



Home Loan Trends in 2017 in Tennessee from Home Mortgage Disclosure Act (HMDA) Data

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Key Findings

In 2017, mortgage activity (all applications; regardless of outcome; including home purchase, refinancing and home improvement) in Tennessee showed signs of slowing, similar to national trends. Nearly 330,000 applications for home purchase, refinancing and home improvement loans in Tennessee led to 164,577 loan originations, which represented a six percent decrease from 2016. In the nation, the total number of originated loans of all types and purposes declined by 12 percent.

Home purchase loan originations continued to grow. Even though overall activity slowed, home purchases did not. With a five percent annual increase in the number of home purchase loans originated in 2017, mortgage loan volume in the state surpassed the level of mortgage activity in 2007, just before the housing market crisis.

Neither <u>total</u> loan applications nor originations were back to the pre-crisis levels. Loan applications were at 68 percent of the 2007 peak and loan originations were at 80 percent of the 2007 peak.

Declining refinance loan origination was the source of mortgage origination slow down. In 2017, the number of refinance loans originated for one- to four-family dwellings declined by 24 percent from the previous year, while home purchase loan originations increased by six percent.

Davidson County led the pack with 10,622 home purchase loan originations in 2017, two percent more than its 2016 total. Shelby and Knox Counties followed Davidson County each with four percent year-over-year increase in home purchase loan originations.

Conventional mortgages have slowly regained their market share and represented 56.5 percent of owner-occupied home purchase mortgage loan originations by the end of 2017. FHA loans, which represented just under 10 percent of the market pre-crisis and reached as high as 42 percent after the crash, fell from 25.4 percent in 2016 to 23.8 percent in 2017. However, VA-insured loans remained near all-time highs in terms of market share in 2017 at around 12 percent (from around five percent in 2007) of all owner-occupied home purchase loans originated.

Minority borrowers are more likely to use nonconventional loan products. Compared to white borrowers, a higher percentage of both African-American and Hispanic/Latino borrowers receive FHA-, VA- or USDA-insured home mortgage loans.

By the end of 2017, African-American borrowers made up a slightly higher percentage of total borrowers, increasing from 6.7 percent in 2016 to 7.1 percent in 2017. The slight increase in share by African-American borrowers mirrors the small decline in the percentage of white borrowers, from 83.7 percent to 82.6 percent. Low-income borrowers also mostly used nonconventional loans in 2017.

Denial rates for all home purchase loan applicants declined slowly compared to 2016. However, denial rates for minorities were still higher than for white borrowers. This was true whether before or after the crisis.

What is Home Mortgage Disclosure Act or HMDA Data?

The HMDA data are the most comprehensive source of publicly available information on the mortgage market. The HMDA data are useful in determining whether financial institutions are serving the housing needs in their communities and in identifying possible discriminatory lending patterns. HMDA data can be used in identifying overall market trends in residential financing. However, it does not include all residential loan applications because some institutions are exempt from HMDA reporting requirements.¹

The HMDA requires many depository and non-depository lenders to collect and disclose information about housing-related loans (including home purchase, home improvement and refinancing) and applications for those loans in addition to applicants' and borrowers' income, race, ethnicity and gender. The law governing HMDA was enacted in 1975, initially falling within the regulatory authority of the Federal Reserve Board. In 2011, regulatory authority was transferred to the Consumer Financial Protection Bureau. Whether an institution is required to report depends on its asset size, its location, and whether it is in the business of residential mortgage lending.

Starting in January 2018, the data points collected with HMDA increased based on Congress's amendment after Dodd-Frank Act in 2010, and their impact will be seen in the coming years. However, two changes took effect in 2017 and they have impacted current HMDA data. The first one reduced the number of depository institutions, which were required to report HMDA data. While before this change any depository institution that originated at least one home purchase loan in the preceding year was required to report, in 2017, depository institutions that originated fewer than 25 covered closed-end mortgages in either of the preceding two years were exempt from HMDA reporting. Before 2017, depository institutions were required to make a modified (to protect applicant and borrower privacy) version of their Loan Application Registers (LARs), available to members of the public on request. With the changes, the Consumer Financial Protection Bureau has collected and made available on its website the modified LAR file for each institution that has filed 2017 HMDA data. The loan-level data provided to the public with modified LAR files will be updated with resubmissions and/or late submissions.

¹ Dietrich, Liu, Parrish, Roell and Skhirtladzeto (2018) estimated the universe of mortgage lenders and the number of loans originated regardless of whether they were required to report to HMDA. Their analysis revealed that, in 2017, approximately 12,000 institutions originated at least one mortgage loan, with a total origination volume of approximately 7.9 million loans. Approximately 49 percent of these institutions reported HMDA data for 2017 for 7.3 million loans, which represents nearly 92 percent of the estimated number of originations in the U.S. For more detail about their methodology of estimating "universe," see Dietrich, J., Liu, F., Parrish, L., Roell, D., and Skhirtladze, A., (2018), "Data Point: 2017 Mortgage Market Activity and Trends

A First Look at the 2017 HMDA Data," https://s3.amazonaws.com/files.consumerfinance.gov/f/documents/bcfp hmda 2017-mortgagemarket-activity-trends report.pdf

² History of HMDA, http://www.ffiec.gov/hmda/history2.htm

³ Reporting institutions are those banks, credit unions or saving associations (institutions) with a home or branch office in a Metropolitan Statistical Area (MSA); whose total assets exceeded the coverage threshold on the preceding December 31; and that originated at least 25 home purchase loan or refinancing of a home purchase loan secured by a first lien on a one- to four-family dwelling, in each of two preceding calendar years (for 2017 reporting, they need to originate at least 25 home purchase loans in 2015 and 2016). The asset exemption threshold for depository and non-depository institutions did not change from the previous year, \$44 million and \$10 million, respectively. The institutions that are not federally insured or regulated are exempt from reporting. Also, the originated loans that are not insured, guaranteed or supplemented by a federal agency are not reported. For more information who reports HMDA data, see: https://www.ffiec.gov/hmda/pdf/2017letter.pdf

2017 Mortgage Loan Activity in Tennessee

This report provides an overview of mortgage market activity and lending patterns in Tennessee using the Home Mortgage Disclosure Act (HMDA) data from 2008 until 2017 and compares different demographic groups and lender types. All the information provided in this report is related to the mortgage loan applications and mortgages originated in Tennessee, unless noted.

In this report, we also looked at Tennessee Housing Development Agency's (THDA's) share in Tennessee home loans market in 2017. THDA does not report to HMDA because THDA is not the direct lender, but the lenders originating the loans for THDA borrowers report to HMDA. We compared the home purchase loans reported in HMDA data files in Tennessee in 2017 with the THDA loan portfolio.

I. MORTGAGE APPLICATIONS AND ORIGINATIONS

In 2017, 1,106 institutions reported data on 326,416 home mortgage applications in Tennessee. These loan applications (including applications that were closed by the lender for incompleteness or were withdrawn by the applicant before a decision was made and the loans made in previous year and loans purchased by reporting institutions during the reporting year, which may be originated at any point in time) in 2017 led to 164,577 loan originations, a 59 percent approval rate⁴, in the amount of nearly \$33 billion. Both the number of applications and originations in 2017 were lower than they were in 2016. As shown in Table 1, 2017 saw a six percent decline in the number of loans originated from 2016. Similarly, the total dollar value of loans originated declined by three percent compared to 2016. Tennessee is roughly on track with the national picture, where the total number of originated loans of all types and purposes declined by 12 percent.

Table 1. Reporting Institutions, Applications and Originations and \$ Value, 2008-2017

Activity Year	Number of Reporting Institutions	Number of Loan Records Reported	Number of Loans Originated	\$ Value of Loans Originated
2008	1,185	365,839	163,188	\$23,883,211
2009	1,126	406,028	187,776	\$29,506,366
2010	1,034	335,917	153,282	\$24,100,292
2011	983	304,377	137,943	\$21,726,542
2012	1,012	373,362	180,686	\$29,927,384
2013	1,053	358,454	172,612	\$28,097,932
2014	1,032	262,821	130,220	\$22,211,166
2015	1,060	305,114	155,616	\$29,040,173
2016	1,105	350,490	174,965	\$33,998,024
2017	1,106	326,416	164,577	\$32,898,461

In 2017, 30 financial institutions originated close to 50 percent of all the loans originated in the state. Quicken Loans originated the highest number of loans followed by Mortgage Investors Group (MIG), Regions Bank and Pinnacle Bank. Combined, these four institutions originated 16 percent of all loans

⁴ Excluding the applications withdrawn by applicant and files closed for incompleteness.

originated in Tennessee in 2017. Of 1,106 institutions reporting to HMDA, 104 institutions did not have any loans originated. Wells Fargo reported the highest number of loan applications in 2017, but only 20 percent of those reported loans were originated in 2017 and 66 percent of reported loan applications by Wells Fargo were originated previously and purchased in 2017. Mortgage Investors Group (MIG) was among the top 10 institutions with the highest number of loans originated in the 10-year period in Tennessee. MIG has been the top originating agent of Tennessee Housing Development Agency (THDA) loans for over 10 years

II. HOME PURCHASE VERSUS REFINANCE⁵

According to HMDA data, in 2017, 305,249 home purchase, refinancing and home improvement loan applications for one- to four-family dwellings were submitted⁶ to financial institutions in Tennessee. In the same year, there were an additional 652 reported loan applications for multifamily dwellings and 20,515 applications for manufactured homes.

In 2017, refinance loans originated for one- to four-family dwellings declined by 24 percent from the previous year, and accounted for 32 percent of all loans originated for one- to four-family dwellings during the year. In contrast, home purchase loans originated for one- to four-family dwellings increased by six percent year over year and accounted for 61 percent of all loans originated for one- to four-family dwellings.

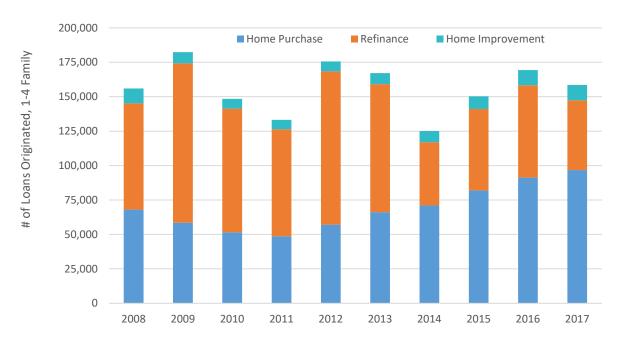
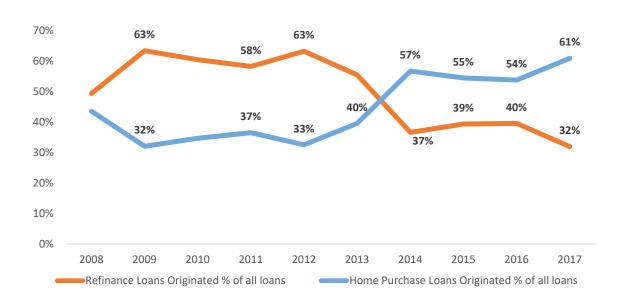


Figure 1. The Number of Mortgage Loans Originated, 1-4 Family Dwellings, 2008-2017

⁵ First lien owner-occupied, one- to four-family mortgage loans originated for home purchase and refinance purposes in 2016 and 2017 by county can be found in Appendix A.

⁶ That number also includes the loans originated in the previous years and purchased by the financial institutions during the year, and preapproval requests.

Figure 2. The Percent of Home Purchase and Refinance Mortgage Loan Originations in Total Loan Originations, 1-4 Family Dwellings, 2008–2017



In Table 2, the number of loans reported to HMDA and various types of action taken by the financial institutions are separated for one- to four-family, manufactured and multifamily dwellings, and the loans for one- to four-family dwellings are further separated based on the loan purpose (purchase, refinance and home improvement).

Table 2. Total Loan Applications and Action Taken by the Financial Institutions, 2008-2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
1-4 Family										
Home Purchase	?									
Applications*	128,363	118,638	103,839	98,742	113,508	128,899	126,868	140,447	156,869	167,874
Originated	68,014	58,509	51,531	48,691	57,175	66,207	71,069	81,942	91,226	96,705
Denied	13,178	9,544	8,794	8,746	10,815	11,663	10,178	10,138	10,806	10,892
Purchased**	30,998	37,257	32,500	30,869	33,452	36,210	31,450	33,186	36,767	39,566
Other***	16,173	13,328	11,014	10,436	12,066	14,819	14,171	15,181	18,070	20,711
Refinancing										
Applications*	194,989	259,264	204,643	174,109	226,436	194,628	101,059	128,792	152,857	115,079
Originated	77,133	115,722	89,818	77,683	111,247	92,850	45,902	59,199	67,098	50,724
Denied	53,211	40,090	34,880	30,917	35,426	36,566	24,410	28,075	36,261	21,343
Purchased**	28,452	59,245	42,693	30,675	36,017	25,970	9,681	12,843	13,869	11,831
Other***	36,193	44,207	37,252	34,834	43,746	39,242	21,066	28,675	35,629	31,181
Home Improver	ment									_
Applications*	27,157	17,118	14,056	14,064	16,029	16,806	18,008	18,592	21,383	22,296
Originated	10,865	8,089	7,080	6,793	7,241	8,126	8,145	9,196	11,055	11,126
Denied	11,129	5,488	4,944	5,393	6,584	6,674	7,490	7,267	7,580	7,713
Purchased**	1,458	1,084	685	600	720	547	465	392	481	563
Other***	3,705	2,457	1,347	1,278	1,484	1,459	1,908	1,737	2,267	2,894
Multifamily										
Applications*	634	407	363	436	585	593	601	683	633	652
Originated	493	321	296	354	489	478	493	574	512	479
Denied	49	44	29	36	42	40	42	44	42	45
Purchased**	59	13	9	13	7	9	3	12	17	41
Other***	33	29	29	33	47	66	63	53	62	87
Manufactured										
Applications*	14,696	10,601	13,016	17,026	16,804	17,528	16,285	16,600	18,748	20,515
Originated	6,683	5,135	4,557	4,422	4,534	4,951	4,611	4,705	5,074	5,543
Denied	4,722	3,287	5,618	7,898	8,214	8,166	7,302	6,618	7,268	8,411
Purchased**	1,115	583	272	252	211	224	286	479	633	648
Other***	2,176	1,596	2,569	4,454	3,845	4,187	4,086	4,798	5,773	5,913

^{*}Applications includes all the loans Applications by financial institutions to HMDA during the year regardless of the action taken.

As Table 2 indicates, the home purchase loan originations for one- to four-family dwellings continued increasing trend started in 2012. Refinancing volume is generally dictated by the available interest rates. Considering that in 2017, annual average mortgage interest rates increased from 3.65 in 2016 to 3.99 in 2017, the volume of refinance loan applications and originations declined from the previous year and reached their lowest levels of the decade except in 2014, when the annual average mortgage interest

^{**}Purchased includes loans purchased by the financial institution during the year

^{***}Other includes: Applications that were approved but not accepted by the applicant, applications withdrawn by the applicant, and files closed for incompleteness in addition to Preapproval Requests that were denied and Preapproval Requests that were approved but not accepted by the applicant

⁷ According to Freddie Mac, Primary Mortgage Market Survey, the average interest rate in 2017 was 3.99 percent compared to 3.65 percent in 2016. See http://www.freddiemac.com/pmms/pmms archives.html

rate was 4.17 percent. Home improvement loan originations are consistently on the rise since a 2011 low but still not used as extensively as they were in 2007. The volume of multifamily loan applications and originations were lower than the previous year.

Trends in First-Lien Mortgage loans on Owner-occupied, One- to Four-Family Dwellings⁸ Metropolitan Statistical Areas (MSAs), 2007-2017

With a five percent one-year increase in the number of home purchase loans originated in 2017, mortgage loan volume in the state surpassed the pre-housing crisis 2007 level of mortgage activity. In the state, home purchase loans originated in 2017 exceeded the home purchase loan originations in 2007 by four percent. This return to 2007 volume occurred in all but two MSAs, the exceptions being the Jackson and Memphis MSAs. Table 3 provides the number of home purchase loans originated by the MSAs between 2007 and 2017 and also shows how the loan origination in 2017 is compared to 2007. The Memphis MSA was the furthest from its 2007 level, reaching just 73 percent of pre-recession home purchase loans levels in 2017. Nashville, Chattanooga and Cleveland witnessed the highest percentage gain over 2007 volume levels.

In 2017, home purchase loans originated in the Nashville MSA increased by two percent compared to 2016. Thirty-nine percent of all home purchase loans originated in the state were in the Nashville MSA during 2017. Of all Tennessee MSAs, the Cleveland MSA has experienced the largest increase from its pre-recession level of 2007, while the Clarksville MSA experienced the largest annual increase in home purchase loan originations.

⁸ The discussion in the following sections is based on first-lien mortgage loans on owner-occupied one- to four-family dwellings, unless otherwise specified.

⁹ Office of Management and Budget (OMB) released the revised delineations of Metropolitan Statistical Areas in February 28, 2013, which affected the HMDA data collected on or after January 1, 2014. After the change in 2013, Maury County was added to the Nashville MSA; Stewart County was excluded from the Clarksville MSA; Campbell, Morgan and Roane Counties were added to the Knoxville MSA; Grainger County was removed from the Morristown MSA and added to the Knoxville MSA; and Crockett County was added to the Jackson MSA. To accurately compare the loan originations in 2017 to previous years, we used the 2013 MSA delineations for all years between 2007 and 2017. This way, the change between two different time periods will be the result of change in the mortgage activity rather than the change in geography.

Table 3. First-Lien *Home Purchase* Loans Originated for Owner-Occupied 1-4 Family Dwellings, 2007-2017, MSA and State

												2017 %
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	of 2007
Chattanooga	4,726	3,436	3,222	2,842	2,632	3,166	3,837	4,010	4,529	5,137	5,304	112%
Clarksville	4,221	2,362	3,305	2,515	2,952	3,042	2,912	3,183	3,228	3,877	4,442	105%
Cleveland	1,076	867	720	663	682	747	934	964	1,102	1,288	1,267	118%
Jackson	1,494	1,113	1,008	811	782	836	982	934	1,072	1,211	1,328	89%
Johnson City	2,220	1,646	1,397	1,271	1,246	1,417	1,503	1,538	1,874	2,049	2,225	100%
Kingsport-Bristol	2,218	1,748	1,391	1,309	1,176	1,390	1,533	1,588	1,916	2,003	2,230	101%
Knoxville	11,292	8,131	7,107	6,295	5,672	6,532	7,770	8,294	9,779	11,245	11,968	106%
Memphis	12,916	8,042	7,686	6,687	5,745	6,463	6,999	7,124	7,908	9,029	9,461	73%
Morristown	1,062	744	638	577	551	600	691	807	972	1,043	1,126	106%
Nashville	29,168	20,613	18,137	16,237	15,462	19,243	23,333	25,228	29,950	32,349	33,146	114%
TENNESSEE	81,647	56,122	51,377	45,433	42,716	50,279	58,613	61,998	72,172	80,282	84,515	104%

In 2017, 13 percent of all home purchase loans originated in the state were in Davidson County, followed by Shelby County with nearly 10 percent and Knox County with eight percent. In 17 counties, home purchase loan volume decreased compared to 2016. Hickman County's home purchase loan originations remained unchanged from 2016 to 2017. The balance, 78 counties including the largest mentioned above, saw an increase in origination. Pickett County experienced the largest annual percentage increase in 2017 with 143 percent, though being a rural county, volume was small, increasing from seven to 17. The largest volume increase in home purchase loans among the counties with 1,000 or more originations in 2017 was in Montgomery County followed by Blount County (a 15 percent and a 12 percent increase, respectively). In Montgomery County home purchase loans increased from 3,877 in 2016 to 4,444 in 2017, and, in Blount County, the loan originations increased from 1,701 to 1,909. Over 10,000 home purchase loans were originated in Davidson County, a two percent annual increase.

Refinance volume offered a different story for several MSAs. A decline of over 20 percent in refinance loan originations in 2017 puts the statewide volume at 68 percent of the refinance loans originated in 2007. However, for refinance loan originations, 2007 was not the peak year. Recovery efforts and declining interest rates caused two peak years in refinance loan originations, 2009 and 2012. In most metro areas refinance activity was still well below 2009 and 2012 peak levels. In 83 counties, the refinance volume declined from the previous year. Refinance activity is not as much of an indicator of housing market recovery because it is, as mentioned earlier, often a function of interest rates and not the other factors that influence overall sales volume. Thus, the recovery to these peaks may not be as illustrative as it is for the home purchase loans.

See Appendix A for the home purchase and refinance loans originated in 2015, 2016 and 2017 by county.

Table 4. First-Lien *Refinance* Loans Originated for Owner-Occupied 1-4 Family Dwellings, 2007-2017, MSA and State

												2017 %	2017	2017	
												of	% of	% of	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2007	2009	2012	
Chattanooga	4,332	3,559	5,844	4,548	3,948	5,841	4,936	2,425	3,067	3,498	2,511	58%	43%	43%	
Clarksville	1,584	1,499	2,713	2,134	2,493	3,727	2,580	1,371	1,818	2,157	1,404	89%	52%	38%	
Cleveland	1,366	1,087	1,755	1,549	1,239	1,733	1,310	663	856	929	658	48%	37%	38%	
Jackson MSA	1,086	1,075	1,528	1,341	1,032	1,549	1,359	674	756	868	656	60%	43%	42%	
Johnson City	1,842	2,000	3,101	2,304	1,971	2,646	2,146	940	1,283	1,421	1,023	56%	33%	39%	
Kingsport-Bristol	2,023	2,113	3,385	2,284	1,953	2,574	2,089	1,048	1,384	1,398	1,126	56%	33%	44%	
Knoxville	9,722	9,833	17,962	13,201	10,271	14,940	11,763	5,398	7,162	8,111	5,745	59%	32%	38%	
Memphis	8,870	7,068	11,963	10,326	8,256	13,151	10,633	4,891	6,101	7,150	5,006	56%	42%	38%	
Morristown	1,197	1,219	1,769	1,302	1,076	1,404	1,216	660	799	878	678	57%	38%	48%	
Nashville	20,524	21,050	36,832	29,531	24,996	35,387	29,281	14,094	20,247	24,582	18,233	89%	50%	52%	
TENNESSEE	65,456	63,839	105,611	80,768	68,283	98,720	79,463	37,793	51,603	60,096	44,564	68%	42%	45%	

III. CONVENTIONAL VERSUS GOVERNMENT-INSURED LOANS¹⁰

In 2017, more than half of home purchase loans originated were conventional. In fact, the distribution of loan types was very similar to the prior year, though there were fluctuations that could be seen gradually across time. Not included in the table below, but on the onset of housing market crash, in 2007, FHA-insured home purchase loans were only ten percent of all loan originations and once the market crashed, FHA's role increased.

Table 5. First-Lien Loans Originated for Owner-Occupied 1-4 Family Dwellings, 2008-2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Home Purchase										
Conventional	58.3%	41.0%	41.3%	44.2%	49.1%	54.7%	56.8%	53.9%	54.7%	56.5%
FHA	30.9%	41.8%	41.8%	34.1%	30.0%	24.3%	20.5%	25.3%	25.4%	23.8%
VA	6.6%	9.9%	9.9%	12.4%	11.5%	11.7%	12.6%	12.0%	12.3%	12.3%
FSA/RHS	4.1%	7.3%	7.0%	9.3%	9.4%	9.3%	10.2%	8.7%	7.6%	7.4%
Refinance										
Conventional	75.3%	73.7%	78.2%	77.9%	75.5%	75.9%	73.7%	69.2%	67.5%	68.3%
FHA	23.2%	22.6%	17.9%	14.1%	14.9%	15.1%	12.8%	17.1%	15.3%	16.6%
VA	1.5%	3.6%	3.8%	7.9%	9.2%	8.5%	13.4%	13.7%	17.1%	14.7%
FSA/RHS	0.0%	0.1%	0.1%	0.2%	0.4%	0.4%	0.1%	0.1%	0.2%	0.3%

After the housing market crisis, FHA was the only option available for many Tennesseans who wanted to obtain a home purchase loan. The decline in conventional loans for home purchases in 2008 and 2009 was related to the decline in the availability of conventional loan options in the Tennessee housing market, rather than a distinct preference from homebuyers. ¹¹ As the markets continued improving, conventional loans increased in importance. In recent years, however, the share of conventional loans has remained between 54 and 57 percent.

¹⁰ First lien, owner-occupied, home purchase loans for one- to four-family dwellings separated by insurer (conventional, FHA-, VA- and FSA/RHS-insured) and by county can be found at Appendix B.

¹¹ For example, in their analysis of 2008 HMDA data, Avery et al. argue that declining home prices and weak economy made it difficult for private lending institutions to offer any mortgage loan without a government guarantee. Additionally, after Private Mortgage Insurance (PMI) companies tightened their credit standards, for many individuals without adequate funds for downpayment government-insured loans were the available options.

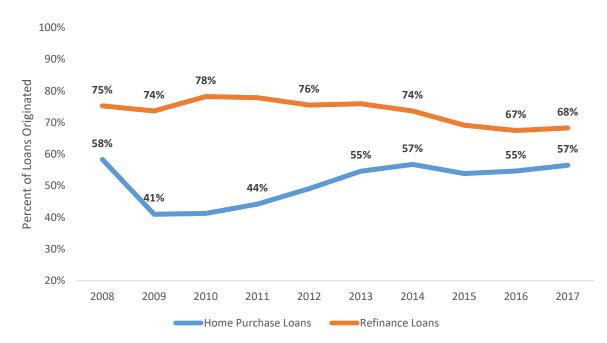


Figure 3. Share of Conventional Loans in Total Loans Originated, 2008-2017

Refinance loans were almost exclusively conventional before the housing market crisis (higher than 90 percent). When the housing market crisis began, this share declined, but remained higher than home purchase loans. Close to 70 percent of all refinance loans originated in 2017 were conventional.

IV. MORTGAGE LOANS FOR NON-OWNER-OCCUPIED HOMES

Financial institutions also report the loan applications and originations for non-owner-occupied homes: rental properties, second homes and/or vacation homes ¹². As Figure 4 shows, the non-owner-occupied home purchases reached the 10-year's highest level in 2007 and started declining in the subsequent years, bottoming out in 2011. Non-owner-occupied home purchase loans have been trending upward since that time. In 2017, with an eight percent year-over-year increase, non-owner-occupied home purchase loan originations were nearly 90 percent higher than the 2010 low, but still 47 percent less than the 2006 peak. It is possible that HMDA data underestimate non-owner-occupied home purchases because of the high number of cash only purchases by investors.

¹² For the data that is collected in 2018 and after, the "occupancy type" variable will be more detailed. It will be possible to identify if the mortgage loan was for a principal residence, second residence or an investment property. See the filing guide at https://s3.amazonaws.com/cfpb-hmda-public/prod/help/2018-hmda-fig.pdf

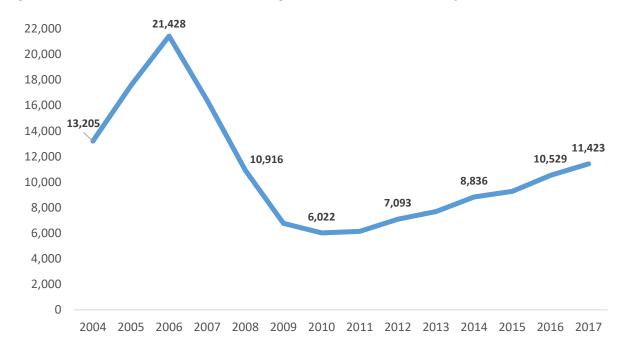


Figure 4. First-Lien Home Purchase Loans Originated for Non-Owner-Occupied Homes, 2004-2017

V. APPLICANT INCOMES AND LOAN AMOUNTS

Financial institutions reporting to HMDA report the loan amounts requested and the applicant income that is considered in making the underwriting decision. The income information is not always required, and 16 percent of loan applications did not include applicant income.¹³

Figure 6 compares the inflation adjusted median income and loan amount for each loan type. Applicants who applied for FSA/RHS-insured loans had the lowest median income and, in real terms, their income was nearly flat. For each of the four loan types, the gap between the loan amount and income is increasing in the recent years.

Across the ten years examined, an average conventional loan applicant had a higher income than nonconventional loan applicants. In 2017, median income of conventional loan applicants was \$73,000, unchanged from the previous year, while for FSA/RHS insured loan applicants, median income was \$45,000. In between the two, median income of FHA-insured loan applicants was \$53,000.

Median loan amounts for VA-insured loans were higher than median conventional loan amounts. In 2017, inflation adjusted median loan amount increased from 2016 for all loan types.

¹³ In some occasions financial institutions reporting HMDA data may mark the "applicant's income" field as "not applicable (NA)." Some of these reasons: the institution does not take the applicant's income into account when making underwriting decisions, the loan or application is for a multifamily dwelling, the transaction is a loan purchase and the institution chooses not to collect the information, the transaction is a loan to an employee of the institution and the institution seeks to protect the employee's privacy, even though institution relied on his or her income, or the borrower or applicant is a corporation, partnership, or other entity that is not a natural person. For more information about HMDA data fields see: A Guide to HMDA Reporting: Getting it Right (Edition effective January, 1, 2013), Federal Financial Institutions Examination Council, at http://www.ffiec.gov/hmda/pdf/2013guide.pdf

Median loan amounts for VA-insured loans were higher than median conventional loan amounts. In 2017, inflation adjusted median loan amount increased from 2016 for all loan types.

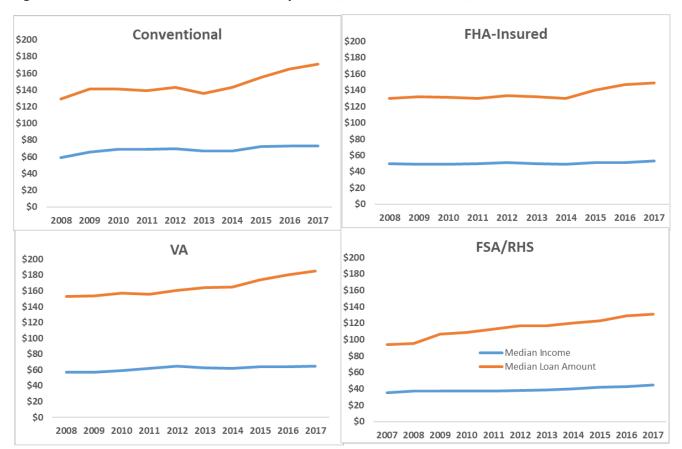


Figure 5. Median Income and Loan Amount by Insurer, in Thousands 2017\$, 2008-2017

In 2017, five percent of home purchase loans and three percent of refinance loans originated had loan amounts above the national conforming loan limit of \$424,100. In the following figure, we looked at the distribution of home purchase loans that were originated between 2008 and 2017 by loan amount¹⁴. While more than half of the home purchase loans originated in 2008 were less than \$150,000, by 2017, these loans constituted less than 35 percent of all loans originated in the year. Forty-nine percent of all borrowers who had home purchase loans in 2017 had loan amounts between \$150,000 and \$300,000. Declining shares of lower priced home purchases in the total of home purchase loan origination is a sign of eroding affordability in the housing markets.

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¹⁴ Loan amounts are non-inflation adjusted nominal values.

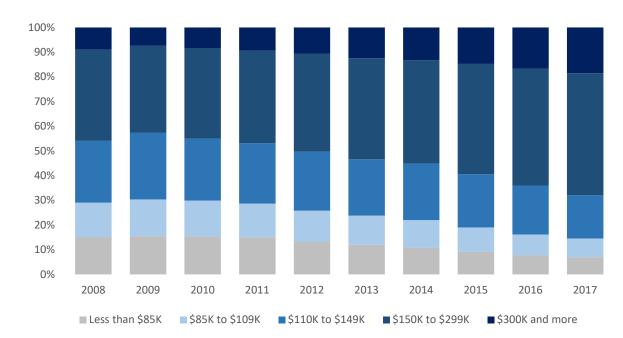


Figure 6. Home Purchase Loans Originated, Nominal Loan Amount, 2008-2017

Average and median loan amounts also varied by the borrower race and ethnicity. In 2017, with over \$260,000, average Asian borrowers took the largest home purchase loan, while the average loan amount for all home purchase loans originated was less than \$220,000.

Table 6. Average and Median Loan Amount by Race, 2017, in Thousands \$

Race	Number of Borrowers	Average Loan Amount	Median Loan Amount		
Asian	1,784	\$261	\$229		
African American	6,007	\$196	\$178		
White	69,788	\$217	\$187		
Other Minority	275	\$197	\$174		
Multi-Racial	1,409	\$243	\$219		
Race Missing	5,244	\$258	\$216		
All Borrowers	84,507	\$219	\$189		

VI. ANALYSIS BY DEMOGRAPHIC GROUPS AND INCOME LEVELS¹⁵

HMDA data allow for an examination of loan applications, originations and denials based on various demographics. HMDA data report race, ethnicity and gender for both the applicant and co-applicant, if available. 16

We also looked at the applicants' income compared to the estimated area median family income ¹⁷ (AMFI) of the census tract where they reported. The purpose was to identify the percent of loan applications, originations and denials for low-income applicants ¹⁸ and to examine loan terms that may vary based on income.

Since 2013, the share of total home purchase and total refinance loans originated for black or African American borrowers is increasing (Table 9), reversing a declining trend. The percent of home purchase loans to Hispanic or Latino borrowers were the highest they have been in the past 10 years.¹⁹

¹⁵ For the analysis from this point on, we will consider first-lien loans for owner-occupied one to four family dwellings.

¹⁶ For the loans that are purchased, the institutions do not have to collect or report race. If the borrower or applicant is not an actual person (for example, a corporation or a partnership), race will be "not applicable." Each applicant can report belonging to up to five racial groups. In this report, we defined combined race categories. The methodology for determining and defining those combined race categories is explained in Appendix C.

¹⁷ The MFI reported in HMDA data files and used in these calculations is the estimated Tract MFI, which is the census tract's estimated MFI for each year, based on the HUD estimate for the Metropolitan Statistical Area (MSA)/Metro Division (MD) or non-MSA/MD area where the tract is located. For tracts located outside of an MSA/MD, the MFI is the statewide non-MSA/MD MFI.

¹⁸ A low- to moderate-income (LMI) applicant is defined as someone who earns less than 80 percent of area median family income. A middle-income applicant earns more than 80 percent but less than 120 percent of the estimated AMFI. If the applicant's income is more than 120 percent of the estimated AMFI, then the applicant is labeled as a high-income applicant. This definition of borrower income categories is consistent with analysis of 2013 HMDA data. For more information, see Neil Bhutta, Jack Popper and Daniel R. Ringo (2015), "The 2014 Home Mortgage Disclosure Act Data," Federal Reserve Bulletin, vol. 101 (November), http://www.federalreserve.gov/pubs/bulletin/2014/pdf/2013 HMDA.pdf

¹⁹ First-lien, owner-occupied, 1-4 family, home purchase and refinance loan originations by race and by county in 2017 can be found at Appendices D and E.

Table 7. Borrower Characteristics and Purpose of the Loan, 2008-2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
			I. Hom	e Purchase	Loans					
Borrower Race										
Asian	1.3%	1.6%	1.4%	1.5%	1.6%	1.7%	1.7%	1.8%	1.9%	2.1%
African American	8.0%	7.9%	8.6%	7.3%	7.1%	6.1%	6.4%	6.5%	6.7%	7.1%
White	81.9%	82.5%	82.9%	83.7%	83.9%	84.7%	84.5%	84.9%	83.7%	82.6%
Other Minority	0.3%	0.5%	0.6%	0.6%	0.4%	0.4%	0.5%	0.4%	0.4%	0.3%
Multi-Racial	1.0%	1.0%	0.9%	1.1%	1.1%	1.2%	1.3%	1.4%	1.5%	1.7%
Missing	7.5%	6.5%	5.6%	5.8%	5.8%	5.8%	5.6%	5.1%	5.7%	6.2%
Borrower Ethnicity										
Hispanic or Latino	2.7%	2.4%	2.5%	2.7%	2.7%	3.0%	3.2%	3.4%	3.8%	3.9%
Not Hispanic or Latino	90.2%	90.9%	91.7%	91.3%	91.3%	91.1%	91.2%	91.5%	90.6%	90.2%
Missing and/or NA	7.0%	6.6%	5.8%	5.9%	6.0%	5.9%	5.6%	5.1%	5.6%	5.9%
Borrower Income										
Low to Moderate Income	31.2%	40.1%	38.4%	35.7%	34.8%	30.2%	30.0%	30.2%	28.3%	26.4%
Middle Income	26.8%	26.1%	25.3%	25.5%	25.5%	25.8%	26.4%	26.5%	26.4%	27.7%
High Income	40.3%	32.5%	35.2%	37.8%	38.7%	43.0%	42.9%	42.5%	44.7%	45.3%
Missing	1.6%	1.3%	1.0%	1.0%	0.9%	1.1%	0.7%	0.8%	0.7%	0.7%
	-		II. Re	efinance L	oans			=		-
Borrower Race										
Asian	0.7%	1.0%	1.0%	1.2%	1.1%	1.1%	0.9%	1.0%	1.2%	0.9%
African American	7.5%	4.6%	4.3%	4.7%	5.3%	6.8%	8.0%	7.8%	8.0%	8.7%
White	81.9%	84.6%	85.5%	85.1%	84.8%	82.9%	80.4%	80.1%	78.6%	77.1%
Other Minority	0.2%	0.3%	0.3%	0.4%	0.3%	0.4%	0.5%	0.4%	0.4%	0.3%
Multi-Racial	0.9%	1.0%	0.9%	1.0%	1.1%	1.2%	1.6%	1.2%	1.2%	1.4%
Missing	8.8%	8.5%	8.0%	7.7%	7.4%	7.6%	8.7%	9.4%	10.4%	11.5%
Borrower Ethnicity										
Hispanic or Latino	1.7%	1.6%	1.6%	1.8%	1.8%	2.1%	2.3%	2.2%	2.3%	2.6%
Not Hispanic or Latino	90.4%	90.0%	90.3%	90.6%	90.7%	90.1%	89.1%	88.7%	87.6%	86.6%
Missing and/or NA	7.9%	8.4%	8.1%	7.6%	7.5%	7.8%	8.6%	9.1%	10.1%	10.8%
Borrower Income										
Low to Moderate										
Income ²⁰	26.5%	21.9%	21.7%	21.3%	20.7%	21.2%	24.7%	21.1%	19.2%	24.5%
Middle Income	25.7%	22.1%	22.5%	21.7%	20.9%	21.4%	21.9%	20.4%	19.5%	23.2%
High Income	41.6%	42.5%	46.7%	44.5%	44.5%	43.0%	39.6%	39.9%	41.8%	41.0%
Missing	6.2%	13.5%	9.1%	12.5%	13.8%	14.3%	13.8%	18.5%	19.5%	11.3%
# of Home Purchase Loans	56,122	51,377	45,433	42,716	50,279	58,613	61,998	72,172	80,282	84,515
# of Refinance Loans	63,839	105,611	80,768	68,283	98,720	79,463	37,793	51,603	60,096	44,564

NOTE: First lien mortgage loans originated for one-to-four family owner-occupied homes.

²⁰Borrowers' classification as Low to Moderate Income by year is relative to the year in question, not based on 2017 AMFI.

Figure 7. The Percent of Home Purchase Loans Originated, Borrower Income, 2008-2017

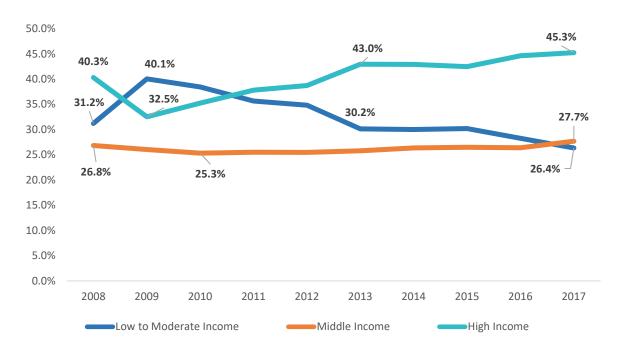
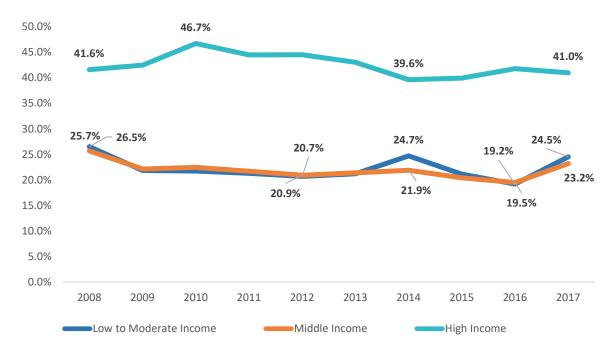


Figure 8. The Percent of Refinance Loans Originated, Borrower Income, 2008-2017



As the preceding figures²¹ show, high-income borrowers have consistently accounted for a higher percentage of refinance loans originated than other income categories. In 2017, 41 percent of all

²¹ Not included in the figures is the borrowers whose income information that was not provided. Especially for the refinance loan originations, the borrowers without income information is a relatively higher portion of all refinance loan borrowers. For example, in the last three years of this study (2014-2016), 14 percent or more of all refinance loan borrowers did not have income information.

refinance loans originated were for high-income borrowers compared to 42 percent in the previous year.

The picture is somewhat different for the home purchase loans originated. For a short period between 2009 and 2011, LMI borrowers accounted for a higher percentage of home purchase loans than high-income borrowers. However, starting in 2012, high income borrowers' percentage in total loans originated exceeded the LMI borrowers again. Since then, the distance between the percentage of high-income borrowers and LMI borrowers is getting larger. In 2017, 26 percent of all home purchase loans originated were for LMI borrowers. The percentage of loans originated for middle-income borrowers was steady over the years, but always lower than the LMI and high-income borrowers. In 2017, this shifted to where nearly 28 percent of total originations were from middle-income borrowers, exceeding the share of LMI borrowers.

It is interesting to see if there is any difference in the loan originations for different borrower characteristics depending on whether or not the loan is a conventional or government insured loan. Non-conventional loans (FHA-, VA-, RHS- and FSA-insured loans) usually have lower downpayment requirements. Considering that income and net worth of African-American and Hispanic households are substantially lower, on average, than white households²², it is possible that minority and non-white borrowers prefer these loan products with lower downpayment requirements. It is also possible that a lender may steer²³ minority and non-white borrowers to these loan products even though they would be eligible for conventional mortgages.

The following table displays the nonconventional, first-lien mortgage loans originated for one- to four-family owner-occupied homes separated by borrower characteristics and loan purpose. The percentages given in the table represent the nonconventional loans made to borrowers in a race category as a percent of all loans made to borrowers in that racial group (including conventional and nonconventional loans). For example, in 2017, 17 percent of all loans made for Asian borrowers were nonconventional loan products.

The number of first-lien home purchase and refinance loans originated for owner-occupied, one- to four-family dwellings separated by race and county is provided in Appendices D and E.

²² Recent Trends in Wealth-Holding by Race and Ethnicity: Evidence from the Survey of Consumer Finances, Board of Governors of Federal Reserve System.

²³ Agarwal, Sumit, Gene Amromin, Itzhak Ben-David, Douglas D. Evanoff. "Loan Product Steering in Mortgage Markets," NBER Working Paper No. 22696, September 2016, available at http://www.nber.org/papers/w22696

Table 8. Borrower Characteristics and Loan Purpose, Nonconventional Loans, 2008-2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
			I. Home	Purchase	Loans					
Borrower Race										
Asian	20.2%	35.4%	35.1%	37.9%	33.4%	22.3%	23.5%	22.9%	19.1%	17.3%
African American	69.2%	86.3%	87.6%	83.3%	81.3%	76.5%	73.4%	77.7%	75.0%	72.0%
White	39.8%	57.3%	56.6%	54.1%	49.2%	44.0%	41.6%	44.2%	43.7%	41.9%
Other Minority	34.9%	38.6%	31.1%	35.5%	34.8%	34.1%	29.9%	34.9%	34.4%	54.9%
Multi-Racial	48.1%	60.3%	60.5%	64.2%	56.5%	54.1%	54.3%	55.4%	54.8%	52.7%
Missing	36.1%	54.3%	54.5%	50.7%	43.1%	37.4%	38.4%	43.8%	40.8%	38.1%
Borrower Ethnicity										
Hispanic or Latino	55.1%	75.2%	75.1%	72.6%	65.5%	61.5%	60.8%	60.6%	58.7%	56.1%
Not Hispanic or Latino	41.8%	59.1%	58.8%	55.9%	51.2%	45.5%	43.0%	45.8%	45.2%	43.4%
Missing and/or NA	34.5%	51.3%	50.1%	45.4%	39.3%	35.2%	36.7%	42.1%	38.3%	36.5%
Borrower Income										
Low to Moderate Income	52.8%	71.6%	73.0%	70.0%	65.8%	60.9%	58.2%	61.4%	58.7%	55.0%
Middle Income	50.8%	65.5%	65.2%	64.2%	58.3%	55.1%	53.4%	55.7%	56.5%	54.0%
High Income	27.6%	39.3%	39.4%	37.5%	33.2%	29.2%	26.9%	29.6%	30.6%	30.7%
All Borrowers	41.7%	59.0%	58.7%	55.8%	50.9%	45.3%	43.2%	46.1%	45.3%	43.5%
			II. Ref	inance Lo	oans					
Borrower Race										
Asian	17.4%	12.4%	11.8%	11.0%	12.2%	12.7%	12.8%	13.9%	10.7%	11.3%
African American	44.8%	58.5%	48.4%	50.7%	48.9%	45.9%	47.5%	54.2%	56.8%	52.6%
White	22.3%	24.4%	20.5%	20.6%	22.7%	22.0%	23.0%	27.7%	29.2%	28.4%
Other Minority	34.3%	18.3%	14.1%	19.4%	25.5%	24.6%	22.0%	25.9%	37.3%	42.9%
Multi-Racial	32.5%	32.8%	27.7%	29.5%	35.3%	33.6%	57.5%	43.7%	44.3%	40.0%
Missing	30.3%	29.3%	22.1%	23.2%	27.0%	27.3%	33.9%	38.8%	39.8%	38.2%
Borrower Ethnicity										
Hispanic or Latino	34.6%	39.4%	29.8%	33.6%	36.5%	36.5%	35.0%	37.7%	40.5%	35.7%
Not Hispanic or Latino	24.4%	25.9%	21.7%	21.9%	24.3%	23.6%	25.4%	30.0%	31.6%	30.9%
Missing and/or NA	26.9%	28.5%	20.5%	21.8%	23.8%	25.4%	33.4%	37.1%	39.0%	36.6%
Borrower Income										
Low to Moderate Income	26.2%	27.0%	24.4%	20.6%	18.4%	15.0%	17.0%	21.0%	23.5%	28.9%
Middle Income	29.4%	23.4%	22.1%	20.9%	17.6%	15.6%	19.4%	20.8%	22.1%	28.7%
High Income	16.6%	12.3%	12.1%	11.8%	10.0%	9.6%	12.2%	13.4%	13.2%	19.0%
All Borrowers	24.7%	26.3%	21.8%	22.1%	24.5%	24.1%	26.3%	30.8%	32.5%	31.7%

NOTE: Nonconventional, first lien mortgage loans originated for one-to-four family owner-occupied homes.

Table 10 reveals that African American and LMI and middle income borrowers used nonconventional government-insured (FHA, VA and/or FSA/RHS insured) loans more often than conventional loans. In 2017, for example, 72 percent of all African-American borrowers, 56 percent of all Hispanic or Latino borrowers, 55 percent of LMI borrowers and 54 percent of middle-income borrowers used

nonconventional loans for home purchase, while in the same year, 43.5 percent of all home purchase loans were nonconventional. The data also show that, in all race, ethnicity and income categories, the share of nonconventional loans increased in 2009. For example, in 2008, 69 percent of African-American home buyers selected nonconventional loans while that percentage increased to 86 percent in 2009 and to 88 percent in 2010. Similar trends were visible in all other race categories. In 2017, in all race categories and for all borrowers, except "other minority," the share of nonconventional loans were lower than in 2016. This is a sign that conventional loan products are returning to the market.

Similar to home purchase loans, black and LMI borrowers used non-conventional loans more often than other borrowers for refinance purpose. Additionally, non-conventional loan usage among various race and income categories for refinance loans did not follow the similar declining trend in the recent years. For example, from 2016 to 2017, the use of non-conventional loans among Asian and "other minority" borrowers increased, while declining for other race categories and for Hispanic and Latinos.

The following figure displays that African-American and multi-racial borrowers are more likely to use nonconventional loans than conventional loans.

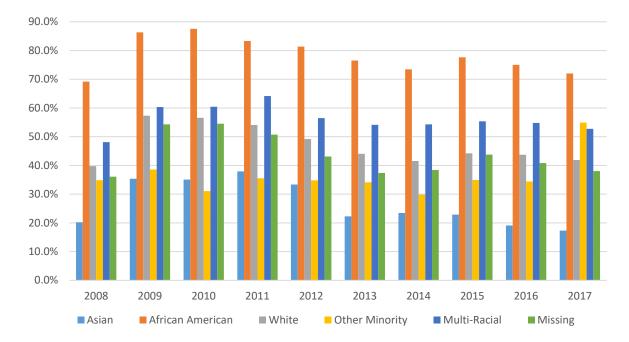
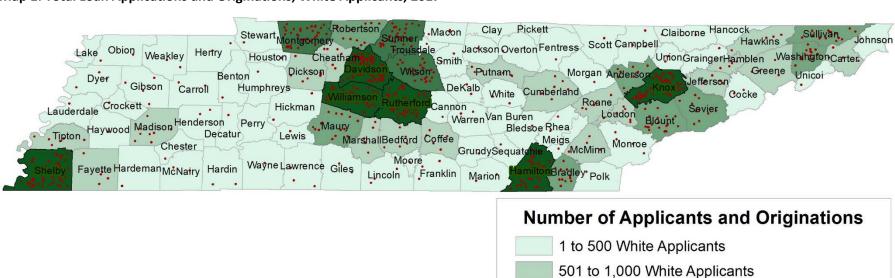


Figure 9. Non-Conventional Share of Home Purchase Loans, by Race, 2008-2017

A comparison of borrowers who received nonconventional (FHA, VA or FSA/RHS insured) first lien home purchase loans for owner-occupied one- to four-family dwellings with race and county loan totals is given in Appendix F.

The following maps display the number of loan applications and originations for white and African American borrowers in 2017.

Map 1: Total Loan Applications and Originations, White Applicants, 2017



1,001 to 2,500 White Applicants 2,501 to 5,000 White Applicants 5,001 to 10,283 White Applicants

: 1 Dot = 100 Loans Originated, White Applicants

Map 2: Total Loan Applications and Originations, African American Applicants, 2017





VII. DENIAL RATES AND DENIAL REASONS

We calculated denial rates by dividing the number of loans denied by the financial institution by the total number of loan applications, excluding the number of applications withdrawn and the applications closed for incompleteness.

In the following table, denial rates are presented as separated by race and loan type, i.e. conventional versus nonconventional. The table shows variations in denial rates across different race categories. However, the denial rates data in the absence of other important borrower and loan characteristics such as the applicants' credit scores and loan to value (LTV) ratios should be considered carefully. Additionally, looking back to the housing crisis years captures a range of issues that make the comparison of denial rates across time tricky. For example, in the years prior to housing market crash, looser underwriting standards brought riskier borrowers with weaker credit profiles to the market, increasing the demand for loans. After the crisis, it is possible that some borrowers with blemished credit histories or with lower income might self-select not to apply for a loan.

Table 9. Denial Rates, Home Purchase Loans, Loan Type, 2008-2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
I. Home Purchase Loans										
Conventional and Nonconve	entional			=				=	=	=
All Applicants	15.5%	13.5%	14.0%	14.7%	15.6%	14.6%	12.4%	10.9%	10.5%	10.0%
Race										
Asian	16.7%	13.4%	15.4%	16.8%	16.4%	16.3%	13.3%	12.1%	11.5%	9.3%
African American	30.2%	21.0%	21.2%	22.6%	24.7%	24.6%	20.6%	18.3%	17.3%	17.4%
White	13.1%	12.3%	12.7%	13.3%	14.4%	13.3%	11.2%	9.8%	9.4%	8.8%
Other Minority	23.7%	14.1%	16.0%	12.7%	17.6%	20.7%	14.0%	14.2%	14.4%	13.2%
Multi-Racial	17.2%	14.3%	16.0%	14.4%	17.0%	17.9%	12.1%	10.2%	11.7%	10.7%
Missing	20.1%	17.4%	19.6%	21.0%	20.0%	19.3%	19.1%	17.4%	15.9%	15.4%
Ethnicity										
Hispanic	19.5%	16.5%	17.0%	16.1%	19.0%	19.6%	17.1%	14.9%	12.6%	12.2%
Not Hispanic	14.9%	13.0%	13.5%	14.0%	15.1%	14.1%	11.8%	10.4%	10.0%	9.5%
Conventional Only										
All Applicants	15.8%	15.4%	15.1%	15.6%	15.5%	13.0%	10.9%	9.7%	9.1%	8.6%
Race										
Asian	16.8%	13.1%	13.5%	17.0%	16.0%	13.9%	13.2%	11.6%	10.6%	8.5%
African American	39.0%	37.1%	35.3%	31.6%	31.9%	27.7%	22.5%	21.5%	19.1%	18.2%
White	13.4%	14.2%	14.0%	14.5%	14.6%	11.9%	9.8%	8.8%	8.2%	7.7%
Other Minority	27.2%	16.3%	15.3%	14.2%	18.1%	20.6%	11.2%	14.0%	13.5%	13.5%
Multi-Racial	18.0%	17.7%	20.4%	14.3%	17.3%	17.0%	11.6%	8.7%	10.9%	10.3%
Missing	20.0%	18.3%	19.6%	21.3%	17.4%	17.5%	16.9%	15.9%	14.1%	13.6%
Ethnicity										
Hispanic	21.8%	21.7%	20.9%	18.8%	20.6%	17.3%	17.4%	14.2%	11.3%	12.3%
Not Hispanic	15.2%	15.0%	14.6%	14.7%	14.9%	12.4%	10.2%	9.1%	8.6%	8.1%

NOTE: First lien home purchase loans for one-to-four family owner-occupied homes.

In Tennessee, in 2017, the denial rate of all borrowers in different race categories (including conventional and nonconventional loans) who applied for a home purchase loan slightly declined from 10.5 percent in 2016 to 10 percent. In fact, for all race categories, except African American borrowers,

the denial rates in 2017 were lower than the previous year, which is a continuation of the trend in the last several years in the state and the nation. Nationwide, denial rates continued a downward trend.²⁴ Several indices²⁵ indicate that mortgage credit availability was lower in 2017 than before the crisis. The fact that denial rates declined even with tighter credit market conditions might result from borrowers' self-selection, with relatively riskier borrowers choosing not to apply for mortgage loans.

At 17.4 percent, African American applicants had the highest denial rate in 2017, followed by the applicants whose race information was not provided. Among the nonwhite race categories, Asian applicants had the lowest denial rates. Apart from African-American applicants, other minority and Hispanic conventional loan applicants, experienced lower denial rates than nonconventional applicants in 2017. Hispanic applicants who applied for a conventional home purchase loan also had higher denial rates than the non-Hispanic applicants who applied for a similar home purchase loan, which was higher than the previous year.

The following figure compares the denial rates of home purchase loans for all, white, African American applicants.

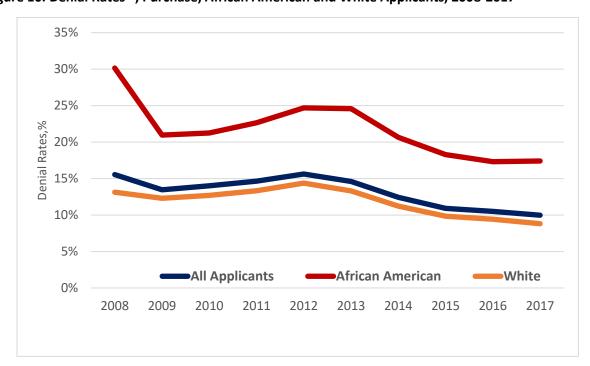


Figure 10. Denial Rates²⁶, Purchase, African American and White Applicants, 2008-2017

²⁴ Dietrich, J., Liu, F., Parrish, L., Roell, D., and Skhirtladze, A., (2018), "Data Point: 2017 Mortgage Market Activity and Trends A First Look at the 2017 HMDA Data," https://s3.amazonaws.com/files.consumerfinance.gov/f/documents/bcfp hmda 2017-mortgage-market-activity-trends report.pdf

²⁵ For example, Housing Credit Availability Index (HCAI) from Urban Institute (https://www.urban.org/policy-centers/housing-finance-policy-center/projects/housing-credit-availability-index) and Mortgage Bankers Association (MBA) Mortgage Credit Availability Index (https://www.mba.org/news-research-and-resources/research-and-economics/single-family-research/mortgage-credit-availability-index-temp">https://www.mba.org/news-research-and-resources/research-and-economics/single-family-research/mortgage-credit-availability-index-temp).

²⁶ Calculated as the number of denied loan applications divided by the total number of applications, excluding withdrawn applications and applications closed for incompleteness for first lien conventional and nonconventional *home purchase* loans for one- to four-family owner-occupied homes.

African American applicants were consistently denied more often than white and all other applicants. This difference was more pronounced before the housing market crash with a large dip in 2009. Since 2012 until 2017, the denial rates for home purchase loan applicants of all races were declining.

Denial rates for refinance loans, in general, were 14 to 29 percentage points higher than home purchase loans. While the denial rates for home purchase loans increased in 2017 compared to 2016 for almost all race categories, denial rates for refinance loans in 2017 declined for all applicants. Regardless of race, 28 percent of all borrowers who applied for either conventional or nonconventional refinance loans were denied in 2017. This is compared to the 34 percent denial rate in 2016. White refinance loan applicants consistently experienced the lowest denial rate in each of the 10 years covered with this study.

The following table displays the denial rates for refinance loans separated by loan type and applicant race.

Table 10. Denial Rates, Refinance Loans, Loan Type, 2008-2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Conventional and Noncon	ventiona	l	-	-	_	-	-	-	-	-
All Applicants	39.7%	24.3%	26.4%	26.8%	22.6%	26.8%	34.2%	30.8%	33.6%	28.0%
Race										
Asian	35.6%	26.0%	26.4%	25.9%	27.1%	30.2%	41.6%	36.2%	35.4%	31.3%
African American	61.5%	44.6%	45.6%	43.1%	34.7%	39.0%	48.7%	45.9%	47.6%	41.0%
White	34.7%	21.0%	23.1%	23.7%	20.3%	23.7%	30.4%	27.4%	30.6%	24.6%
Other Minority	61.1%	29.3%	37.4%	28.3%	31.1%	32.6%	42.2%	38.5%	47.0%	42.9%
Multi-Racial	48.1%	26.1%	29.4%	26.8%	23.9%	26.3%	30.7%	35.0%	39.3%	33.0%
Missing	47.7%	35.6%	39.6%	41.5%	34.2%	40.3%	45.6%	38.7%	39.3%	34.6%
Ethnicity										
Hispanic	47.5%	30.9%	31.9%	31.7%	28.8%	31.7%	40.9%	40.2%	39.6%	32.0%
Not Hispanic	38.5%	22.9%	24.8%	25.1%	21.4%	25.5%	33.0%	29.7%	32.8%	27.0%
Conventional Only										
All Applicants	39.4%	21.8%	22.9%	24.7%	22.3%	26.4%	32.8%	30.2%	33.1%	25.5%
Race										
Asian	36.0%	24.1%	23.9%	24.4%	26.9%	30.8%	40.0%	35.8%	34.4%	29.4%
African American	67.4%	51.7%	44.1%	45.0%	37.7%	43.2%	51.9%	51.9%	55.6%	44.2%
White	34.2%	19.3%	20.7%	22.2%	20.2%	23.4%	29.0%	26.8%	29.8%	22.4%
Other Minority	65.3%	26.9%	35.0%	27.1%	34.5%	32.9%	39.5%	35.0%	48.3%	44.1%
Multi-Racial	50.1%	25.0%	24.7%	23.9%	24.0%	25.9%	38.5%	35.8%	41.0%	27.9%
Missing	45.0%	28.3%	32.4%	36.9%	32.9%	39.5%	44.4%	38.7%	39.3%	31.1%
Ethnicity										
Hispanic	49.2%	31.8%	30.1%	31.8%	30.1%	34.6%	43.1%	43.1%	42.1%	32.0%
Not Hispanic	38.5%	21.0%	21.9%	23.3%	21.1%	25.1%	31.5%	29.1%	32.2%	24.7%

 ${\it NOTE: First \ lien \ mortgage \ refinance \ loans \ for \ one-to-four \ family \ owner-occupied \ homes.}$

In the absence of other important loan and borrower characteristics, namely credit scores and debt-to-income ratios, the denial rates should be treated cautiously. However, even after controlling for income levels, denial rates between white and African American applicants varied significantly. In 2017, less than seven percent of high-income white applicants were denied for a home purchase loan, while more than 11 percent of high-income African-American applicants were denied. The difference between the denial rates of white and African-American applicants continues for low- and middle income borrowers.

Low-income African American borrowers had ten percentage point higher denial rates than low-income white applicants. The following figure shows the denial rates of white and African American applicants separated by their income level.

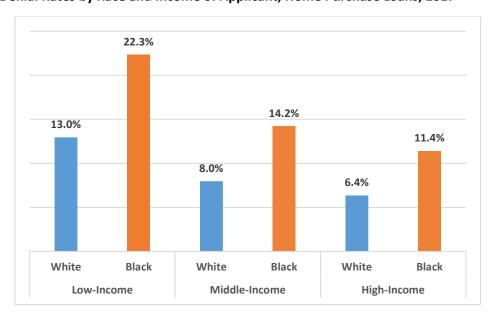


Figure 11. Denial Rates by Race and Income of Applicant, Home Purchase Loans, 2017

The difference between the denial rates of African American and white applicants separated by race is more pronounced when only conventional home purchase loan applications are included. In 2017, less than 13 percent of low-income white applicants were denied for a conventional home purchase loan while nearly 25 percent of low-income African-American borrowers were denied. This is consistent with the trend of relatively higher portion of nonwhite applicants receiving nonconventional loans.

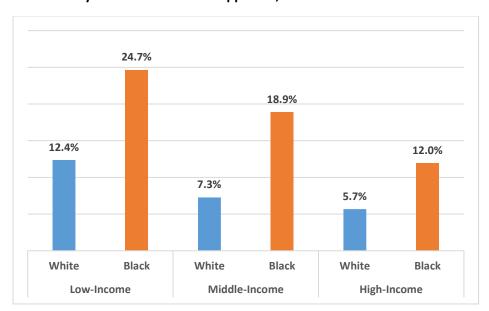


Figure 12. Denial Rates by Race and Income of Applicant, Conventional Home Purchase Loans, 2017

The denial rates for home purchase loans and refinance loans in 2017 separated by county and race are provided in Appendices G and H.

Financial institutions reporting to HMDA can report²⁷ up to three reasons for denial by choosing among nine²⁸ possible reasons when they deny an applicant. In 2017, among the applications for first-lien one-to four-family owner-occupied home purchase loans, financial institutions provided at least one reason for 68 percent of applicants they denied. Debt-to-income (DTI) ratio and credit history were the most cited reasons for denials followed by collateral among the denied applications.

VIII. HIGHER-PRICED LOANS

Institutions are also required to report the spread between the annual percentage rate (APR) and the average prime offer rate for a comparable transaction if the spread is equal to or greater than 1.5 percentage points for first-lien loans or 3.5 percentage points for junior lien loans for a home-purchase loan, a refinancing, or a dwelling-secured home improvement loan originated. Higher-priced loans are defined as first-lien loans with an APR³⁰ of at least 1.5 percentage points above the average prime offer rate (APOR) for a similar type loan. For a junior-lien loan to be considered as higher priced, the spread between APR on the loan and APOR for a similar type loan must be at least 3.5 percentage points.

The following table compares the occurrence of higher-priced loans for the first-lien home purchase loans for one- to four-family owner-occupied homes by race and ethnicity of the applicants. According to the table, in 2017, the proportion of all higher-priced home purchase loans (conventional and nonconventional with interest rates above the threshold) increased from the previous year for almost all race groups, except for Asian borrowers. In 2017, more than eight percent of all borrowers received higher-priced loans compared to 6.7 percent in 2016. The largest increase in higher-priced loans percentage was among African American borrowers. Since 2011, African-American borrowers received the highest percentage of higher-priced loans, across all race categories. The percent of African American borrowers who received higher-priced loans increased from nearly 13 percent in 2016 to over 18 percent in 2017. Less than three percent of home purchase loans originated for Asian borrowers in 2017 were considered higher priced, which was the lowest among all race categories.

The longer term changes in the occurrence of higher-priced loans should be interpreted carefully due, in part, to changes in definition. Since 2009, higher priced loans have been identified using a broader definition. Before 2009, if the spread between a mortgage's APR and the rate on a Treasury bond of comparable term, instead of the Average Prime Offer Rate (APOR), was greater than three (3) percentage points, the loan was reported as a "higher-priced" loan. Additionally, for the years prior to

²⁷ They are not required to report because it is optional except for institutions that are subject to Office of the Comptroller of the Currency (OCC) regulations or Federal Deposit Insurance Corporation (FDIC) regulations.

²⁸ Possible denial reasons include: debt-to-income ratio, employment history, credit history, collateral, insufficient cash (downpayment, closing costs), unverifiable information, credit application incomplete, mortgage insurance denied, and other

²⁹ To determine whether the rate spread meets this threshold, institutions use the average prime offer rate (APOR) in effect for the type of transaction as of the date the interest rate was set, and use the APR for the loan, as calculated and disclosed to the consumer. An application that is identified as "not applicable (NA)" could have a difference between the APR and the average prime offer rate that is less than 1.5 percentage points for a first-lien loan and less than 3.5 percentage points for a junior lien loan, it could be an application that did not result in origination, the loan is not subject to Regulation Z, the loan is a home improvement loan that is not dwelling-secured, or the loan is purchased by the financial institution.

³⁰ The APR for a mortgage loan is different than the interest rate on the loan, and it is a function of the costs of the mortgage loan added to the interest rate and re-amortized based on the size of the loan borrower is requesting.

2009, the use of the rate on a Treasury bond of comparable term to determine the rate spread created inadvertent fluctuations in the spread over time.³¹

Table 11. Higher-Priced Loans, Home Purchase Loans, 2008-2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	
Conventional and Nonconventional											
All Applicants	9.4%	6.0%	3.8%	5.2%	6.8%	8.9%	9.7%	6.4%	6.7%	8.4%	
Race											
Asian	5.0%	3.6%	2.3%	3.7%	4.2%	5.8%	7.4%	3.2%	3.0%	2.7%	
African American	17.1%	5.9%	3.6%	9.1%	11.5%	17.7%	22.4%	10.9%	12.6%	18.3%	
White	9.0%	6.3%	4.0%	5.0%	6.6%	8.5%	9.0%	6.3%	6.5%	7.8%	
Other Minority	12.2%	4.5%	3.2%	5.1%	4.5%	10.7%	15.1%	6.7%	5.6%	10.5%	
Multi-Racial	6.9%	4.0%	3.0%	4.3%	6.1%	8.9%	9.9%	7.0%	6.1%	8.2%	
Missing	7.0%	3.1%	1.5%	3.3%	5.3%	6.4%	6.0%	3.6%	4.1%	5.7%	
Ethnicity	Ethnicity										
Hispanic	12.1%	6.1%	3.4%	6.3%	7.8%	11.4%	12.6%	8.3%	8.6%	12.0%	
Not Hispanic	9.5%	6.2%	3.9%	5.3%	6.9%	8.9%	9.8%	6.4%	6.8%	8.4%	
Conventional Only											
All Applicants	10.8%	10.1%	8.1%	7.3%	7.7%	7.1%	5.7%	5.8%	5.2%	4.9%	
Race											
Asian	5.2%	4.3%	3.1%	3.3%	3.7%	3.5%	3.5%	2.3%	2.2%	1.1%	
African American	25.4%	12.1%	16.3%	14.8%	8.1%	10.7%	8.8%	8.1%	7.5%	8.9%	
White	10.6%	10.9%	8.4%	7.7%	8.2%	7.5%	5.8%	6.1%	5.5%	5.1%	
Other Minority	17.0%	4.3%	4.6%	4.5%	5.5%	10.8%	12.9%	7.7%	5.8%	6.5%	
Multi-Racial	9.8%	5.3%	7.0%	4.8%	6.4%	6.0%	5.3%	3.8%	4.9%	4.2%	
Missing	6.3%	3.1%	1.8%	1.6%	2.7%	2.2%	1.8%	2.0%	2.0%	2.2%	
Ethnicity											
Hispanic	18.2%	17.7%	12.4%	9.8%	11.7%	11.2%	8.9%	9.3%	9.4%	7.6%	
Not Hispanic	10.9%	10.6%	8.4%	7.6%	7.9%	7.3%	5.8%	5.9%	5.2%	4.9%	
			N	onconven	tional Onl	•					
All Applicants	7.5%	3.1%	0.8%	3.5%	6.0%	11.1%	15.0%	7.1%	8.5%	12.9%	
Race											
Asian	4.0%	2.4%	0.9%	4.2%	5.2%	13.7%	20.0%	6.1%	6.4%	10.4%	
African American	13.4%	4.9%	1.8%	7.9%	12.2%	19.9%	27.3%	11.7%	14.4%	21.9%	
White	6.5%	2.9%	0.6%	2.8%	5.0%	9.8%	13.4%	6.6%	7.9%	11.7%	
Other Minority	3.3%	4.9%	0.0%	6.2%	2.6%	10.5%	20.2%	4.8%	5.1%	13.9%	
Multi-Racial	3.8%	3.2%	0.4%	4.0%	5.9%	11.5%	13.8%	9.6%	7.0%	11.8%	
Missing	8.3%	3.2%	1.2%	4.9%	8.6%	13.4%	12.7%	5.6%	7.2%	11.4%	
Ethnicity											
Hispanic	7.2%	2.2%	0.5%	5.0%	5.8%	11.5%	15.0%	7.6%	8.1%	15.4%	
Not Hispanic	7.5%	3.2%	0.8%	3.4%	6.0%	11.0%	15.1%	7.1%	8.6%	12.9%	
NOTE: First lien home purchase loans originated for owner occupied one-to-four family dwellings.											

Before 2011, for almost all race categories, the borrowers who used conventional home purchase loans had a higher proportion of loans with interest rates higher than the spread threshold. However, in most recent years, the proportion of higher-priced loans for conventional and nonconventional loans was

³¹ For more information about the impact of rate spread rule changes, see See Bhutta, N, Steven Laufer, and Daniel R. Ringo (2017) "Residential Mortgage Lending in 2016: Evidence from the Home Mortgage Disclosure Act Data," forthcoming in the Federal Reserve Bulletin, accessed on 10/11/2017 at https://www.federalreserve.gov/publications/files/2016 HMDA.pdf

reversed. In 2014, borrowers in all race categories who purchased a home using nonconventional loans (including FHA, VA and FSA/RHS insured loans) had a higher occurrence of loans with interest rates above the spread reporting threshold. The trend continued in 2017. For example, in 2017, 22 percent of African-American borrowers who received nonconventional mortgage loans (FHA-, VA- or RD-insured) had higher-priced loans while nine percent of African American borrowers with conventional mortgage loans received higher-priced loans.

These patterns also differed by the type of nonconventional loan. Among nonconventional loans, borrowers who used VA or FSA/RHS insured loans received fewer higher-priced loans than borrowers with FHA-insured loans. The proportion of FHA insured higher-priced loans and the relative proportion across loan types increased substantially in recent years. For example, in 2008, nearly 10 percent of borrowers with FHA-insured loans had higher-priced loans while in the same year one percent of borrowers with VA -insured loans had higher-priced loans. The FHA percentage leapt to 20 percent in 2013 and again to 31 percent in 2014. All the while, the other nonconventional loan types saw negligible proportions of higher-priced loans.

Increasing mortgage insurance premiums (MIP) on FHA insurance is one reason for the increase in higher-priced loans in recent years, because the monthly MIP on FHA-insured loans increases the APR for those loans. FHA decreased the MIP in January 2015, and it is likely an important factor in the reduction of higher-priced loans among borrowers with FHA-insured loans from its high³² in 2014; however, the insurance is still required for the life of the loan. In 2017, of all FHA-insured loans, 23 percent were considered higher priced. In 2017, RHS (RD)-insured loan borrowers experienced decline in the percentage of higher-priced loans, from 3.5 percent to 1.1 percent.

Table 12. Higher-Priced Nonconventional Home Purchase Loans, by Insurer, 2008-2017

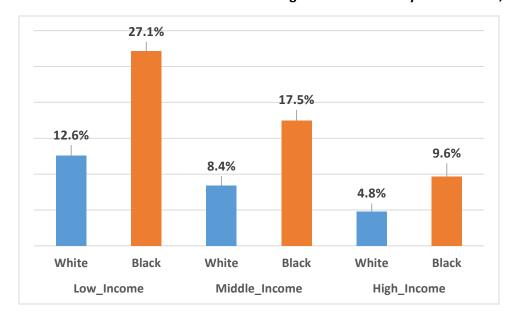
_	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
FHA-Insured	9.6%	4.1%	1.0%	5.6%	10.2%	20.1%	30.8%	11.6%	14.0%	23.0%
VA-Insured	1.0%	0.8%	0.1%	0.1%	0.1%	0.1%	0.2%	0.6%	0.3%	0.4%
RHS and RD-Insured	2.3%	0.8%	0.2%	0.1%	0.1%	1.5%	1.2%	3.1%	3.5%	1.1%

NOTE: First lien, 1-4 family, owner occupied, home purchase loans originated

The proportion of African American borrowers who received higher-priced home purchase loans was higher than the white borrowers, even among borrowers within the same income group. The difference between white and African American borrowers with higher-priced loans was greatest among the lowincome borrowers. More than 27 percent of low-income African-American borrowers paid interest rates higher than the threshold level in 2017, while less than 13 percent of low-income white borrowers' home purchase loans were considered higher priced. The occurrence of higher-priced loans declined with the income for both white and African-American borrowers.

³² Since 2004 when we have loan level detailed HMDA data in Tennessee.





THDA SHARE OF HOME PURCHASE LOAN MARKET

I. FHA-Insured Home Loan Purchase Market Share of THDA

Key Findings

- THDA's share in FHA-insured loans market was 27.5 in 2017, increased from 18.8 percent previous year.
- Market share increased from previous year in all race categories.
- Higher share of African American borrowers shows that THDA offers a distinct product to help underserved demographic groups access to homeownership.
- Of the largest counties (counties with 100 or more THDA loans), the highest share was in Montgomery County followed by Madison County.
- Biggest share increase (among the counties with 100 or more THDA loans) was in Montgomery County, followed by Rutherford County.

In this report, we also measured THDA's share in the home purchase loan market. Market share refers to the proportion of loans funded by THDA to all home purchase loans originated by financial institutions and reported in Tennessee. Knowing THDA's share in the home loan market is important in determining how competitive THDA loan products are compared to similar loan products available in the market. Knowledge of where THDA's business is relative to the market is also useful when making decisions around marketing and planning to fill unmet need.

Using HMDA data to measure THDA's share in the home loan market presents some limitations because of the nature of the HMDA data and THDA's loan program eligibility requirements. However, the market share estimates based on our income limits and on the maximum purchase price of a THDA loan sale from 2017 for the county. For counties without a THDA loan in the year, we used the county median sales price. Because the majority of THDA loans are FHA-insured, we compared THDA FHA-insured mortgage loans to FHA-insured loans in the market. First-time homebuyer data is not readily available through HMDA so we used FHA estimates of first time homebuyers to help us estimate the market share. While there are some estimation issues to be found in these assumptions, the estimates serve as a good overall barometer.

In 2017, THDA funded 2,642 FHA-insured loans for first-time homebuyers, which represented 27.5 percent of 11,702 FHA-insured first lien home purchase loans originated for first-time homebuyers who met THDA's income limit requirements and purchased homes that were priced less than or equal to the maximum price THDA borrowers paid in each county³³. This share was up from the 18.8 percent in 2016, due to the declining number of THDA-eligible FHA-insured loans in the market and increasing number of THDA borrowers in 2017. THDA funded FHA-insured loans for first-time homebuyers increased by 41 percent in 2017 compared to 2016, while in the market, all lenders reporting to HMDA originated four percent fewer FHA-insured loans compared to the previous year for borrowers estimated to be THDA-eligible.

³³ In the counties THDA did not make any loan during the year, we used the median sales price in the county for *all* sales during year from Comptroller's data.

Among the counties with 100 or more THDA funded FHA-insured loans, Montgomery County's 46.8 percent market share was the highest. THDA was able to attract 21 percent or more of the potential FHA borrowers in each of Davidson, Hamilton, Knox, Madison, Rutherford and Shelby Counties, while THDA's market share was relatively low in Williamson County. THDA funded FHA-insured loans were 24.3 percent of comparable FHA-insured loans reported in Rutherford County and 21.6 percent in Davidson County. THDA's market share in both Rutherford and Davidson Counties increased from 2016. In Davidson County, both the number of FHA-insured THDA loans funded and comparable FHA-insured loans originated in the market declined compared to the previous year, but the decline in FHA-insured THDA loans funded was less than the decline in the market loans originated, so THDA's market share in the county increased. In Rutherford County, the number of FHA-insured THDA loans increased by 25 percent while the comparable FHA-insured loans originated in the market declined by 16 percent from 2016, leading to nearly eight percentage points increase in market share in the county.

THDA's market share in the FHA-insured loans market declined in 30 counties and increased in 54 counties. THDA's largest annual market share gains were primarily in small rural counties with relatively small mortgage loan markets.

In majority of the Nashville MSA counties, THDA's reach to the potential FHA-insured mortgage loan borrowers increased. Cheatham, Dickson, Hickman, Maury and Sumner Counties were the Nashville MSA counties with declining THDA market share in 2017.

THDA's share in FHA-insured loans market also varied by race. In 2017, THDA served nearly 40 percent of African American first time homebuyers who had income less than THDA's income limit in the county and purchased a home priced less than the maximum price THDA borrowers paid, while the market share among white borrowers was 27 percent. In all race categories, THDA market share in 2017 increased from 2016

Table 13. THDA's Market Share by Race, FHA-Insured Loans, 2011-2017

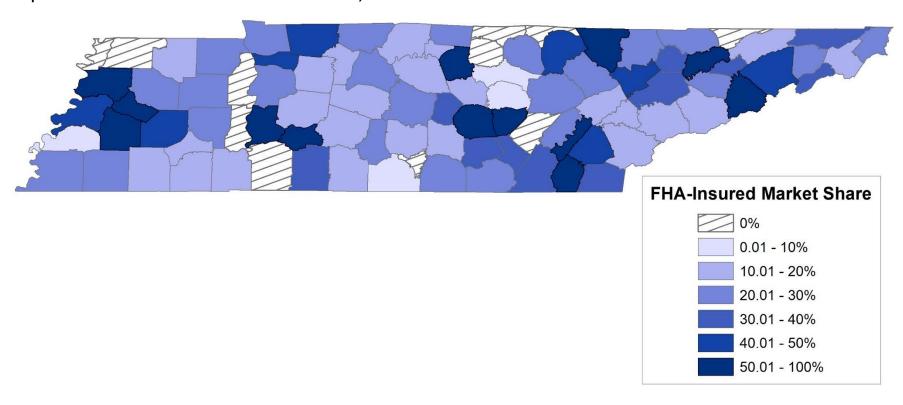
RACE	2011	2012	2013	2014	2015	2016	2017
Asian	24.7%	13.8%	17.5%	19.5%	13.1%	6.6%	15.6%
Black or African American	39.1%	34.9%	35.4%	30.4%	31.7%	26.1%	38.5%
White	26.7%	24.9%	25.1%	24.1%	23.1%	19.2%	27.0%
Other Minority ³⁴	0.0%	0.0%	0.0%	6.7%	26.1%	17.4%	34.8%
Multi-Racial	9.9%	9.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Missing	21.5%	18.0%	12.0%	5.1%	3.4%	0.7%	8.4%
Share of Total	28.1%	25.9%	25.7%	23.9%	23.2%	18.8%	27.5%

THDA's shares in FHA-insured mortgage loans market in 2016 and 2017 by county can be found in Appendix J.

The following map displays THDA's share in the FHA-insured loans market in 2017.

³⁴ For THDA borrowers, "other minority" includes the borrowers who are American Indian or Alaskan Native and/or Native Hawaiian or Pacific Islander.

Map 3: THDA's Share in FHA-Insured Home Loans Market, 2017³⁵



³⁵ The FHA-insured home loan market refers to the first-lien home purchase loans for owner-occupied 1-4 family dwellings that are originated in 2017 by financial institutions and reported in HMDA data. Only the FHA-insured loans to the borrowers who would be eligible to receive FHA-insured THDA loans based on their income, which was less than or equal to the small family (households with 1 to 2 people) income limit of the county they purchased their homes, and purchased homes that are less than or equal to the maximum price THDA borrowers paid (estimated by adding a four percent downpayment amount to the loan amount) are included. THDA changed the income limits in mid-2017. Publicly available HMDA data do not have full loan origination dates other than the year of origination. Therefore, for all loans in 2017, we used the income limits started in mid-2017. We also assumed 82.2 percent of borrowers who used FHA-insured loans were first time homebuyers

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APPENDIX

APPENDIX A

			П	ome Purchase		
				% of State	% change	Rank in
	2017	2016	2015	Total	from 2016	2017
Anderson	832	784	664	1%	6%	18
Bedford	607	555	465	1%	9%	27
Benton	104	70	65	0%	49%	75
Bledsoe	60	61	55	0%	-2%	87
Blount	1,909	1,701	1,502	2%	12%	10
Bradley	1,165	1,192	1,020	1%	-2%	14
Campbell	318	290	222	0%	10%	40
Cannon	161	114	115	0%	41%	62
Carroll	166	158	147	0%	5%	61
Carter	459	413	367	1%	11%	35
Cheatham	609	595	517	1%	2%	25
Chester	158	162	146	0%	-2%	63
Claiborne	206	192	196	0%	7%	53
Clay	30	34	27	0%	-12%	92
Cocke	168	134	138	0%	25%	60
Coffee	572	560	471	1%	2%	28
Crockett	102	84	101	0%	21%	77
Cumberland	639	515	440	1%	24%	24
Davidson	10,622	10,398	10,052	13%	2%	1
Decatur	73	75	64	0%	-3%	85
DeKalb	209	186	138	0%	12%	52
Dickson	706	698	617	1%	1%	20
Dyer	309	295	280	0%	5%	42
Fayette	661	622	526	1%	6%	22
Fentress	112	95	87	0%	18%	73
Franklin	358	328	297	0%	9%	38
Gibson	445	431	366	1%	3%	36
Giles	238	204	215	0%	17%	46
Grainger	151	126	122	0%	20%	64
Greene	463	481	426	1%	-4%	33
Grundy	88	71	70	0%	24%	80
Hamblen	608	600	512	1%	1%	26
Hamilton	4,951	4,839	4,262	6%	2%	6
Hancock	30	21	27	0%	43%	92
Hardeman	122	131	83	0%	-7%	70
Hardin	217	159	174	0%	36%	51
Hawkins	486	411	386	1%	18%	32

Home Purchase

			Но	me Purchase		
				% of State	% change	Rank in
	2017	2016	2015	Total	from 2016	2017
Haywood	84	91	80	0%	-8%	82
Henderson	201	188	164	0%	7%	55
Henry	220	198	205	0%	11%	50
Hickman	192	192	185	0%	0%	57
Houston	75	66	47	0%	14%	84
Humphreys	141	152	121	0%	-7%	66
Jackson	82	63	52	0%	30%	83
Jefferson	519	443	462	1%	17%	31
Johnson	48	66	51	0%	-27%	89
Knox	7,160	6,870	6,003	8%	4%	3
Lake	19	17	11	0%	12%	94
Lauderdale	133	111	112	0%	20%	67
Lawrence	343	337	270	0%	2%	39
Lewis	89	62	51	0%	44%	79
Lincoln	311	313	248	0%	-1%	41
Loudon	774	742	622	1%	4%	19
Macon	258	226	183	0%	14%	44
Madison	1,068	965	829	1%	11%	16
Marion	229	175	166	0%	31%	47
Marshall	522	441	393	1%	18%	30
Maury	1,838	1,717	1,430	2%	7%	11
McMinn	463	459	381	1%	1%	33
McNairy	180	169	152	0%	7%	58
Meigs	87	63	77	0%	38%	81
Monroe	384	344	278	0%	12%	37
Montgomery	4,444	3,877	3,237	5%	15%	7
Moore	62	53	37	0%	17%	86
Morgan	105	90	110	0%	17%	74
Obion	178	163	156	0%	9%	59
Overton	121	91	90	0%	33%	71
Perry	31	17	12	0%	82%	91
Pickett	17	7	12	0%	143%	96
Polk	103	96	82	0%	7%	76
Putnam	688	625	623	1%	10%	21
Rhea	248	237	208	0%	5%	45
Roane	525	495	407	1%	6%	29
Robertson	1,147	1,092	954	1%	5%	15
Rutherford	5,969	6,054	5,199	7%	-1%	4
Scott	97	133	97	0%	-27%	78
Sequatchie	125	124	108	0%	1%	69
Sequatonie	123	124	100	0/0	1/0	09

Home Purchase

				% of State	% change	Rank in
	2017	2016	2015	Total	from 2016	2017
Sevier	1,024	984	846	1%	4%	17
Shelby	8,158	7,817	6,901	10%	4%	2
Smith	229	186	168	0%	23%	47
Stewart	126	85	89	0%	48%	68
Sullivan	1,744	1,592	1,530	2%	10%	12
Sumner	3,597	3,409	3,077	4%	6%	8
Tipton	659	590	485	1%	12%	23
Trousdale	118	87	84	0%	36%	72
Unicoi	142	137	99	0%	4%	65
Union	196	149	134	0%	32%	56
Van Buren	33	35	23	0%	-6%	90
Warren	272	250	215	0%	9%	43
Washington	1,624	1,499	1,408	2%	8%	13
Wayne	53	55	42	0%	-4%	88
Weakley	205	166	178	0%	23%	54
White	222	204	200	0%	9%	49
Williamson	4,990	5,123	5,010	6%	-3%	5
Wilson	2,710	2,464	2,391	3%	10%	9
NA	19	41	25	0%	-54%	94
STATE	84,515	80,282	72,172	100%	11%	

	Refinance							
				% of State	% change	Rank in		
	2017	2016	2015	Total	from 2016	2017		
Anderson	449	606	548	1%	-26%	18		
Bedford	321	349	275	1%	-8%	30		
Benton	75	82	88	0%	-9%	75		
Bledsoe	69	94	57	0%	-27%	77		
Blount	946	1,333	1,138	2%	-29%	10		
Bradley	586	830	747	1%	-29%	15		
Campbell	210	239	223	0%	-12%	38		
Cannon	106	116	99	0%	-9%	62		
Carroll	124	151	129	0%	-18%	55		
Carter	209	313	312	0%	-33%	39		
Cheatham	412	473	391	1%	-13%	21		
Chester	76	117	99	0%	-35%	74		
Claiborne	117	124	115	0%	-6%	58		
Clay	23	21	21	0%	10%	94		
Cocke	131	151	134	0%	-13%	52		
Coffee	332	350	326	1%	-5%	28		
Crockett	59	80	72	0%	-26%	82		
Cumberland	335	468	414	1%	-28%	27		
Davidson	5,889	8,019	6,615	13%	-27%	1		
Decatur	66	75	65	0%	-12%	78		
DeKalb	99	103	106	0%	-4%	66		
Dickson	437	474	432	1%	-8%	19		
Dyer	151	209	193	0%	-28%	47		
Fayette	327	459	378	1%	-29%	29		
Fentress	57	91	77	0%	-37%	83		
Franklin	314	323	300	1%	-3%	31		
Gibson	209	259	266	0%	-19%	39		
Giles	127	188	139	0%	-32%	54		
Grainger	107	147	129	0%	-27%	61		
Greene	381	444	373	1%	-14%	24		
Grundy	106	79	75	0%	34%	62		
Hamblen	410	482	423	1%	-15%	22		
Hamilton	2,154	3,129	2,773	5%	-31%	6		
Hancock	27	16	21	0%	69%	91		
Hardeman	87	98	92	0%	-11%	71		
Hardin	117	150	129	0%	-22%	58		
Hawkins	308	354	361	1%	-13%	32		
Haywood	103	91	82	0%	13%	64		

				Refinance		
				% of State	% change	Rank in
	2017	2016	2015	Total	from 2016	2017
Henderson	161	183	145	0%	-12%	45
Henry	137	171	159	0%	-20%	50
Hickman	117	129	119	0%	-9%	58
Houston	36	55	46	0%	-35%	90
Humphreys	100	105	115	0%	-5%	65
Jackson	43	56	55	0%	-23%	89
Jefferson	269	396	376	1%	-32%	33
Johnson	54	83	62	0%	-35%	86
Knox	3,090	4,517	4,045	7%	-32%	4
Lake	25	20	26	0%	25%	92
Lauderdale	77	129	113	0%	-40%	73
Lawrence	179	238	201	0%	-25%	42
Lewis	53	72	74	0%	-26%	87
Lincoln	167	260	218	0%	-36%	44
Loudon	400	579	464	1%	-31%	23
Macon	135	132	105	0%	2%	51
Madison	521	671	585	1%	-22%	17
Marion	233	210	191	1%	11%	36
Marshall	259	267	200	1%	-3%	34
Maury	852	998	803	2%	-15%	11
McMinn	256	343	294	1%	-25%	35
McNairy	129	161	157	0%	-20%	53
Meigs	62	73	66	0%	-15%	79
Monroe	228	288	261	1%	-21%	37
Montgomery	1,404	2,157	1,820	3%	-35%	9
Moore	56	43	45	0%	30%	84
Morgan	97	131	106	0%	-26%	68
Obion	141	143	153	0%	-1%	49
Overton	61	71	59	0%	-14%	81
Perry	25	26	28	0%	-4%	92
Pickett	17	20	26	0%	-15%	95
Polk	72	100	109	0%	-28%	76
Putnam	350	471	429	1%	-26%	25
Rhea	172	218	196	0%	-21%	43
Roane	348	461	395	1%	-25%	26
Robertson	746	800	684	2%	-7%	13
Rutherford	3,299	3,995	3,338	7%	-17%	3
Scott	91	92	105	0%	-1%	69
Sequatchie	124	159	103	0%	-22%	55
Sevier	583	807	710	1%	-28%	16

	Refinance									
				% of State	% change	Rank in				
	2017	2016	2015	Total	from 2016	2017				
Shelby	4,260	6,107	5,204	10%	-30%	2				
Smith	118	116	117	0%	2%	57				
Stewart	82	99	91	0%	-17%	72				
Sullivan	818	1,044	1,023	2%	-22%	12				
Sumner	1,867	2,585	2,107	4%	-28%	7				
Tipton	419	584	520	1%	-28%	20				
Trousdale	62	58	44	0%	7%	79				
Unicoi	90	102	93	0%	-12%	70				
Union	99	98	115	0%	1%	66				
Van Buren	47	34	37	0%	38%	88				
Warren	181	216	210	0%	-16%	41				
Washington	725	1,006	878	2%	-28%	14				
Wayne	55	77	48	0%	-29%	85				
Weakley	150	181	169	0%	-17%	48				
White	161	145	130	0%	11%	45				
Williamson	2,696	4,604	3,668	6%	-41%	5				
Wilson	1,497	2,084	1,729	3%	-28%	8				
NA	12	39	17	0%	-69%	96				

100%

-26%

44,564 60,096 51,603

STATE

APPENDIX B

First Lien, Owner-Occupied, Home Purchase Loans Originated for 1-4 Family Dwellings

COUNTY	Conventional	FHA	VA	FSA/RHS	ALL
Anderson	397	252	93	90	832
Bedford	221	161	62	163	607
Benton	44	13	18	29	104
Bledsoe	39	13	7	1	60
Blount	1,001	336	239	333	1,909
Bradley	604	359	119	83	1,165
Campbell	154	56	34	74	318
Cannon	73	36	18	34	161
Carroll	62	28	28	48	166
Carter	235	63	49	112	459
Cheatham	309	159	70	71	609
Chester	59	42	16	41	158
Claiborne	120	34	17	35	206
Clay	15	5	1	9	30
Cocke	72	37	25	34	168
Coffee	246	137	85	104	572
Crockett	43	31	7	21	102
Cumberland	316	112	105	106	639
Davidson	7,857	2,272	486	7	10,622
Decatur	28	15	10	20	73
DeKalb	88	54	22	45	209
Dickson	329	183	73	121	706
Dyer	124	59	27	99	309
Fayette	375	137	77	72	661
Fentress	59	18	14	21	112
Franklin	166	73	52	67	358
Gibson	175	93	50	127	445
Giles	89	68	31	50	238
Grainger	78	29	16	28	151
Greene	238	85	58	82	463
Grundy	51	14	10	13	88
Hamblen	263	145	58	142	608
Hamilton	3,207	1,159	430	155	4,951
Hancock	19	3	2	6	30
Hardeman	44	31	19	28	122
Hardin	95	51	14	57	217
Hawkins	255	94	55	82	486
Haywood	24	37	10	13	84

First Lien, Owner-Occupied, Home Purchase Loans Originated for 1-4 Family Dwellings

COUNTY	Conventional	FHA	VA	FSA/RHS	ALL
Henderson	78	46	20	57	201
Henry	122	33	34	31	220
Hickman	75	57	23	37	192
Houston	22	18	20	15	75
Humphreys	57	33	22	29	141
Jackson	29	21	10	22	82
Jefferson	240	117	64	98	519
Johnson	22	10	12	4	48
Knox	4,517	1,683	625	335	7,160
Lake	5	7	1	6	19
Lauderdale	25	71	9	28	133
Lawrence	160	63	52	68	343
Lewis	30	23	15	21	89
Lincoln	110	76	39	86	311
Loudon	494	103	86	91	774
Macon	109	54	20	75	258
Madison	507	399	97	65	1,068
Marion	110	56	26	37	229
Marshall	201	153	50	118	522
Maury	1,026	584	166	62	1,838
McMinn	196	88	59	120	463
McNairy	69	40	17	54	180
Meigs	41	22	13	11	87
Monroe	161	80	52	91	384
Montgomery	863	913	2,615	53	4,444
Moore	35	4	10	13	62
Morgan	41	22	18	24	105
Obion	80	25	15	58	178
Overton	48	24	19	30	121
Perry	9	11	7	4	31
Pickett	13	1	1	2	17
Polk	54	20	12	17	103
Putnam	377	138	93	80	688
Rhea	96	73	29	50	248
Roane	231	105	86	103	525
Robertson	486	338	152	171	1,147
Rutherford	3,093	2,109	608	159	5,969
Scott	60	16	5	16	97
Sequatchie	61	27	11	26	125
Sevier	519	200	139	166	1,024

First Lien, Owner-Occupied, Home Purchase Loans Originated for 1-4 Family Dwellings

COUNTY	Conventional	FHA	VA	FSA/RHS	ALL
Shelby	4,654	2,609	845	50	8,158
Smith	100	60	30	39	229
Stewart	39	26	57	4	126
Sullivan	1,151	374	176	43	1,744
Sumner	2,030	943	392	232	3,597
Tipton	190	194	151	124	659
Trousdale	42	39	14	23	118
Unicoi	76	26	19	21	142
Union	81	46	18	51	196
Van Buren	15	5	6	7	33
Warren	97	57	36	82	272
Washington	1,115	243	188	78	1,624
Wayne	20	8	11	14	53
Weakley	94	36	13	62	205
White	98	42	24	58	222
Williamson	4,156	512	270	52	4,990
Wilson	1,740	552	288	130	2,710
NA	13	2	4	0	19
TENNESSEE	47,757	20,131	10,401	6,226	84,515

APPENDIX C

Methodology for Determining Combined Race Categories

In this report, we identified and defined the racial groups in the following way (these are combined race categories considering both applicant and co-applicant, if any, and all the racial groups, up to five, reported):

- White Both applicant and co-applicant are white and no other race reported, or the applicant is white and there is no co-applicant
- Black Both applicant and co-applicant are black and no other race reported, or the applicant is black and there is no co-applicant
- Asian Both applicant and co-applicant are Asian and no other race reported, or the applicant is Asian and there is no co-applicant
- Multiracial Both applicant and co-applicant are of different races or either applicant or coapplicant are multiracial, meaning at least one applicant reports more than one race
- Other minority Both the applicant and co-applicant are American Indian or Alaska Native,
 Native Hawaiian or other Pacific Islander and no other race reported or the applicant is
 American Indian or Alaska Native, Native Hawaiian or other Pacific Islander and there is no co-applicant
- Missing Race information for both applicant and co-applicant, if any, is reported as either "information not provided" or "not applicable."

We treated the borrower's ethnicity separately rather than combining as "race and ethnicity." According to our classification, a borrower is Hispanic or Latino if the applicant or co applicant is identified as Hispanic or Latino. If neither the applicant nor the co-applicant is Hispanic or Latino, then the borrower is categorized as not Hispanic or Latino. The information is missing if ethnicity is not provided or not applicable for both applicant and co-applicant, if there is any.

APPENDIX D

First-lien, Owner-Occupied, 1-4 Family, Home Purchase Loan Originations by Race, 2017

County	White	Black	Asian	Other	Multi-Racial	Missing	TOTAL
Anderson	771	14	3	4	6	34	832
Bedford	540	24	3 4	3	7	29	607
	98					29	
Benton		3	0	0	1		104
Bledsoe	57	2	0	0	0	1	60
Blount	1,761	7	12	3	19	107	1,909
Bradley	1,066	32	7	4	13	43	1,165
Campbell	311	1	0	1	1	4	318
Cannon	145	4	0	0	4	8	161
Carroll	150	5	0	1	2	8	166
Carter	436	2	0	0	3	18	459
Cheatham	556	8	0	0	10	35	609
Chester	147	6	0	1	1	3	158
Claiborne	200	1	0	0	2	3	206
Clay	29	0	0	1	0	0	30
Cocke	156	2	0	1	2	7	168
Coffee	494	14	6	2	10	46	572
Crockett	93	5	0	0	2	2	102
Cumberland	600	1	0	3	5	30	639
Davidson	7,988	979	424	29	188	1,014	10,622
Decatur	67	1	0	1	1	3	73
DeKalb	198	0	2	2	1	6	209
Dickson	654	9	3	3	7	30	706
Dyer	287	15	1	0	2	4	309
Fayette	515	92	11	1	8	34	661
Fentress	105	0	0	0	1	6	112
Franklin	323	9	0	0	5	21	358
Gibson	376	28	1	0	7	33	445
Giles	214	6	2	1	4	11	238
Grainger	141	1	0	1	1	7	151
Greene	435	2	1	3	6	16	463
Grundy	84	0	0	0	2	2	88
Hamblen	549	14	6	1	13	25	608
Hamilton	4,205	306	73	12	57	298	4,951
Hancock	28	0	0	1	0	1	30
Hardeman	90	27	1	0	0	4	122
Hardin	209	4	0	1	1	2	217
Hawkins	464	1	3	1	3	14	486
Haywood	54	25	0	0	2	3	84
-,			•	_	_	•	

First-lien, Owner-Occupied, 1-4 Family, Home Purchase Loan Originations by Race, 2017

County	White	Black	Asian	Other	Multi-Racial	Missing	TOTAL
Henderson	179	12	1	1	3	5	201
Henry	201	8	1	0	4	6	220
Hickman	182	1	0	1	1	7	192
Houston	72	0	1	0	0	2	75
Humphreys	131	2	1	0	2	5	141
Jackson	77	1	0	0	1	3	82
Jefferson	473	5	2	2	4	33	519
Johnson	43	0	0	0	2	3	48
Knox	6,299	225	152	11	111	362	7,160
Lake	19	0	0	0	0	0	19
Lauderdale	110	22	0	0	0	1	133
Lawrence	328	2	0	1	2	10	343
Lewis	82	0	0	0	1	6	89
Lincoln	272	16	1	0	3	19	311
Loudon	722	5	5	3	4	35	774
Macon	250	1	0	0	0	7	258
Madison	788	209	14	1	13	43	1,068
Marion	209	4	0	1	4	11	229
Marshall	464	15	1	2	8	32	522
Maury	1,562	95	11	4	37	129	1,838
McMinn	428	4	3	2	7	19	463
McNairy	165	9	0	0	0	6	180
Meigs	83	0	0	0	1	3	87
Monroe	351	4	1	1	7	20	384
Montgomery	3,287	559	73	47	176	302	4,444
Moore	58	0	0	1	0	3	62
Morgan	95	0	0	0	2	8	105
Obion	164	5	0	0	4	5	178
Overton	112	1	0	0	1	7	121
Perry	27	1	0	0	1	2	31
Pickett	15	0	0	0	0	2	17
Polk	91	0	0	0	3	9	103
Putnam	635	7	5	0	13	28	688
Rhea	227	5	1	2	1	12	248
Roane	490	4	1	2	6	22	525
Robertson	1,012	48	7	1	13	66	1,147
Rutherford	4,545	641	217	23	136	407	5,969
Scott	89	2	0	2	0	4	97
Sequatchie	117	0	0	2	2	4	125
Sevier	963	3	8	2	9	39	1,024

First-lien, Owner-Occupied, 1-4 Family, Home Purchase Loan Originations by Race, 2017

County	White	Black	Asian	Other	Multi-Racial	Missing	TOTAL
Shelby	5,204	1,948	340	26	162	478	8,158
Smith	211	4	0	1	4	9	229
Stewart	112	1	0	0	5	8	126
Sullivan	1,640	15	11	5	7	66	1,744
Sumner	3,075	181	48	14	62	217	3,597
Tipton	565	48	3	7	11	25	659
Trousdale	109	2	0	0	4	3	118
Unicoi	136	0	0	1	0	5	142
Union	189	1	1	0	0	5	196
Van Buren	32	0	0	0	0	1	33
Warren	242	6	1	2	2	19	272
Washington	1,478	19	22	3	21	81	1,624
Wayne	51	0	0	0	0	2	53
Weakley	186	4	5	0	1	9	205
White	213	2	0	0	2	5	222
Williamson	4,043	104	221	13	98	511	4,990
Wilson	2,283	105	66	10	51	195	2,710
NA	13	2	0	0	0	4	19
TENNESSEE	69,795	6,008	1,784	275	1,409	5,244	84,515

APPENDIX E

First-lien, Owner-Occupied, 1-4 Family, *Refinance* Loan Originations, 2017

County	White	Black	Asian	Other	Multi-Racial	Missing	TOTAL
Anderson	383	12	4	1	8	41	449
Bedford	258	17	3	2	1	40	321
Benton	67	0	1	0	1	6	75
Bledsoe	65	0	0	0	0	4	69
Blount	816	16	2	5	10	97	946
Bradley	500	15	1	1	8	61	586
Campbell	197	0	0	0	0	13	210
Cannon	96	0	0	0	1	9	106
Carroll	109	6	0	0	1	8	124
Carter	187	0	0	0	4	18	209
Cheatham	355	2	0	2	4	49	412
Chester	68	3	1	0	2	2	76
Claiborne	109	1	0	1	1	5	117
Clay	20	0	0	1	0	2	23
Cocke	120	1	0	1	0	9	131
Coffee	284	4	0	1	6	37	332
Crockett	51	2	0	0	0	6	59
Cumberland	292	1	0	1	4	37	335
Davidson	3,848	1,035	69	20	85	832	5,889
Decatur	60	1	0	0	0	5	66
DeKalb	85	1	0	0	2	11	99
Dickson	376	10	3	0	3	45	437
Dyer	125	6	1	0	2	17	151
Fayette	240	43	2	1	7	34	327
Fentress	52	0	0	0	0	5	57
Franklin	270	6	0	0	6	32	314
Gibson	180	11	0	0	1	17	209
Giles	98	11	0	0	2	16	127
Grainger	98	0	0	0	2	7	107
Greene	345	5	1	1	4	25	381
Grundy	105	0	0	1	0	0	106
Hamblen	347	14	1	0	5	43	410
Hamilton	1,643	202	20	1	38	250	2,154
Hancock	24	0	0	0	0	3	27
Hardeman	52	24	1	0	1	9	87
Hardin	93	2	0	1	3	18	117
Hawkins	277	4	0	1	3	23	308
Haywood	56	29	0	0	1	17	103

First-lien, Owner-Occupied, 1-4 Family, Refinance Loan Originations, 2017

County	White	Black	Asian	Other	Multi-Racial	Missing	TOTAL
Henderson	146	5	0	1	0	9	161
Henry	119	4	0	0	2	12	137
Hickman	103	2	0	0	0	12	117
Houston	34	1	0	0	1	0	36
Humphreys	91	1	0	0	1	7	100
Jackson	38	0	0	0	1	4	43
Jefferson	237	5	0	0	5	22	269
Johnson	48	0	0	0	1	5	54
Knox	2,602	123	27	7	44	287	3,090
Lake	21	1	0	0	0	3	25
Lauderdale	57	11	0	1	2	6	77
Lawrence	162	1	0	1	0	15	179
Lewis	45	0	0	1	0	7	53
Lincoln	132	9	0	0	3	23	167
Loudon	341	4	3	1	10	41	400
Macon	127	0	0	0	0	8	135
Madison	365	91	3	0	4	58	521
Marion	205	5	1	1	2	19	233
Marshall	203	7	0	1	2	46	259
Maury	688	39	3	4	14	104	852
McMinn	223	4	1	0	4	24	256
McNairy	113	1	0	0	2	13	129
Meigs	54	1	0	1	0	6	62
Monroe	203	1	1	1	2	20	228
Montgomery	910	255	7	16	49	167	1,404
Moore	51	1	0	0	0	4	56
Morgan	85	0	1	0	0	11	97
Obion	112	7	0	1	4	17	141
Overton	49	0	0	1	3	8	61
Perry	21	1	0	0	0	3	25
Pickett	16	0	0	0	0	1	17
Polk	65	0	0	0	1	6	72
Putnam	294	3	4	0	3	46	350
Rhea	150	1	1	0	5	15	172
Roane	317	6	1	0	3	21	348
Robertson	620	27	1	1	10	87	746
Rutherford	2,497	274	42	13	59	414	3,299
Scott	87	0	0	0	0	4	91
Sequatchie	109	0	0	1	2	12	124
Sevier	529	3	4	5	3	39	583

First-lien, Owner-Occupied, 1-4 Family, Refinance Loan Originations, 2017

County	White	Black	Asian	Other	Multi-Racial	Missing	TOTAL
Shelby	2,409	1,140	86	13	55	557	4,260
Smith	107	2	0	0	1	8	118
Stewart	69	1	0	0	3	9	82
Sullivan	717	7	1	2	8	83	818
Sumner	1,490	92	12	10	24	239	1,867
Tipton	313	43	0	1	3	59	419
Trousdale	50	3	0	1	1	7	62
Unicoi	77	0	0	0	1	12	90
Union	89	0	0	1	0	9	99
Van Buren	41	0	0	0	0	6	47
Warren	159	4	0	0	2	16	181
Washington	612	13	6	3	9	82	725
Wayne	49	1	0	0	0	5	55
Weakley	129	5	0	0	3	13	150
White	138	1	0	1	1	20	161
Williamson	2,103	99	73	16	46	359	2,696
Wilson	1,196	69	18	6	20	188	1,497
NA	11	1	0	0	0	0	12
TENNESSEE	34,379	3,859	406	154	635	5,131	44,564

APPENDIX F

Ratio Of Non-Conventional Purchase Loan Borrowers In Total Borrowers, by Race, 2017

COUNTY	White	Black	Asian	Ot	her Minority	Multi-Racial	Missing	ALL
Anderson	52.7%	64.3%	0.0%		25.0%	83.3%	41.2%	52.3%
Bedford	62.4%	87.5%	75.0%		0.0%	42.9%	75.9%	63.6%
Benton	57.1%	33.3%				100.0%	100.0%	57.7%
Bledsoe	33.3%	50.0%					100.0%	35.0%
Blount	47.7%	85.7%	33.3%		66.7%	31.6%	46.7%	47.6%
Bradley	48.3%	62.5%	42.9%		75.0%	30.8%	37.2%	48.2%
Campbell	50.8%	100.0%			100.0%	100.0%	75.0%	51.6%
Cannon	54.5%	75.0%				50.0%	50.0%	54.7%
Carroll	62.0%	60.0%			0.0%	100.0%	75.0%	62.7%
Carter	49.1%	50.0%				33.3%	44.4%	48.8%
Cheatham	48.0%	75.0%				80.0%	54.3%	49.3%
Chester	61.2%	83.3%			0.0%	100.0%	100.0%	62.7%
Claiborne	41.5%	0.0%				50.0%	66.7%	41.7%
Clay	51.7%				0.0%			50.0%
Cocke	58.3%	100.0%			0.0%	50.0%	28.6%	57.1%
Coffee	57.5%	85.7%	0.0%		50.0%	80.0%	45.7%	57.0%
Crockett	57.0%	80.0%				50.0%	50.0%	57.8%
Cumberland	51.0%	0.0%			66.7%	80.0%	36.7%	50.5%
Davidson	22.8%	60.4%	15.8%		44.8%	31.4%	20.9%	26.0%
Decatur	59.7%	100.0%			100.0%	100.0%	66.7%	61.6%
DeKalb	56.6%		50.0%		100.0%	100.0%	83.3%	57.9%
Dickson	53.2%	77.8%	33.3%		33.3%	57.1%	53.3%	53.4%
Dyer	59.9%	66.7%	100.0%			50.0%	25.0%	59.9%
Fayette	38.4%	68.5%	18.2%		100.0%	50.0%	52.9%	43.3%
Fentress	46.7%					0.0%	66.7%	47.3%
Franklin	53.3%	77.8%				60.0%	47.6%	53.6%
Gibson	58.0%	85.7%	0.0%			71.4%	69.7%	60.7%
Giles	65.9%	83.3%	50.0%		0.0%	50.0%	0.0%	62.6%
Grainger	46.8%	0.0%			100.0%	100.0%	71.4%	48.3%
Greene	48.7%	50.0%	0.0%		33.3%	66.7%	43.8%	48.6%
Grundy	41.7%					50.0%	50.0%	42.0%
Hamblen	57.7%	64.3%	33.3%		0.0%	61.5%	36.0%	56.7%
Hamilton	33.4%	66.0%	12.3%		50.0%	43.9%	32.9%	35.2%
Hancock	35.7%				0.0%		100.0%	36.7%
Hardeman	60.0%	77.8%	0.0%				75.0%	63.9%
Hardin	55.5%	75.0%			100.0%	0.0%	100.0%	56.2%
Hawkins	47.4%	100.0%	0.0%		100.0%	66.7%	50.0%	47.5%
Haywood	64.8%	84.0%				100.0%	66.7%	71.4%
Henderson	60.9%	75.0%	0.0%		0.0%	33.3%	80.0%	61.2%
Henry	43.8%	37.5%	0.0%			75.0%	66.7%	44.5%
Hickman	61.0%	100.0%			0.0%	0.0%	71.4%	60.9%
Houston	70.8%		0.0%				100.0%	70.7%
Humphreys	59.5%	100.0%	0.0%			100.0%	40.0%	59.6%

Ratio Of Non-Conventional Purchase Loan Borrowers In Total Borrowers, by Race, 2017

COUNTY	White	Black	Asian	ther Minority	Multi-Racial	Missing	ALL
Jackson	63.6%	100.0%		 	100.0%	66.7%	64.6%
Jefferson	53.7%	80.0%	50.0%	0.0%	75.0%	51.5%	53.8%
Johnson	51.2%			 0.070	100.0%	66.7%	54.2%
Knox	36.8%	66.7%	8.6%	36.4%	46.8%	29.3%	36.9%
Lake	73.7%			 30.470			73.7%
Lauderdale	80.0%	86.4%				100.0%	81.2%
Lawrence	52.7%	100.0%		100.0%	100.0%	50.0%	53.4%
Lewis	65.9%			 100.070	100.0%	66.7%	66.3%
Lincoln	62.1%	100.0%	0.0%		66.7%	73.7%	64.6%
Loudon	36.8%	80.0%	0.0%	 33.3%	50.0%	20.0%	36.2%
Macon	57.2%	100.0%	0.070	 33.370	30.070	71.4%	57.8%
Madison	45.6%	81.8%	21.4%	 0.0%	61.5%	46.5%	52.5%
				100.0%	25.0%		
Marion	51.2%	100.0%	100.00/			54.5%	52.0%
Marshall	60.8%	93.3%	100.0%	0.0%	87.5%	53.1%	61.5%
Maury	42.3%	74.7%	27.3%	0.0%	64.9%	41.1%	44.2%
McMinn	58.4%	100.0%	33.3%	100.0%	42.9%	36.8%	57.7%
McNairy	60.0%	88.9%				66.7%	61.7%
Meigs	55.4%			 	0.0%	0.0%	52.9%
Monroe	58.1%	75.0%	0.0%	100.0%	85.7%	45.0%	58.1%
Montgomery	78.1%	92.8%	58.9%	91.5%	88.6%	84.1%	80.6%
Moore	41.4%			100.0%		66.7%	43.5%
Morgan	64.2%				100.0%	12.5%	61.0%
Obion	52.4%	60.0%			100.0%	100.0%	55.1%
Overton	60.7%	100.0%			0.0%	57.1%	60.3%
Perry	70.4%	100.0%			0.0%	100.0%	71.0%
Pickett	20.0%					50.0%	23.5%
Polk	44.0%				100.0%	66.7%	47.6%
Putnam	45.0%	71.4%	20.0%		46.2%	46.4%	45.2%
Rhea	60.4%	100.0%	100.0%	50.0%	100.0%	58.3%	61.3%
Roane	55.1%	50.0%	100.0%	50.0%	83.3%	68.2%	56.0%
Robertson	56.6%	72.9%	42.9%	100.0%	61.5%	62.1%	57.6%
Rutherford	45.3%	71.9%	34.1%	73.9%	55.9%	45.9%	48.2%
Scott	37.1%	50.0%		0.0%		75.0%	38.1%
Sequatchie	51.3%			0.0%	50.0%	75.0%	51.2%
Sevier	49.4%	66.7%	25.0%	50.0%	66.7%	46.2%	49.3%
Shelby	33.4%	73.3%	13.2%	61.5%	44.4%	43.3%	43.0%
Smith	55.9%	75.0%		100.0%	75.0%	44.4%	56.3%
Stewart	67.0%	100.0%			100.0%	75.0%	69.0%
Sullivan	34.3%	53.3%	0.0%	20.0%	14.3%	31.8%	34.0%
Sumner	42.0%	74.0%	8.3%	50.0%	53.2%	44.2%	43.6%
Tipton	69.0%	95.8%	66.7%	100.0%	72.7%	64.0%	71.2%
Trousdale	64.2%	50.0%			75.0%	66.7%	64.4%
Unicoi	47.1%			0.0%		40.0%	46.5%
Union	58.2%	100.0%	0.0%	 2.2.2		80.0%	58.7%
Van Buren	56.3%					0.0%	54.5%
. all Balcii	30.370					3.070	3 1.370

Ratio Of Non-Conventional Purchase Loan Borrowers In Total Borrowers, by Race, 2017

COUNTY	White	Black	Asian	Other Minority	Multi-Racial	Missing	ALL
Warren	65.7%	66.7%	0.0%	0.0%	100.0%	52.6%	64.3%
Washington	32.1%	36.8%	0.0%	33.3%	28.6%	25.9%	31.3%
Wayne	64.7%					0.0%	62.3%
Weakley	54.3%	100.0%	0.0%		0.0%	66.7%	54.1%
White	55.9%	100.0%			0.0%	60.0%	55.9%
Williamson	16.9%	38.5%	3.2%	0.0%	30.6%	14.5%	16.7%
Wilson	35.7%	61.9%	15.2%	50.0%	39.2%	27.7%	35.8%
NA	30.8%	50.0%				25.0%	31.6%
TENNESSEE	41.9%	72.0%	17.3%	54.9%	52.7%	38.1%	43.5%

APPENDIX G

Home Purchase Loans Denial Rates* by Race, 2017

County	Asian	Black	White	Other Minority	Multi-Racial	Missing	TOTAL
Anderson	25.0%	11.8%	10.7%	0.0%	14.3%	32.7%	11.9%
Bedford	0.0%	10.7%	10.3%	0.0%	0.0%	11.1%	10.2%
Benton		0.0%	18.2%	100.0%	50.0%	33.3%	19.2%
Bledsoe		0.0%	10.8%			66.7%	12.9%
Blount	20.0%	12.5%	8.3%	0.0%	19.2%	13.2%	8.8%
Bradley	22.2%	14.3%	8.6%	33.3%	6.7%	19.3%	9.4%
Campbell		0.0%	14.8%	0.0%	0.0%	50.0%	15.6%
Cannon		0.0%	9.2%		0.0%	33.3%	10.4%
Carroll		28.6%	18.1%	0.0%	33.3%	11.1%	18.3%
Carter		33.3%	14.7%		0.0%	21.7%	15.0%
Cheatham		38.5%	7.6%		16.7%	11.9%	8.6%
Chester		14.3%	8.5%	0.0%	50.0%	40.0%	10.0%
Claiborne		0.0%	18.7%	0.0%	33.3%	57.1%	19.6%
Clay		0.0%	11.8%	0.0%		100.0%	15.8%
Cocke		0.0%	13.4%	0.0%	50.0%	12.5%	13.9%
Coffee	14.3%	11.8%	10.3%	0.0%	0.0%	14.5%	10.5%
Crockett		16.7%	12.6%		33.3%	0.0%	13.0%
Cumberland		0.0%	9.4%	0.0%	0.0%	21.1%	9.9%
Davidson	8.3%	17.8%	7.2%	9.4%	8.5%	11.3%	8.8%
Decatur		0.0%	16.9%	0.0%	0.0%	25.0%	16.7%
DeKalb	0.0%		11.6%	0.0%	0.0%	14.3%	11.5%
Dickson	50.0%	0.0%	8.8%	0.0%	0.0%	8.6%	8.9%
Dyer	0.0%	11.1%	12.8%		0.0%	33.3%	12.9%
Fayette	7.7%	12.6%	6.9%	0.0%	11.1%	14.6%	8.2%
Fentress			13.3%		0.0%	14.3%	13.2%
Franklin		10.0%	8.6%		33.3%	17.9%	9.8%
Gibson	0.0%	25.0%	11.1%	100.0%	0.0%	5.7%	11.8%
Giles	0.0%	25.0%	11.8%	50.0%	0.0%	20.0%	12.6%
Grainger		0.0%	10.9%	0.0%	50.0%	12.5%	11.3%
Greene	50.0%	0.0%	14.3%	25.0%	0.0%	30.4%	14.9%
Grundy			18.3%	100.0%	0.0%	0.0%	18.3%
Hamblen	14.3%	12.5%	10.8%	0.0%	0.0%	21.2%	11.1%
Hamilton	13.6%	16.6%	7.8%	29.4%	15.9%	14.3%	9.1%
Hancock	100.0%		18.9%	0.0%		0.0%	20.0%
Hardeman	50.0%	26.3%	10.6%			33.3%	16.0%
Hardin		20.0%	9.3%	0.0%	50.0%	60.0%	10.8%
Hawkins	0.0%	0.0%	14.1%	0.0%	20.0%	44.0%	15.3%
Haywood		25.7%	5.1%		0.0%	25.0%	13.0%
Henderson	0.0%	14.3%	15.6%	0.0%	0.0%	28.6%	15.6%
Henry	50.0%	11.1%	16.7%		20.0%	14.3%	16.7%
Hickman		0.0%	11.7%	50.0%	50.0%	20.0%	12.6%
Houston	50.0%	100.0%	16.9%			0.0%	18.1%
Humphreys	0.0%	33.3%	13.3%		33.3%	16.7%	14.0%

Home Purchase Loans Denial Rates* by Race, 2017

County	Asian	Black	White	Other Minority	Multi-Racial	Missing	TOTAL
Jackson		0.0%	14.9%	100.0%	0.0%	25.0%	15.8%
Jefferson	0.0%	0.0%	13.4%	0.0%	0.0%	17.5%	13.4%
Johnson			31.8%		50.0%	50.0%	34.2%
Knox	11.2%	12.5%	6.6%	15.4%	9.0%	17.1%	7.6%
Lake			16.7%			100.0%	20.0%
Lauderdale		24.1%	15.4%			33.3%	17.3%
Lawrence		33.3%	13.0%	0.0%	0.0%	23.1%	13.3%
Lewis			6.5%		66.7%	14.3%	8.8%
Lincoln	50.0%	5.9%	9.9%		25.0%	13.6%	10.3%
Loudon	16.7%	0.0%	8.5%	0.0%	20.0%	21.3%	9.2%
Macon		50.0%	11.4%	0.0%		27.3%	12.2%
Madison	6.7%	9.8%	9.1%	0.0%	13.3%	19.3%	9.7%
Marion		20.0%	16.3%	0.0%	20.0%	15.4%	16.3%
Marshall	0.0%	14.3%	13.1%	50.0%	0.0%	10.8%	13.0%
Maury	14.3%	9.6%	8.5%	20.0%	11.6%	12.3%	8.9%
McMinn	40.0%	42.9%	10.4%	0.0%	0.0%	26.9%	11.7%
McNairy	100.0%	40.0%	12.3%	0.070	0.076	45.5%	16.2%
Meigs		40.076	15.4%		0.0%	25.0%	15.6%
Monroe	0.0%	20.0%	14.3%	0.0%	12.5%	22.2%	14.7%
Montgomery	10.5%	16.4%	8.1%	4.1%	10.6%	11.7%	9.6%
		10.4%	12.9%	0.0%		50.0%	16.7%
Moore			15.6%			20.0%	16.7%
Morgan		14 20/			33.3%		
Obion		14.3%	14.3%		0.0%	0.0%	13.7%
Overton		0.0%	14.1%		50.0%	0.0%	13.8%
Perry		0.0%	20.6%		0.0%	33.3%	20.5%
Pickett			16.7%	100.00/	 25 00/	33.3%	19.0%
Polk			15.0%	100.0%	25.0%	10.0%	15.6%
Putnam	28.6%	0.0%	7.9%		13.3%	24.3%	8.9%
Rhea	0.0%	25.0%	13.9%	0.0%	0.0%	14.3%	14.0%
Roane	0.0%	55.6%	11.7%	0.0%	25.0%	17.9%	12.8%
Robertson	0.0%	23.4%	8.4%	0.0%	7.1%	14.8%	9.5%
Rutherford	6.8%	14.6%	7.1%	13.8%	9.1%	11.8%	8.3%
Scott		0.0%	26.0%	0.0%	100.0%	42.9%	26.6%
Sequatchie			16.0%	0.0%	0.0%	20.0%	15.7%
Sevier	27.3%	0.0%	14.2%	0.0%	25.0%	26.3%	14.9%
Shelby	7.0%	17.5%	5.8%	14.3%	8.2%	20.9%	10.0%
Smith		25.0%	15.0%	0.0%	33.3%	26.7%	16.2%
Stewart		0.0%	17.4%		16.7%	11.1%	16.9%
Sullivan	20.0%	31.8%	11.2%	25.0%	30.0%	18.8%	11.9%
Sumner	7.7%	14.4%	6.4%	22.2%	7.2%	9.3%	7.1%
Tipton	0.0%	21.3%	9.2%	0.0%	0.0%	16.7%	10.3%
Trousdale		75.0%	13.6%	0.0%	20.0%	33.3%	17.8%
Unicoi			13.6%	0.0%		16.7%	13.6%
Union	0.0%	0.0%	11.8%			33.3%	12.5%
Van Buren			15.0%			0.0%	14.6%

Home Purchase Loans Denial Rates* by Race, 2017

County	Asian	Black	White	Other Minority	Multi-Racial	Missing	TOTAL
Warren	0.0%	14.3%	13.5%	33.3%	0.0%	26.9%	14.6%
Washington	4.2%	13.0%	9.6%	25.0%	15.4%	21.5%	10.4%
Wayne		0.0%	24.7%			57.1%	27.2%
Weakley	14.3%	42.9%	14.1%		0.0%	10.0%	14.7%
White		0.0%	11.2%		0.0%	37.5%	11.8%
Williamson	8.9%	9.6%	6.3%	7.1%	8.8%	8.2%	6.8%
Wilson	5.5%	12.1%	6.7%	9.1%	5.5%	13.7%	7.4%
NA	33.3%	97.8%	79.6%		66.7%	82.8%	86.4%
TENNESSEE	9.3%	17.4%	8.8%	13.2%	10.7%	15.4%	10.0%

APPENDIX H

Refinance Loans Denial Rates* by Race, 2017

Country	۸۰۰۰			Other Minerity		Minsins	TOTAL
County	Asian	Black	White	Other Minority	Multi-Racial	Missing	TOTAL
Anderson	16.7%	38.5%	25.5%	66.7%	40.0%	47.2%	29.0%
Bedford	0.0%	38.2%	27.9%	33.3%	33.3%	45.2%	31.2%
Benton	0.0%	100.0%	29.8%		0.0%	35.7%	30.6%
Bledsoe		100.0%	23.7%			61.5%	29.0%
Blount	66.7%	45.2%	24.3%	28.6%	33.3%	36.7%	26.6%
Bradley	50.0%	42.4%	27.5%	33.3%	50.0%	36.7%	29.6%
Campbell			23.1%	25.0%	66.7%	50.0%	25.6%
Cannon			28.4%		0.0%	37.5%	29.1%
Carroll		33.3%	22.9%		0.0%	47.1%	25.6%
Carter		100.0%	31.0%	100.0%	20.0%	52.4%	34.1%
Cheatham	100.0%	50.0%	24.9%	0.0%	20.0%	27.5%	25.4%
Chester	0.0%	57.1%	14.6%		50.0%	77.8%	23.6%
Claiborne	100.0%	33.3%	23.9%	50.0%	0.0%	60.0%	29.2%
Clay			45.0%	0.0%		40.0%	43.5%
Cocke		66.7%	32.0%	0.0%	100.0%	50.0%	34.7%
Coffee		33.3%	21.4%	0.0%	25.0%	27.6%	22.3%
Crockett		71.4%	36.7%		100.0%	66.7%	44.0%
Cumberland		0.0%	29.2%	66.7%	44.4%	38.8%	31.0%
Davidson	42.3%	33.1%	21.9%	40.5%	27.5%	29.0%	25.7%
Decatur		0.0%	22.4%			50.0%	25.0%
DeKalb		50.0%	27.7%		50.0%	40.0%	30.2%
Dickson	0.0%	47.4%	20.8%		0.0%	27.9%	22.2%
Dyer	0.0%	50.0%	32.2%	100.0%	33.3%	47.2%	35.7%
Fayette	0.0%	46.7%	21.1%	50.0%	11.1%	40.3%	27.8%
Fentress			36.8%	0.0%		53.3%	38.2%
Franklin		30.0%	24.1%		40.0%	34.6%	25.9%
Gibson		59.5%	26.1%		66.7%	35.5%	30.8%
Giles		50.0%	34.1%		33.3%	40.7%	36.6%
Grainger			23.6%		37.5%	47.6%	27.2%
Greene	0.0%	40.0%	30.4%	66.7%	23.1%	46.2%	31.8%
Grundy			14.3%	0.0%	100.0%	100.0%	20.7%
Hamblen	0.0%	29.6%	29.8%	66.7%	50.0%	37.0%	31.1%
Hamilton	36.8%	42.9%	26.9%	70.0%	21.4%	36.0%	30.1%
Hancock	0.0%	100.0%	30.6%			0.0%	28.6%
Hardeman	0.0%	41.9%	25.6%		0.0%	58.3%	34.8%
Hardin		0.0%	24.6%	0.0%	0.0%	35.7%	25.4%
Hawkins		33.3%	33.2%	66.7%	57.1%	33.3%	33.7%
Haywood		41.9%	24.7%		0.0%	14.3%	29.8%
Henderson		42.9%	22.4%	50.0%	66.7%	56.5%	27.4%
Henry		42.9%	32.6%		0.0%	31.6%	32.6%
Hickman		71.4%	24.2%	100.0%	50.0%	43.5%	29.7%
Houston		33.3%	26.0%		0.0%	100.0%	31.0%
Humphreys		50.0%	20.3%		50.0%	41.7%	22.8%
. idilipilicy3		33.070	20.5/0		30.070	12.7/0	22.0/0

Refinance Loans Denial Rates* by Race, 2017

County	Asian	Black	White	Other Minority	Multi-Racial	Missing	TOTAL
Jackson	Asiaii 		25.0%		0.0%	42.9%	26.6%
Jefferson			35.5%	0.0%	0.0%	39.5%	35.4%
	100.0%	28.6%	35.6%	100.0%	66.7%	59.5% 50.0%	
Johnson	 21 20/	 46 40/					39.0%
Knox	31.3%	46.4%	25.2%	42.9%	29.0%	35.9%	27.7%
Lake		66.7%	35.3%			50.0%	39.5%
Lauderdale		55.6%	39.6%	0.0%	50.0%	55.6%	44.2%
Lawrence 		0.0%	25.8%	0.0%	100.0%	29.2%	26.5%
Lewis	100.0%		24.2%	0.0%	100.0%	33.3%	27.2%
Lincoln		35.7%	31.4%	100.0%	0.0%	25.0%	30.6%
Loudon	40.0%	36.4%	22.0%	0.0%	0.0%	27.9%	22.7%
Macon			22.9%	100.0%		25.0%	23.4%
Madison	40.0%	49.8%	21.9%	100.0%	60.0%	41.5%	32.2%
Marion	50.0%	45.5%	24.7%	0.0%	33.3%	41.7%	27.2%
Marshall		38.5%	24.6%	0.0%	0.0%	21.7%	24.4%
Maury	20.0%	42.7%	20.5%	42.9%	26.3%	31.3%	23.7%
McMinn	50.0%	58.3%	30.3%	100.0%	50.0%	38.6%	32.7%
McNairy		50.0%	28.4%		33.3%	46.2%	30.8%
Meigs		0.0%	38.1%	0.0%	100.0%	30.0%	37.8%
Monroe	0.0%	60.0%	25.8%	0.0%	40.0%	35.0%	27.3%
Montgomery	64.3%	30.2%	26.6%	45.2%	37.9%	37.4%	29.9%
Moore		50.0%	31.2%			28.6%	31.4%
Morgan	0.0%		31.9%		100.0%	38.1%	32.9%
Obion		20.0%	29.6%	50.0%	0.0%	32.0%	29.1%
Overton			35.2%	50.0%	0.0%	26.7%	33.6%
Perry		0.0%	27.8%			0.0%	25.0%
Pickett			43.8%		0.0%	75.0%	45.9%
Polk			26.3%		50.0%	45.5%	28.6%
Putnam	37.5%	40.0%	29.3%	50.0%	42.9%	34.1%	30.4%
Rhea	0.0%	0.0%	24.5%	0.0%	16.7%	37.9%	25.5%
Roane	25.0%	44.4%	25.5%	50.0%	50.0%	49.1%	28.7%
Robertson	50.0%	31.1%	22.2%	0.0%	13.3%	30.1%	23.5%
Rutherford	33.8%	36.7%	19.7%	48.3%	31.3%	25.5%	22.9%
Scott			28.8%			66.7%	31.6%
Sequatchie			22.5%	0.0%	0.0%	47.8%	25.4%
Sevier	0.0%	50.0%	32.1%	16.7%	70.0%	51.5%	34.2%
Shelby	23.1%	48.0%	22.8%	53.1%	38.2%	43.4%	35.2%
Smith	25.170	0.0%	29.1%	55.170	66.7%	43.8%	30.5%
Stewart		0.0%	31.8%		40.0%	52.2%	35.0%
	 66 70/			66.7%			
Sullivan	66.7%	35.7%	31.6% 22.0%	31.3%	57.1% 29.7%	36.4%	32.8%
Sumner	25.0%	32.9%				26.4%	23.4%
Tipton	100.00/	40.2%	26.0%	66.7%	70.0%	35.8%	30.3%
Trousdale	100.0%	50.0%	21.4%	0.0%	0.0%	30.0%	24.4%
Unicoi			30.5%		50.0%	27.8%	30.4%
Union			30.9%	0.0%	0.0%	33.3%	30.2%
Van Buren			28.8%		100.0%	25.0%	29.3%

Refinance Loans Denial Rates* by Race, 2017

County	Asian	Black	White	Other Minority	Multi-Racial	Missing	TOTAL
Warren		16.7%	30.8%		0.0%	40.7%	31.0%
Washington	25.0%	55.6%	28.5%	25.0%	35.7%	34.7%	30.2%
Wayne		50.0%	27.4%			40.0%	29.4%
Weakley		33.3%	30.7%	100.0%	25.0%	33.3%	31.3%
White		66.7%	25.1%	0.0%	75.0%	25.0%	26.3%
Williamson	13.2%	28.0%	17.4%	15.8%	21.5%	20.2%	18.2%
Wilson	23.1%	30.1%	21.3%	53.8%	26.7%	25.7%	22.6%
NA		75.0%	35.3%			100.0%	53.8%
TENNESSEE	31.3%	41.0%	24.6%	42.9%	33.0%	34.6%	28.0%

APPENDIX I

Methodology for Estimating THDA Eligible Borrowers to calculate THDA's Market Share

To compare similar loan products between THDA and those within the HMDA data set, we limited the HMDA loans to those with borrowers meeting the income limits and the maximum purchase price THDA borrowers paid. HMDA does not require all lenders to report mortgage information, so the data may not represent a complete inventory of loans made, especially in small rural counties. Additionally, THDA loan eligibility is subject to income and purchase price limits, and, in more than half of the state's counties, loan eligibility is limited to first time homebuyers. ³⁶Therefore, some assumptions are made.

THDA eligible borrowers are defined as first time homebuyers with income less than or equal to THDA's income limit for the county they are purchasing their homes with a price less than or equal to the maximum price THDA borrowers paid in the county. Since majority of THDA loans funded in the recent years are FHA-insured, only FHA-insured THDA loans are compared to FHA-insured loans originated in the market.

In the HMDA data, institutions report the loan amounts rather than the purchase prices. This complicates determining the mortgage borrowers who could be eligible for THDA loans. Therefore, in this version, the purchase price of the homes was estimated by assuming that borrowers paid four percent of the reported loan amount as downpayment. A four percent downpayment may be considered low, especially for conventional loans, but considering there are zero or low downpayment loan products such as FSA/RHS and FHA insured loans and borrowers may use private mortgage insurance (PMI) and pay less than 20 percent downpayment, four percent is a good average for an estimated downpayment. We compared this estimated purchase price to the maximum price THDA borrowers paid during the year in each county. In the counties where THDA did not fund any loan, we used the median sales price in the county for all sales during year from Comptroller's.

To determine the eligibility based on the income limits, THDA's income limits for a small family (households with one to two people) were used. HMDA data do not include the number of people in the household. This might underestimate number of THDA eligible borrowers.

HMDA data do not indicate whether or not borrower was a first-time homebuyer. Since majority of THDA borrowers are first-time homebuyers, we used the estimates provided in the US Department of Housing and Urban Development's Annual reports to Congress on financial status of FHA mortgage insurance fund³⁷. For example, in 2017, the report estimates 82.2 percent of borrowers who used FHA-insured loans were first-time homebuyers.

There is not a first time homebuyer indicator in HMDA, however, in the US Department of Housing and Urban Development (HUD) Annual Reports to Congress about financial status of FHA Mortgage Insurance Funds, the percent of FHA-insured loan borrowers who are first-time homebuyer is

³⁶ First-time homeownership requirement is waived in the fully targeted economically distressed counties and qualified census tracts in addition to the Veterans who are using THDA loan products.

³⁷ Annual reports for various fiscal years can be found at https://www.hud.gov/fhammifrpt

estimated.³⁸ All told, this means that the loan counts used are likely to under/overestimate THDA's participation in the market. However, despite these limitations, this is a useful comparison to examine our loan market participation.

³⁸ Annual reports for various fiscal years can be found at https://www.hud.gov/fhammifrpt

APPENDIX J

	THDA Eligible FHA- insured Loans		FHA-Insured First Time THDA Borrowers		THDA's Market Share in FHA- Insured Loans Market	
County	2017	2016	2017	2016	2017	2016
Anderson	158	133	61	29	46.97%	26.56%
Bedford	56	24	8	5	17.38%	25.38%
Benton	5	1	0	0	0.00%	0.00%
Bledsoe	4	2	0	0	0.00%	0.00%
Blount	190	176	24	23	15.37%	15.92%
Bradley	233	211	97	52	50.65%	30.02%
Campbell	24	39	5	5	25.34%	15.62%
Cannon	26	0	8	1	37.43%	0.00%
Carroll	9	9	2	1	27.03%	13.53%
Carter	34	19	4	0	14.31%	0.00%
Cheatham	108	109	12	15	13.52%	16.76%
Chester	7	12	1	0	17.38%	0.00%
Claiborne	11	7	2	1	22.12%	17.40%
Clay	0	0	0	0	0.00%	0.00%
Cocke	28	2	16	4	69.52%	100.00%
Coffee	74	23	11	5	18.08%	26.48%
Crockett	19	14	8	5	51.22%	43.50%
Cumberland	42	34	7	3	20.28%	10.75%
Davidson	1,650	2,036	293	298	21.60%	17.83%
Decatur	1	5	0	0	0.00%	0.00%
DeKalb	32	31	4	5	15.21%	19.65%
Dickson	104	63	11	15	12.87%	29.00%
Dyer	7	16	3	5	52.14%	38.06%
Fayette	59	78	10	7	20.62%	10.93%
Fentress	3	4	1	0	40.55%	0.00%
Franklin	38	15	7	4	22.41%	32.48%
Gibson	41	55	7	10	20.77%	22.15%
Giles	39	11	4	1	12.48%	11.07%
Grainger	15	12	8	5	64.88%	50.75%
Greene	56	36	19	16	41.28%	54.13%
Grundy	4	3	1	1	30.41%	40.60%
Hamblen	75	46	24	11	38.93%	29.13%
Hamilton	631	816	164	170	31.62%	25.38%
Hancock	1	1	0	0	0.00%	0.00%
Hardeman	15	7	2	0	16.22%	0.00%
Hardin	12	11	1	1	10.14%	11.07%
Hawkins	41	50	6	8	17.80%	19.49%
Haywood	21	34	11	9	63.72%	32.24%
Henderson	6	13	1	1	20.28%	9.37%

	THDA Eligible FHA- insured Loans		FHA-Insure		THDA's Market Share in FHA- Insured Loans Market		
-			Time THDA Borrowers				
County	2017	2016	2017	2016	2017	2016	
Henry		21	1		20.28%	17.40%	
Hickman	36	19	4	7	13.52%	44.87%	
Houston	11	5	4	2	44.24%	48.72%	
Humphreys	9	9	2	0	27.03%	0.00%	
Jackson	5	0	0	0	0.00%	0.00%	
Jefferson 	69	53	16	12	28.21%	27.58%	
Johnson	6	4	1	0	20.28%	0.00%	
Knox	1,070	1,150	319	236	36.27%	25.00%	
Lake	1	3	0	0	0.00%	0.00%	
Lauderdale	44	23	17	9	47.00%	47.66%	
Lawrence	4	29	1	3	30.41%	12.60%	
Lewis	1	3	1	1	100.00%	40.60%	
Lincoln	18	24	1	2	6.76%	10.15%	
Loudon	54	88	7	16	15.77%	22.15%	
Macon	22	32	4	4	22.12%	15.23%	
Madison	304	235	108	68	43.22%	35.25%	
Marion	10	27	2	0	24.33%	0.00%	
Marshall	64	58	12	3	22.81%	6.30%	
Maury	360	325	51	47	17.23%	17.61%	
McMinn	48	35	17	12	43.09%	41.76%	
McNairy	14	10	2	0	17.38%	0.00%	
Meigs	6	5	4	1	81.10%	24.36%	
Monroe	48	51	6	8	15.21%	19.11%	
Montgomery	587	442	226	86	46.84%	23.70%	
Moore	2	4	0	0	0.00%	0.00%	
Morgan	9	2	2	1	27.03%	60.90%	
Obion	4	22	0	4	0.00%	22.15%	
Overton	6	2	1	2	20.28%	100.00%	
Perry	4	2	2	0	60.83%	0.00%	
Pickett	1	0	0	0	0.00%	0.00%	
Polk	7	5	2	2	34.76%	48.72%	
Putnam	49	80	4	2	9.93%	3.05%	
Rhea	44	36	9	6	24.88%	20.30%	
Roane	49	49	8	14	19.86%	34.80%	
Robertson	230	161	44	17	23.27%	12.86%	
Rutherford	1,469	1,753	293	235	24.26%	16.33%	
Scott	4	10	2	1	60.83%	12.18%	
Sequatchie	16	13	4	3	30.41%	28.11%	
Sevier	62	98	6	9	11.77%	11.19%	
Shelby	1,428	1,541	340	160	28.97%	12.65%	
Smith	12	7	5	0	50.69%	0.00%	

	THDA Eligible FHA- insured Loans		FHA-Insure Time THDA B		THDA's Market Share in FHA- Insured Loans Market	
County	2017	2016	2017	2016	2017	2016
Stewart	13	2	3	1	28.07%	60.90%
Sullivan	241	171	63	13	31.80%	9.26%
Sumner	605	550	95	89	19.10%	19.71%
Tipton	100	31	7	3	8.52%	11.79%
Trousdale	7	10	1	1	17.38%	12.18%
Unicoi	14	11	4	3	34.76%	33.22%
Union	16	34	4	8	30.41%	28.66%
Van Buren	1	2	2	0	100.00%	0.00%
Warren	27	35	21	4	94.62%	13.92%
Washington	117	104	25	13	25.99%	15.23%
Wayne	0	0	0	0	0.00%	0.00%
Weakley	21	2	2	1	11.59%	60.90%
White	29	12	1	1	4.19%	10.15%
Williamson	132	267	15	25	13.82%	11.40%
Wilson	307	316	28	23	11.10%	8.87%
TENNNESSEE	11,702	12,142	2,642	1,877	27.47%	18.83%