	.4
Other minority[2]	13.2	22.0	22.3	14.5	7.1	2.1	.9	1.1	1.1	.8	1.1	.7	.3
Conventional only													
All borrowers	11.8	20.7	21.9	13.3	5.1	1.5	.5	.6	.4	.4	.7	.5	.4
Asian	4.1	12.3	12.1	5.4	.9	.2	.1	.1	.0	.0	.1	.1	.1
Black or African American	27.3	40.8	40.7	29.4	17.1	6.3	2.0	1.8	1.0	1.0	1.4	1.1	1.0
Hispanic white	14.1	27.7	26.2	15.4	6.9	3.5	1.4	1.3	.8	.7	.8	.8	.6
Non-Hispanic white	9.9	16.3	17.3	10.9	4.8	1.6	.5	.6	.4	.5	.8	.5	.4
Other minority[2]	13.6	22.6	22.7	14.9	8.3	2.8	.9	.9	.7	.7	.7	.6	.4
Nonconventional only[1]													
All borrowers	1.0	.6	.7	.5	.4	.5	1.2	2.5	2.4	1.8	2.5	.9	.3
Asian	2.9	1.8	1.3	1.4	.5	.3	.5	1.5	1.4	1.1	2.0	.4	.3
Black or African American	.6	.8	1.2	.6	.5	1.1	3.5	5.9	4.9	2.6	3.2	1.5	.2
Hispanic white	1.4	.4	.3	.6	.7	.8	2.8	3.5	1.9	1.3	2.1	.6	.3
Non-Hispanic white	.8	.4	.4	.3	.4	.5	1.0	2.4	2.5	2.1	3.0	1.0	.4
Other minority[2]	6.3	3.4	7.8	6.3	1.9	.4	1.1	2.0	2.2	1.2	2.2	.8	.1

Note: First-lien mortgages for one- to four-family, owner-occupied, site-built homes. For a description of how borrowers are categorized by race and ethnicity, see table 2, note 1. See text for details on how adjusted incidences of higher-priced lending are calculated.

[1] See table 5, note 1.

[2] See table 2, note 2.

The higher-priced fraction of FHA home-purchase loans was about 21 percent in 2016, much higher than for other types of loans, in part because of the relatively high up-front and annual MIPs charged by the FHA (table 8). In contrast, only about 1 percent of VA/RHS/FSA home-purchase loans were higher priced. The higher-priced fractions for both types of loans were little changed from 2015.

Table 8. Distribution of price spread, 2016
Percent except as noted

Purpose and type of loan	Total number	Loans with APOR spread above 1.5 percentage points[1]							
		Number	Percent	Distribution, by percentage points of APOR spread					
				1.5–1.99	2–2.49	2.5–2.99	3–3.99	4–4.99	5 or more
Site-built homes									
Home purchase									
Conventional	2,123,365	78,775	3.7	56.1	21.5	9.4	7.5	2.9	2.6
FHA[2]	865,897	180,864	20.9	76.6	19.1	2.9	1.3	.08	.04
VA/RHS/FSA[3]	473,755	5,563	1.2	83.6	5.9	1.2	8.6	.6	.1
Refinance									
Conventional	2,527,430	36,826	1.5	54.0	18.5	9.3	9.9	4.9	3.3
FHA[2]	400,147	28,831	7.2	76.9	14.8	2.7	4.7	.6	.2
VA/RHS/FSA[3]	410,163	1,911	.5	87.2	10.2	.7	1.7	.2	.1
Manufactured homes									
Home purchase									
Conventional	59,093	44,971	76.1	5.6	5.0	5.3	13.7	12.2	58.3
FHA[2]	17,572	9,871	56.2	53.9	25.5	8.7	2.1	1.0	8.9
VA/RHS/FSA[3]	4,912	234	4.8	73.5	13.2	6.4	6.0	0	0
Refinance									
Conventional	19,553	5,775	29.5	29.0	15.5	12.4	18.2	9.9	15.0
FHA[2]	8,560	1,897	22.2	69.0	20.5	7.0	3.1	.4	.2
VA/RHS/FSA[3]	5,031	129	2.6	70.5	26.4	1.6	1.6	0	0

Note: First-lien mortgages for one- to four-family owner-occupied homes.

1 Average prime offer rate (APOR) spread is the difference between the annual percentage rate on the loan and the APOR for loans of a similar type published weekly by the Federal Financial Institutions Examination Council. The threshold for first-lien loans is a spread of 1.5 percentage points.

2 Loans insured by the Federal Housing Administration.

3 Loans backed by guarantees from the U.S. Department of Veterans Affairs, the Rural Housing Service, or the Farm Service Agency.

HOEPA Loans

Under the Home Ownership and Equity Protection Act (HOEPA), certain types of mortgage loans that have interest rates or fees above specified levels are subject to additional consumer protections, such as special disclosures and restrictions on loan features. New rules extending HOEPA's protections from refinance and home equity loans to also include home-purchase loans and HELOCs became effective on January 10, 2014. These rules also added new protections for high-cost mortgages, such as a pre-loan counseling requirement for borrowers.

The new rules also changed the benchmark used to identify high-cost loans that are covered by HOEPA's protections. Instead of using the yield on Treasury securities, high-cost loans are identified by comparing a loan's APR with the APOR. HOEPA coverage now applies to first liens with an APR more than 6.5 percentage points above the APOR. If the loan is a junior lien or the loan amount is less than $50,000 and the loan is secured by personal property (such as a manufactured home), then the high-cost threshold is 8.5 percentage points above the APOR. Prior to 2014, HOEPA's protections were triggered if the loan's APR exceeded 8 percentage points above the rate on a Treasury security of similar term for first liens, and 10 percentage points for junior liens. Finally, under the new rules, HOEPA coverage is also triggered if the points and fees exceed certain thresholds.[43]

While HOEPA loans were never a large fraction of the mortgage market, they have become even rarer since the housing boom. In 2005, lenders reported nearly 36,000 HOEPA loans (table 9). In 2016, the total was only 1,903 loans, despite the extension of HOEPA protections to home-purchase loans.[44]

Table 9. Distribution of HOEPA loans, by characteristic of loan, 2004–16
Percent except as noted

Loans by purpose, lien status, property type, and amount	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
HOEPA loans (total)	**24,437**	**35,985**	**15,195**	**10,780**	**8,577**	**6,446**	**3,407**	**2,373**	**2,193**	**1,868**	**1,271**	**1,248**	**1,903**
Loan purpose													
Home purchase	0	0	0	0	0	0	0	0	0	0	31.4	39.5	58.7
Home improvement	37.7	26.1	42.4	45.4	30.5	31.1	32.6	32.3	31.5	30.1	17.9	14.9	14.9
Refinance	62.3	73.9	57.6	54.6	69.5	68.9	67.4	67.7	68.5	69.9	50.7	45.6	26.3
Lien status													
First	55.5	60.5	53.6	52.8	78.5	84.1	83.9	82.8	84.6	84.2	90.3	88.4	90.0
Junior	44.5	39.5	46.4	47.2	21.5	15.9	16.1	17.2	15.4	15.8	9.7	11.6	10.0
Property type													
Site built	88.0	91.8	83.7	81.0	72.7	67.8	68.3	65.7	65.7	68.8	75.4	83.3	86.3
Manufactured home	12.0	8.2	16.3	19.0	27.3	32.2	31.7	34.3	34.3	31.2	24.6	16.7	13.7
Loan amount													
Less than $50,000	72.4	48.4	72.1	74.3	66.7	72.5	76.5	77.8	75.6	71.3	52.9	36.9	35.0
Greater than $50,000	27.6	51.6	27.9	25.7	33.3	27.5	23.5	22.2	24.4	28.7	47.1	63.1	65.0

Note: Mortgages for one- to four-family homes. HOEPA loans are mortgages with terms that triggered the additional protections provided by the Home Ownership and Equity Protection Act.

Lending Institutions

In 2016, there were 6,762 reporting institutions (table 10). The total consisted of 3,805 banks and thrifts (hereafter, banks), of which 3,033 were small, defined as having assets of less than $1 billion; 1,939 credit unions; 131 mortgage companies affiliated with depositories (banks and credit unions); and 887 independent mortgage companies.[45] Banks collectively accounted for about 38 percent of all reported mortgage originations; independent mortgage companies, about 48 percent; credit unions, about 9 percent; and affiliates, the remainder. Over the past few years, the share of loans originated by independent mortgage companies has risen sharply. In 2016, these lenders originated 53 percent of first-lien owner-occupant home-purchase loans, up from 50 percent in 2015 and just 35 percent in 2010. Independent mortgage companies also originated 52 percent of first-lien owner-occupant refinance loans, an increase from 48 percent in 2015.

[43] Under the new rules, a loan is also considered high cost if the points and fees exceed 5 percent of the total loan amount for a loan amount equal to or more than $20,000 and 8 percent of the total loan amount or $1,000 for a loan less than $20,000, with the loan amounts adjusted annually for inflation from the base year of 2014.

[44] For an analysis of the potential effects of the new HOEPA rule on lending patterns, see Bhutta, Popper, and Ringo, "The 2014 Home Mortgage Disclosure Act Data," in note 29.

[45] Data on bank assets were drawn from the Federal Deposit Insurance Corporation Reports of Condition and Income. The $1 billion threshold is based on the combined assets of all banks within a given banking organization. Data available in the HMDA Reporter Panel (available at https://www.ffiec.gov/hmda/hmdaflat.htm) can be used to help identify the various types of institutions. Affiliate institutions include all mortgage companies known to be wholly or partially owned by a depository—that is, institutions for which the "other lender code" in the Reporter Panel equals 1, 2, or 5. Most credit unions report to the National Credit Union Administration, except a few large credit unions, which report to the Consumer Financial Protection Bureau.

Table 10. Lending activity, by type of institution, 2016
Percent except as noted

Institutions and type of activity	Type of institution[1]					
	Small bank	Large bank	Credit union	Affiliated mortgage company	Independent mortgage company	All
Number of institutions	3,033	772	1,939	131	887	6,762
Applications (thousands)	894	4,059	1,190	567	7,216	13,926
Originations (thousands)	651	2,573	724	384	4,046	8,378
Purchases (thousands)	23	1,099	18	182	910	2,232
Number of institutions with fewer than 100 loans	1,630	136	1,025	25	84	2,900
Originations (thousands)	66.9	5.9	40.5	.9	3.4	117.5
Number of institutions with fewer than 25 loans	557	39	374	11	37	1,018
Originations (thousands)	7.0	.4	4.5	.1	.4	12.4
Home-purchase loans (thousands)[2]	246	948	215	210	1,845	3,463
Conventional	71.9	77.3	86.7	58.0	49.1	61.3
Higher-priced share of conventional loans	10.4	2.3	5.0	2.2	3.5	3.7
LMI borrower[3]	28.1	21.8	25.2	29.2	27.9	26.2
LMI neighborhood[4]	12.4	12.0	13.2	13.4	15.5	14.1
Non-Hispanic white[5]	79.1	68.4	69.2	69.6	62.9	66.4
Minority borrower[5]	13.0	18.7	15.8	17.0	24.5	21.1
Sold[6]	75.2	71.5	48.2	97.0	97.2	85.5
Refinance loans (thousands)[2]	179	1,007	277	130	1,744	3,338
Conventional	83.5	91.7	96.0	71.5	62.8	75.7
Higher-priced share of conventional loans	6.2	1.2	2.6	.6	.8	1.5
LMI borrower[3]	17.1	17.3	21.2	15.6	16.0	16.9
LMI neighborhood[4]	9.5	10.5	12.8	11.5	13.1	12.0
Non-Hispanic white[5]	82.2	68.9	68.9	69.3	60.4	65.2
Minority borrower[5]	8.5	16.9	15.1	14.9	19.6	17.6
Sold[6]	73.9	70.5	39.6	97.2	98.5	84.0

1 Small banks consist of those banks with assets (including the assets of all other banks in the same banking organization) of less than $1 billion at the end of 2016. Affiliated mortgage companies are nondepository mortgage companies owned by or affiliated with a banking organization or credit union.

2 First-lien mortgages for one- to four-family, owner-occupied, site-built homes.

3 See table 2, note 3.

4 See table 2, note 4.

5 See table 2, note 1. “Minority borrower” refers to nonwhite (excluding joint or missing) or Hispanic white applicants.

6 Excludes originations made in the last quarter of the year because the incidence of loan sales tends to decline for loans originated toward the end of the year, as lenders report a loan as sold only if the sale occurs within the same year as origination.

Source: FFIEC HMDA data; bank asset data drawn from Federal Deposit Insurance Corporation Reports of Condition and Income (https://www.fdic.gov).

Many institutions report little activity. About 43 percent of institutions (2,900 out of 6,762) reported fewer than 100 mortgage originations in 2016, accounting for about 118,000 originations, or less than 2 percent of all originations. About 15 percent of institutions originated fewer than 25 loans, in total accounting for about one-tenth of 1 percent of all originations.[46]

46 Under changes to the HMDA regulations (Regulation C) finalized in 2015, banks, savings associations, and credit unions that originated fewer than 25 home-purchase loans (including refinancings of home-purchase loans) in either 2015 or 2016 will not be subject to HMDA reporting requirements in 2017. Beginning in 2018, lending institutions will not be subject to HMDA reporting requirements unless they originated at least 25 covered closed-end mortgage loans or 100 covered open-end lines of credit in each of the two preceding calendar years. For a more detailed description of these and other changes to Regulation C, see Consumer

Table 10 provides several other statistics to help compare the lending patterns of different types of institutions in 2016, and we discuss some highlights here. First, depositories tend to originate a significantly higher fraction of conventional loans than nondepositories. Second, small banks and credit unions have accounted for a highly disproportionate share of conventional higher-priced loans in recent years.

Third, independent mortgage companies originated a higher share of their home-purchase loans to minority borrowers and in LMI neighborhoods than other types of lenders. Fourth, large banks originate a significantly lower share of home-purchase mortgages to LMI borrowers compared with other types of lenders. In a supplementary analysis, we show that much of the decline in lending by large banks to LMI borrowers in recent years can be explained by their decreasing share of FHA-guaranteed mortgages, which are more likely to be originated to LMI borrowers.[47]

Finally, the HMDA data provide information on whether originated loans were sold within the same calendar year and the type of institution to which they were sold, such as one of the GSEs or a banking institution (see appendix A for a full list of purchaser types). Table 10 displays the fraction of loans sold within the calendar year, as opposed to being held in portfolio.[48] Nondepositories sold virtually all of their loans in 2016. In contrast, credit unions sold about one-half of the home-purchase loans they originated and about 40 percent of the refinance loans they originated. That said, portfolio lending among depositories has declined significantly over the longer term.[49]

Table 11 lists the top 25 reporting institutions according to their total number of originations, along with the same set of lending characteristics as those listed in table 10.[50] Wells Fargo reported the most originations, with about 438,000.[51] The next-highest total was for Quicken Loans, followed by JPMorgan Chase (JPMC) and Bank of America. Overall, the top 25 lenders accounted for about 34 percent of all loan originations in 2016, up slightly from 33 percent in 2015. These same firms also provided additional funding by purchasing over 1.2 million loans from other lending institutions during 2016 (these loans could have been originated in 2015 or in earlier years), equal to about 43 percent of the number of loans they originated during the year.

The top institutions differ significantly in their lending patterns. Some of this variation reflects differences between types of institutions, which were discussed earlier. For example,

Financial Protection Bureau (2015), "New Rule Summary: Home Mortgage Disclosure (Regulation C)," October 15, http://files.consumerfinance.gov/f/201510_cfpb_hmda-executive-summary.pdf.

47 See Bhutta, Laufer, and Ringo, "Decline in Lending to Lower-Income Borrowers," in note 8.

48 Because loan sales are recorded in the HMDA data only if the loans are originated and sold in the same calendar year, loans originated toward the end of the year are less likely to be reported as sold. For that reason, statistics on loan sales are computed using only loans originated during the first three quarters of the year.

49 See table 13 in Bhutta, Popper, and Ringo, "The 2014 Home Mortgage Disclosure Act Data," in note 29.

50 Some institutions may be part of a larger organization; however, the data in table 11 are at the reporter level. Because affiliate activity has declined markedly since the housing boom, a top 25 list at the organization level is not likely to be significantly different. SunTrust is one notable exception. Combined mortgage originations across its bank and mortgage affiliates totaled about 75,000.

51 Notably, loan counts and market shares derived from the HMDA data can differ markedly from market shares based on information compiled by Inside Mortgage Finance. For HMDA reporting purposes, institutions report only mortgage applications in which they make the credit decision. Under HMDA, if an application is approved by a third party (such as a correspondent) rather than the lending institution, then that party reports the loan as its own origination and the lending institution reports the loan as a purchased loan. Alternatively, if a third party forwards an application to the lending institution for approval, then the lending institution reports the application under HMDA (and the third party does not report anything). In contrast, Inside Mortgage Finance considers loans to have been originated by the acquiring institution even if a third party makes the credit decision. Thus, many of the larger lending organizations that work with sizable networks of correspondents report considerable volumes of purchased loans in the HMDA data, while Inside Mortgage Finance considers many of these purchased loans to be originations.

Table 11. Top 25 respondents in terms of total originations, 2016

Percent except as noted

Respondent	Institution type[1]	Total originations (thousands)	Total purchases (thousands)	Home-purchase loans[2]: Number (thousands)	Conventional	Higher priced[3]	LMI borrower[4]	LMI neighborhood[5]	Non-Hispanic white[6]	Minority borrower[6]	Sold[7]
Wells Fargo Bank, NA	Large bank	438	513	154	85.1	2.2	16.2	11.2	66.4	21.2	72.9
Quicken Loans, Inc.	Ind. mort. co.	436	0	89	52.8	.5	29.1	14.8	53.2	13.6	99.9
JPMorgan Chase Bank, NA	Large bank	185	154	56	96.7	.8	10.9	8.8	60.5	23.0	47.7
Bank of America, NA	Large bank	159	30	47	91.1	.1	15.4	10.9	58.7	30.2	45.7
Freedom Mortgage Corp.	Ind. mort. co.	155	87	22	33.5	1.9	29.0	17.2	55.2	32.1	99.7
loanDepot.com	Ind. mort. co.	133	0	36	58.6	3.4	18.6	14.4	52.5	28.8	98.7
U.S. Bank, NA	Large bank	122	139	34	82.4	1.2	26.7	11.8	68.3	13.5	75.8
Caliber Home Loans, Inc.	Ind. mort. co.	108	49	65	52.6	4.2	30.4	16.2	60.2	25.7	99.8
Flagstar Bank, FSB	Large bank	103	18	43	53.3	2.8	24.7	13.4	65.6	25.8	98.3
United Shore Financial Services, LLC	Ind. mort. co.	83	0	32	84.3	2.2	27.1	14.6	60.2	29.7	98.7
Fairway Independent Mortgage Corp.	Ind. mort. co.	73	0	52	51.7	4.1	31.3	15.0	70.8	18.4	99.7
Nationstar Mortgage	Ind. mort. co.	70	29	1	74.5	2.4	16.1	13.8	48.9	19.7	90.9
Guild Mortgage Co.	Ind. mort. co.	67	3	38	47.1	5.0	28.7	18.0	57.8	20.3	99.9
USAA Federal Savings Bank	Large bank	67	0	42	31.1	.1	14.0	10.5	65.1	15.7	96.6
Guaranteed Rate, Inc.	Ind. mort. co.	65	0	32	73.8	1.8	21.2	14.1	71.2	17.4	100.0
PrimeLending, a PlainsCapital Company	Affiliated mort. co.	64	1	44	57.9	4.5	28.8	14.1	67.3	17.8	99.9
Navy Federal Credit Union	Credit union	64	0	29	42.3	26.5	19.8	12.6	55.8	23.2	56.4
PNC Bank, NA	Large bank	64	1	17	74.2	.0	30.5	13.8	61.1	13.5	83.1
Finance of America Mortgage	Ind. mort. co.	62	0	30	48.9	1.4	24.7	18.6	61.6	24.7	99.9
Citibank, NA	Large bank	55	22	17	97.9	.0	16.0	16.6	37.3	38.7	51.3
Movement Mortgage, LLC	Ind. mort. co.	54	0	43	46.0	3.8	30.8	16.7	68.7	24.7	87.8
Stearns Lending, Inc.	Ind. mort. co.	54	40	27	47.6	2.5	26.7	17.5	59.4	28.8	100.0
SunTrust Mortgage, Inc.	Affiliated mort. co.	51	59	16	87.1	.2	16.5	10.8	62.4	17.8	98.9
Ditech Financial, LLC	Ind. mort. co.	47	58	3	78.4	1.2	23.9	13.3	75.0	16.2	98.0
Mortgage Research Center, LLC	Ind. mort. co.	46	0	36	1.6	.0	28.2	14.0	61.7	21.9	100.0
Top 25 institutions	...	2,828	1,203	1,004	62.6	2.8	23.2	13.7	62.0	22.0	86.3
All institutions	...	**8,378**	**2,232**	**3,463**	**61.3**	**3.7**	**26.2**	**14.1**	**66.4**	**21.1**	**85.5**

1 See table 10, note 1.

2 First-lien mortgages for one- to four-family, owner-occupied, site-built homes.

3 Share of conventional loans that are higher priced.

4 See table 2, note 3.

5 See table 2, note 4.

6 See table 2, note 1. "Minority borrower" refers to nonwhite (excluding joint or missing) or Hispanic white applicants.

7 See table 10, note 6.

. . . Not applicable.

Source: FFIEC HMDA data; bank asset data drawn from Federal Deposit Insurance Corporation Reports of Condition and Income (https://www.fdic.gov).

(continued on next page)

table 11 shows that large banks like Bank of America have a higher share of conventional mortgages and a smaller share of lending in LMI neighborhoods compared with independent mortgage companies like Quicken Loans.

In addition to the variation across lender types, there is substantial variation in lending patterns within lender types. For example, regarding large banks, about 97 percent of JPMC's home-purchase loans were conventional, compared with about 82 percent for U.S. Bank. There is also significant variation among the large banks in the fraction of loans sold, with Wells Fargo selling almost 73 percent of its home-purchase originations, compared with less than 46 percent for Bank of America.

Table 11. Top 25 respondents in terms of total originations, 2016–*continued*

Percent except as noted

Respondent	Institution type[1]	Refinance loans[2]							
		Number (thousands)	Conventional	Higher priced[3]	LMI borrower[4]	LMI neighborhood[5]	Non-Hispanic white[6]	Minority borrower[6]	Sold[7]
Wells Fargo Bank, NA	Large bank	195	88.7	1.0	16.8	11.2	66.9	19.7	88.1
Quicken Loans, Inc.	Ind. mort. co.	325	67.2	.1	23.3	13.0	46.6	10.8	100.0
JPMorgan Chase Bank, NA	Large bank	102	97.2	.8	16.6	9.7	65.5	20.3	60.9
Bank of America, NA	Large bank	88	99.5	.1	19.1	11.5	63.1	24.9	61.0
Freedom Mortgage Corp.	Ind. mort. co.	123	10.6	.0	4.1	15.1	59.6	24.4	99.8
loanDepot.com	Ind. mort. co.	88	64.5	1.9	16.7	12.1	65.0	18.0	99.9
U.S. Bank, NA	Large bank	62	95.9	3.1	20.9	12.3	65.7	12.8	43.8
Caliber Home Loans, Inc.	Ind. mort. co.	31	72.0	.9	15.4	11.9	63.9	20.1	99.9
Flagstar Bank, FSB	Large bank	47	76.5	.7	13.1	11.0	61.7	27.3	97.6
United Shore Financial Services, LLC	Ind. mort. co.	42	96.1	.2	13.9	11.1	59.0	27.8	98.9
Fairway Independent Mortgage Corp.	Ind. mort. co.	13	80.3	.6	16.3	10.9	76.1	11.8	99.9
Nationstar Mortgage	Ind. mort. co.	59	72.2	1.2	9.8	17.2	59.9	25.6	99.9
Guild Mortgage Co.	Ind. mort. co.	17	68.8	.2	17.5	15.6	64.2	16.5	100.0
USAA Federal Savings Bank	Large bank	20	33.9	.1	6.4	9.5	60.7	18.4	90.9
Guaranteed Rate, Inc.	Ind. mort. co.	25	93.4	.4	11.3	9.7	75.4	13.1	100.0
PrimeLending, a PlainsCapital Company	Affiliated mort. co.	12	89.1	1.3	17.1	10.7	73.6	14.0	99.9
Navy Federal Credit Union	Credit union	17	49.8	2.2	12.9	11.1	54.4	25.6	62.8
PNC Bank, NA	Large bank	30	90.6	.0	25.3	12.1	67.1	11.6	58.6
Finance of America Mortgage	Ind. mort. co.	26	81.3	.0	14.4	13.8	62.6	24.3	99.9
Citibank, NA	Large bank	28	97.1	.0	19.9	12.2	56.3	20.0	82.1
Movement Mortgage, LLC	Ind. mort. co.	6	78.4	.5	19.6	12.5	75.8	17.5	77.3
Stearns Lending, Inc.	Ind. mort. co.	22	69.4	.2	14.4	13.6	62.6	24.4	100.0
SunTrust Mortgage, Inc.	Affiliated mort. co.	29	89.5	.1	18.9	10.6	63.8	15.0	99.1
Ditech Financial, LLC	Ind. mort. co.	34	94.9	.0	36.4	16.8	65.0	19.8	99.8
Mortgage Research Center, LLC	Ind. mort. co.	10	1.6	.0	7.3	12.1	62.9	20.6	99.9
Top 25 institutions	…	1,453	74.1	.6	17.3	12.4	60.1	18.5	88.9
All institutions	**…**	**3,338**	**75.7**	**1.5**	**16.9**	**12.0**	**65.2**	**17.6**	**84.0**

Finally, the composition of borrowers varied across the top 25 institutions, both within and across lender types. For some institutions, more than 30 percent of home-purchase borrowers were LMI, while at other institutions, fewer than 20 percent of borrowers were in that category.[52] Although it is difficult to know precisely why such variation exists, these differences could reflect different business strategies or different customer demands in the markets and geographic regions the institutions serve, among other possibilities.

[52] Note that for lenders with a significant nonconventional share of refinance loans (for example, Freedom Mortgage Corporation), borrower income may not be reported for most loans, thus pushing down the LMI share of borrowers.

Appendix A: Requirements of Regulation C

Regulation C requires lenders to report the following information on home-purchase and home-improvement loans and on refinancings:[53]

For each application or loan

- application date and the date an action was taken on the application
- action taken on the application
  - approved and originated
  - approved but not accepted by the applicant
  - denied (with the reasons for denial—voluntary for some lenders)
  - withdrawn by the applicant
  - file closed for incompleteness
- preapproval program status (for home-purchase loans only)
  - preapproval request denied by financial institution
  - preapproval request approved but not accepted by individual
- loan amount
- loan type
  - conventional
  - insured by the Federal Housing Administration
  - guaranteed by the Department of Veterans Affairs
  - backed by the Farm Service Agency or Rural Housing Service
- lien status
  - first lien
  - junior lien
  - unsecured
- loan purpose
  - home purchase
  - refinance
  - home improvement
- type of purchaser (if the lender subsequently sold the loan during the year)
  - Fannie Mae
  - Ginnie Mae
  - Freddie Mac
  - Farmer Mac
  - private securitization
  - commercial bank, savings bank, or savings association
  - life insurance company, credit union, mortgage bank, or finance company
  - affiliate institution
  - other type of purchaser

For each applicant or co-applicant

- race
- ethnicity

[53] Changes to Regulation C passed in 2015 will affect the information that covered institutions are required to report beginning with the 2018 data. For a description of these changes, see Consumer Financial Protection Bureau, "New Rule Summary," in note 46 of the main text.

- sex
- income relied on in credit decision

For each property

- location, by state, county, metropolitan statistical area, and census tract
- type of structure
  - one- to four-family dwelling
  - manufactured home
  - multifamily property (dwelling with five or more units)
- occupancy status (owner occupied, non-owner occupied, or not applicable)

For loans subject to price reporting

- spread above comparable Treasury security for applications taken prior to October 1, 2009
- spread above average prime offer rate for applications taken on or after October 1, 2009

For loans subject to the Home Ownership and Equity Protection Act

- indicator of whether loan is subject to the Home Ownership and Equity Protection Act