

A Look at Tennessee Mortgage Activity:
A one-state analysis of the Home
Mortgage Disclosure Act (HMDA) Data
2004-2013

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TABLE OF CONTENTS

I. Introduction	4
1. What Is HMDA?	4
2. Some Of the Key Findings.....	4
II. Mortgage Applications and Originations	5
III. Home Purchase versus Refinance	7
IV. Conventional versus Government Insured Loans.....	10
V. Mortgage Loans For Non-Owner-Occupied Homes	12
VI. Subordinate (Junior) Lien Loans	13
VII. Loan Sales	14
VIII. Applicant Incomes and Loan Amounts	14
IX. Analysis by Demographic Groups and Income Levels.....	15
X. Denial Rates and Denial Reasons.....	22
XI. High Cost Loans.....	24
XI. Home Loan Market Share of THDA.....	24

FIGURES, MAPS AND TABLES

Figure 1	The Number of Mortgage Loans Originated, 1-4 Family Dwellings, 2004-2013, Tennessee.....	7
Figure 2	The Number of Home Purchase and Refinance Mortgage Loan Originations, 1-4 Family Dwellings, 2004–2013, Tennessee.....	8
Figure 3	Share of Conventional Loans in Total Loans Originated, 2004-2013, Tennessee	11
Figure 4	First-Lien Mortgages Originated for Non-Owner-Occupied Homes, 2004-2013, Tennessee.....	12
Figure 5	Subordinate Lien Mortgages Originated for 1-4 Family Owner-Occupied Homes by Loan Purpose, 2004-2013, Tennessee.....	13
Map 1	Total Loan Applications and Originations, White Applicants, 2013	20
Map 2	Total Loan Applications and Originations, African American Applicants, 2013	21
Map 3	THDA’s Share in the Home Loans Market, 2012	30
Map 4	THDA’s Share in the Home Loans Market, 2013	31
Map 5	THDA’s Share in FHA-Insured Home Loans Market, 2012	33
Map 6	THDA’s Share in FHA-Insured Home Loans Market, 2013	34
Table 1	Number of Reporting Institutions, Total Number of Applications and Originations and Dollar Value of Loans Originated by Year, 2004-2013, Tennessee	6
Table 2	Number of Loans Reported and Action Taken by the Financial Institutions, 2004-2013, Tennessee.....	9

Table 3	First-Lien Loans Originated for Owner-Occupied 1-4 Family Dwellings, 2004-2013, Tennessee.....	10
Table 4	Non-Conventional, Government Insured First-Lien Loans Originated for Owner-Occupied 1-4 Family Dwellings by Insurer, 2004-2013, Tennessee	12
Table 5	Average and Median Income and Loan Amounts, in Thousand \$, 2004-2013, Tennessee.....	15
Table 6	Borrower Characteristics and Purpose of the Loan, 2004-2013, Tennessee	17
Table 7	Borrower Characteristics and Purpose of the Loan, Nonconventional Loans, 2004-2013, Tennessee.....	18
Table 8	Denial Rates, Conventional and Nonconventional Home Purchase Loans, 2004-2013, Tennessee.....	22
Table 9	Denial Rates, Conventional and Nonconventional Refinance Loans, 2004-2013, Tennessee.....	23
Table 10	High Cost Loans, Conventional and Nonconventional Home Purchase Loans, 2004-2013, Tennessee.....	25
Table 11	High Cost Loans, Nonconventional Home Purchase Loans, 2004-2013, Tennessee..	26
Table 12	High Cost Loans, Conventional and Nonconventional Refinance Loans, 2004-2013, Tennessee.....	27

I. INTRODUCTION

This report provides an overview of mortgage market activity and lending patterns in Tennessee using the Home Mortgage Disclosure Act (HMDA) data from 2004 until 2013 and compares different demographic groups and lender types. Ten years of HMDA data is included in the analysis. By so doing, we intend to find if there is any trend in mortgage loan applications, originations and denials in Tennessee. This 10-year period is particularly interesting because it covers years before, during and after the housing market crisis, which helps us determine the impact of the housing market crisis on mortgage loan originations. All the information provided in this report is related to the mortgage loan applications in Tennessee, unless noted.

1. What is HMDA?

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 even though it does not include all residential loan applications because some institutions are exempt from HMDA reporting requirements.

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.¹ 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.²

2. Some of the Key Findings

- In 2013, 340,333 home purchase, refinancing and home improvement loan applications for one-to four-family dwellings were submitted to financial institutions in Tennessee. In 2013, both the loan applications and originations were lower than 2012. Five large lenders, including Wells Fargo, Regions, Quicken Loans, Mortgage Investors Group (MIG) and Bank of America originated more than one fifth of all the loans, in 2013.

¹ History of HMDA, <http://www.ffiec.gov/hmda/history2.htm>

² Banks, credit unions or saving associations (institutions) that had 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 one home purchase loan (excluding temporary financing such as a construction loan) or refinancing of a home purchase loan secured by a first lien on a one- to four-family dwelling, in the preceding calendar year, must report. The exemption threshold of the HMDA data changed over the years. In December 2014, the CFPB increased the asset exemption threshold for depository institutions to \$44 million for data collection in 2015, and did not change the exemption thresholds for non-depository institutions. 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 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>

- In 2013, 55 percent of all first-lien home purchase loans originated for one- to four-family owner-occupied homes were conventional, while 24 percent were Federal Housing Administration (FHA)-insured, 12 percent were insured by the Veterans Administration (VA) and nine percent were Farm Services Agency (FSA)/Rural Housing Services (RHS)-insured. While the share of loans insured by VA and FSA/RHS stayed similar to their level in 2012, the share of FHA-insured loans declined in 2013, and the gap was filled by conventional loans. The share of FHA-insured loans in the total originated loans declined in 2013 compared to 2012.
- Minority and lower income borrowers used nonconventional government-insured (FHA, VA and/or FSA/RHS insured) loans more often than conventional loans. In 2013, almost 77 percent of all black borrowers and 62 percent of all Hispanic or Latino borrowers used nonconventional loans for home purchase, while in the same year, only 45 percent of all home purchase loans were nonconventional. Low-income borrowers also mostly used nonconventional loans in 2013.
- In 2013, the average loan amount for VA-insured loans was higher than the average conventional loan amount. The applicants who used VA insurance also had higher average incomes than borrowers with FHA-insured and FSA/RHS-insured loans.
- In 2013, the denial rate of all borrowers in different race categories (including conventional and nonconventional loans) who applied for a home purchase loan was 14.6 percent in Tennessee. With 24.6 percent, black or African American borrowers had the highest denial rate in 2013, followed by 'other' minority borrowers, who include American Indians and Native Hawaiians. Among the nonwhite race categories, Asian applicants had the lowest denial rates.

In this report, we also looked at Tennessee Housing Development Agency's (THDA's) share in Tennessee home loans market in 2011, 2012 and 2013. 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 for years 2011 through 2013 with the THDA loan portfolio for these years.

In 2013, THDA funded 5.6 percent of all comparable first lien home purchase loans for owner-occupied one- to four-family dwellings that were at THDA's purchase price limit for borrowers who met THDA's income limit requirements. In 2013, THDA's share among FHA-insured loans was 16.4 percent.

II. MORTGAGE APPLICATIONS AND ORIGINATIONS

In 2013, 1,053 institutions reported data on approximately 360,000 home mortgage applications in Tennessee. These loan applications in 2013 led to 172,612 loan originations in the amount of approximately \$28 billion. Both the number of applications and originations in 2013 were lower than they were in 2012. Table 1 gives the total number of institutions reporting HMDA data and the total applications reported and the total number and dollar amount of loans originated in each year from 2004 until 2013.

Table 1. Number of Reporting Institutions, Total Number of Applications and Originations and Dollar Value of Loans Originated by Year, 2004-2013, Tennessee

Activity Year	Number of Reporting Institutions	Number of Loan Records Reported	Number of Loans Originated	Dollar Value of Loans Originated
2004	1,171	585,706	246,168	\$27,466,125
2005	1,198	637,308	259,778	\$30,098,732
2006	1,299	608,566	252,001	\$30,733,054
2007	1,268	512,117	217,392	\$29,398,208
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

According to the table, over the years, the number of depository institutions required to report HMDA data fluctuated.³ In 2005, financial institutions originated the highest number of loans in this 10-year period. The number of loans originated declined in the subsequent years until 2009, when the originated loans increased by 15 percent compared to 2008. Another big jump in the loan originations was in 2012 when the number of loans originated increased by 34 percent compared to 2011. The low interest rates in 2012 stimulated both the home purchases and refinances causing this substantial annual increase.

In 2013, approximately 700 institutions had fewer than 100 loans originated. Five large lenders originated more than one fifth of all the loans, in 2013. These lenders were Wells Fargo, Regions, Quicken Loans, Mortgage Investors Group (MIG) and Bank of America, respectively. Wells Fargo originated the highest number of mortgage loans in Tennessee since 2009, and even when it was not the institution with most loans, it was always among the first four institutions with the highest number of loan originations during the 10-year period. Between 2004 and 2008, Countrywide⁴ originated the highest number of loans in Tennessee. 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 is the top originating agent of Tennessee Housing Development Agency (THDA) loans for the last several years.

³ Several factors cause these fluctuations. The most significant one is the changes in reporting requirements resulting from increases in the minimum asset level used in determining coverage. For example, in December 2012, the CFPB increased the asset exemption threshold for depository institutions to \$42 million for data collection in 2013 from \$41 million for 2012 data. Bank mergers, acquisitions and bank closings also affect the number of reporting institutions in a year.

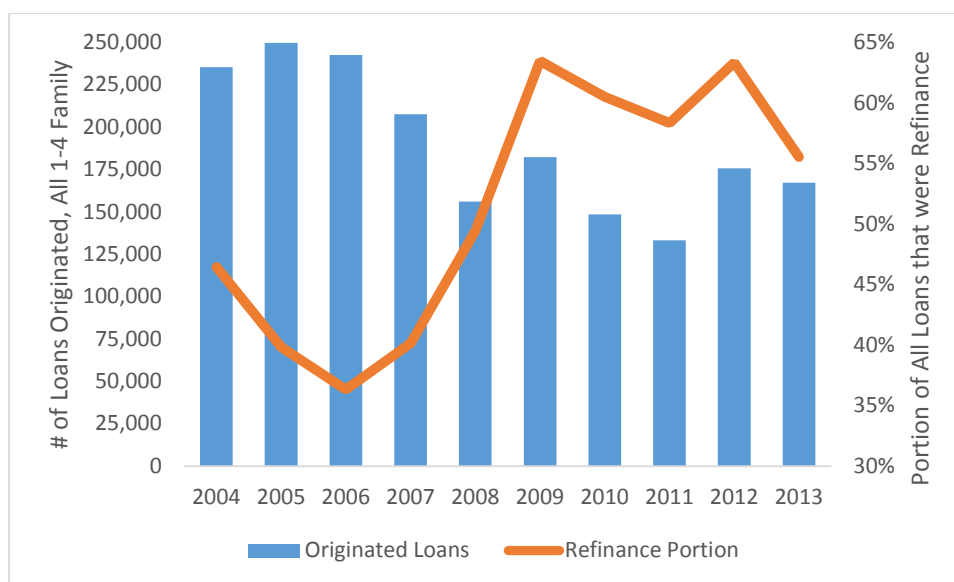
⁴ In 2008, Countrywide Financial was purchased by Bank of America.

III. HOME PURCHASE VERSUS REFINANCE

According to HMDA data, in 2013, 340,333 home purchase, refinancing and home improvement loan applications for one- to four-family dwellings were submitted⁵ to financial institutions in Tennessee. In the same year, there were an additional 593 reported loan applications for multifamily dwellings and 17,528 applications for manufactured homes. In 2012, the home purchase, refinancing and home improvement applications involving one- to four-family dwellings was 355,973, which was 4.4 percent higher than the applications in 2013. In 2013, both the loan applications and originations were lower than 2012.

In 2013, the annual decline in loan applications and originations was mostly the result of the decline in refinancing activity. As Figure 1 displays, in 2012, more than 60 percent of all loans originated involving one- to four-family dwellings in Tennessee were for refinance purpose.

Figure 1. The Number of Mortgage Loans Originated, 1-4 Family Dwellings, 2004-2013, Tennessee



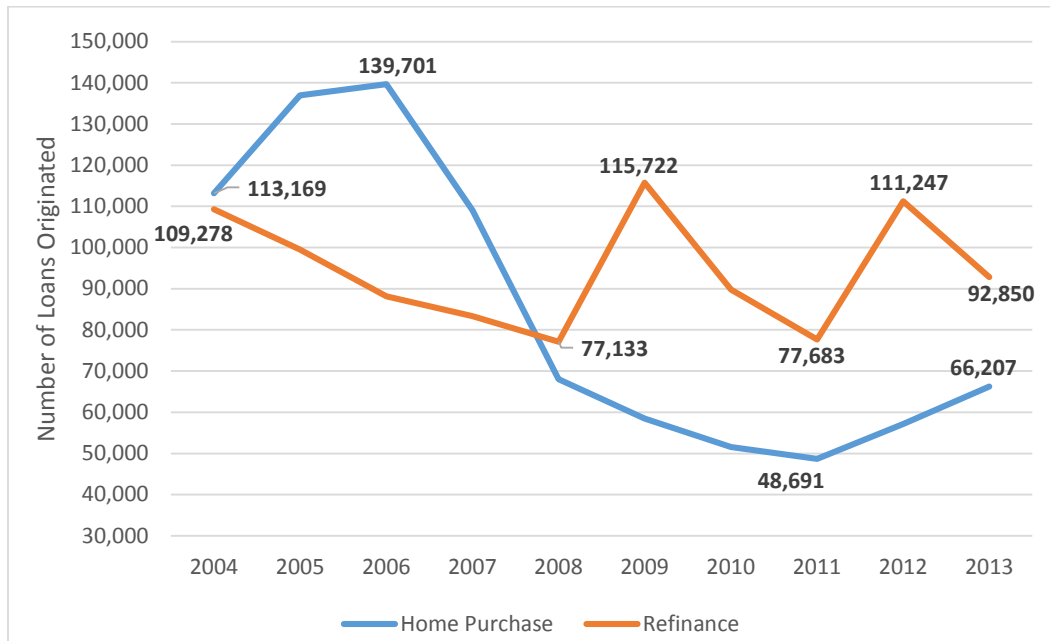
Home purchase and home improvement loans that were originated involving one- to four-family dwellings increased by 16 and 12 percent from 2012 to 2013, respectively. The breakdown between home purchase and refinance loans in 2012 and 2013 in Tennessee was similar to the national trend. Refinance mortgage loan originations for one- to four-family properties declined by over 18,000, or by 17 percent, from 2012 to 2013, in Tennessee, while, in 2013, the refinance mortgage loan originations for one- to four-family homes in the nation declined by 23 percent compared to 2012.⁶

Figure 2 shows the trend in the volume of home purchase and refinance mortgage loan originations for one-to four-family homes from 2004 to 2013.

⁵ That number also includes the loans originated in the previous years and purchased by the financial institutions during the year and preapproval requests.

⁶ Neil Bhutta and Daniel R. Ringo (2014), "The 2013 Home Mortgage Disclosure Act Data," *Federal Reserve Bulletin*, vol. 100 (November), http://www.federalreserve.gov/pubs/bulletin/2014/pdf/2013_HMDA.pdf

Figure 2. The Number of Home Purchase and Refinance Mortgage Loan Originations, 1-4 Family Dwellings, 2004–2013, Tennessee



In Tennessee, 2009 was the peak year for the refinancing loan origination. In 2009, the refinancing mortgages for one- to four-family homes increased by 50 percent from 2008. That is not a coincidence considering that the Home Affordable Refinance Program (HARP) started in March 2009. Another important factor was the large decline in interest rates that started in late 2008. According to the Freddie Mac Primary Mortgage Market Survey (PMMS) data⁷, in December 2008, the monthly average commitment rate on 30-year fixed-rate mortgages declined to 5.29 percent from 6.09 percent in November, and in 2009, the annual average rate on 30-year fixed-rate mortgages declined to 5.04 percent compared to 6.03 percent in 2008 and 6.34 percent in 2007. The declining interest rates stimulated refinance mortgage activity in 2009 while mortgage loans for home purchase declined.

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).

⁷ For data on Monthly Average Commitment Rate And Points On 30-Year Fixed-Rate Mortgages Since 1971, see <http://www.freddiemac.com/pmms/pmms30.htm>

Table 2. The Number of Loans Reported and Action Taken by the Financial Institutions, 2004-2013, Tennessee

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
1-4 Family										
<i>Home Purchase</i>										
Reported*	209,144	263,386	274,524	208,406	128,363	118,638	103,839	98,742	113,508	128,899
Originated	113,169	136,983	139,701	109,089	68,014	58,509	51,531	48,691	57,175	66,207
Denied	23,194	27,896	30,772	22,986	13,178	9,544	8,794	8,746	10,815	11,663
Purchased**	43,017	56,162	65,645	49,407	30,998	37,257	32,500	30,869	33,452	36,210
Other***	29,764	42,345	38,406	26,924	16,173	13,328	11,014	10,436	12,066	14,819
<i>Refinancing</i>										
Reported	306,929	304,721	271,172	241,947	194,989	259,264	204,643	174,109	226,436	194,628
Originated	109,278	99,488	88,152	83,347	77,133	115,722	89,818	77,683	111,247	92,850
Denied	79,290	82,274	72,496	71,222	53,211	40,090	34,880	30,917	35,426	36,566
Purchased	36,218	34,052	37,561	34,354	28,452	59,245	42,693	30,675	36,017	25,970
Other	82,143	88,907	72,963	53,024	36,193	44,207	37,252	34,834	43,746	39,242
<i>Home Improvement</i>										
Reported	31,192	35,528	36,252	36,081	27,157	17,118	14,056	14,064	16,029	16,806
Originated	12,854	13,189	14,752	15,171	10,865	8,089	7,080	6,793	7,241	8,126
Denied	12,722	13,782	14,465	14,455	11,129	5,488	4,944	5,393	6,584	6,674
Purchased	843	804	1,398	1,106	1,458	1,084	685	600	720	547
Other	4,773	7,753	5,637	5,349	3,705	2,457	1,347	1,278	1,484	1,459
Multifamily										
Reported	561	606	604	574	634	407	363	436	585	593
Originated	393	479	461	452	493	321	296	354	489	478
Denied	43	54	64	57	49	44	29	36	42	40
Purchased	92	34	29	15	59	13	9	13	7	9
Other	33	39	50	50	33	29	29	33	47	66
Manufactured										
Reported	37,880	33,067	26,014	25,109	14,696	10,601	13,016	17,026	16,804	17,528
Originated	10,474	9,639	8,935	9,333	6,683	5,135	4,557	4,422	4,534	4,951
Denied	16,119	13,783	11,041	9,297	4,722	3,287	5,618	7,898	8,214	8,166
Purchased	3,264	2,906	925	2,421	1,115	583	272	252	211	224
Other	8,023	6,739	5,113	4,058	2,176	1,596	2,569	4,454	3,845	4,187

*Reported includes all the loans reported by the financial institutions to HMDA during the year regardless of the action taken.

**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.

In 2008, loans originated for multifamily home purchases were at the highest level of the 10-year period covered in this report. In 2009 and 2010, the number of multifamily loans originated declined and since 2011, it is increasing again.

In 2013, first-lien home purchase loans on one- to four-family dwellings increased compared to 2012 in all Tennessee counties except Decatur, Hancock, Sequatchie, Montgomery, Polk, Unicoi and Carter. Haywood, Perry and Hamblen did not have any change in the home purchase loan originations from 2012 to 2013. In contrast, the first-lien refinance loans on one- to four-family dwellings declined in the majority of counties.

Institutions also report the loans that were previously originated and purchased from other institutions during the year and the pre-approval requests. In 2013, reporting institutions purchased almost 63,000 loans that were previously originated. Approximately 58 percent of those loans purchased by the financial institutions were for the purchase of one- to four-family dwellings. There were not many loans purchased by the institutions for home improvement purposes.

IV. CONVENTIONAL VERSUS GOVERNMENT-INSURED LOANS

Table 3 further breaks down the first-lien loans originated for owner-occupied one- to four-family dwellings by loan type. According to the table, in 2013, 55 percent of all first-lien home purchase loans originated for one- to four-family owner-occupied homes were conventional, while 24 percent were Federal Housing Administration (FHA)-insured, 12 percent were insured by the Veterans Administration (VA) and nine percent were Farm Services Agency (FSA)/Rural Housing Services (RHS)-insured. While the share of loans insured by VA and FSA/RHS stayed similar to their level in 2012, the share of FHA-insured loans declined in 2013, and the gap was filled by conventional loans.

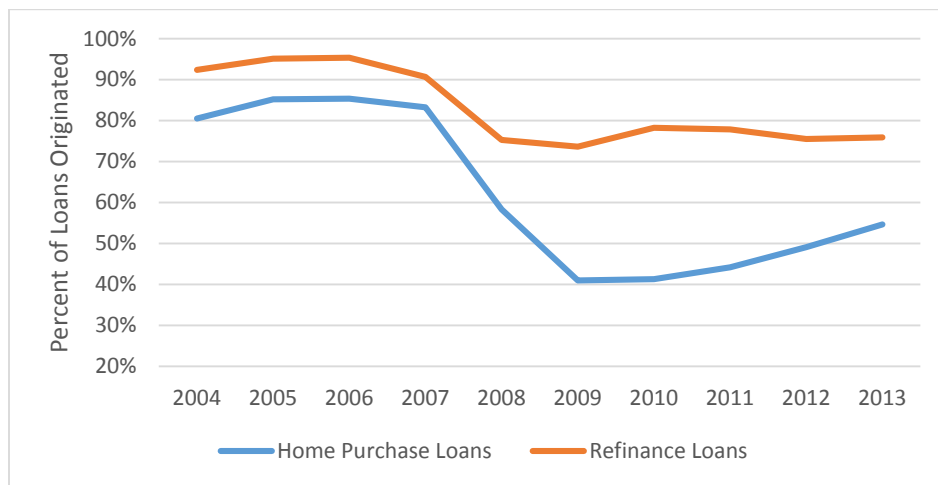
Table 3. First-Lien Loans Originated for Owner-Occupied 1-4 Family Dwellings, 2004-2013, Tennessee

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Home Purchase Loans										
Total # of Loans Originated	89,203	98,307	95,477	81,647	56,122	51,377	45,433	42,716	50,279	58,613
Conventional (%)	80.5%	85.2%	85.4%	83.3%	58.3%	41.0%	41.3%	44.2%	49.1%	54.7%
FHA (%)	13.6%	9.7%	9.4%	9.8%	30.9%	41.8%	41.8%	34.1%	30.0%	24.3%
VA (%)	4.7%	4.2%	4.3%	5.4%	6.6%	9.9%	9.9%	12.4%	11.5%	11.7%
FSA/RHS (%)	1.2%	1.0%	0.9%	1.5%	4.1%	7.3%	7.0%	9.3%	9.4%	9.3%
Refinance Loans										
Total # of Loans Originated	93,988	80,420	66,105	65,456	63,839	105,611	80,768	68,283	98,720	79,463
Conventional (%)	92.4%	95.2%	95.3%	90.7%	75.3%	73.7%	78.2%	77.9%	75.5%	75.9%
FHA (%)	4.9%	3.6%	4.0%	8.3%	23.2%	22.6%	17.9%	14.1%	14.9%	15.1%
VA (%)	2.8%	1.3%	0.6%	1.0%	1.5%	3.6%	3.8%	7.9%	9.2%	8.5%
FSA/RHS (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%	0.2%	0.4%	0.4%

Figure 3 shows the percent of originated loans that were conventional from 2004 until 2013. In 2013, 55 percent of home purchase loans and 76 percent of refinance loans were conventional. In any given year from 2004 until 2013, a higher percentage of originated loans for refinance purpose was conventional compared to home purchase loans. Until 2008, 80 percent or more of all first-lien loans originated for

the purchase of owner-occupied one- to four-family dwellings were conventional loans in Tennessee. This declined to 58 percent in 2008, and it hit the bottom with 41 percent in 2009. It is gradually increasing since 2010, but still it is not to the peak level before the housing crisis. 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, and for many Tennesseans who wanted to obtain a home purchase loan during that time period, the FHA was the only option available. In recent years, the Federal Housing Administration has increased the mortgage insurance premiums (MIP) and up front mortgage insurance payments several times and required MIP for the life of the loan unless borrowers refinance the loan. This increased the cost of purchasing a home using FHA-insured mortgage loans. For that reason, the FHA-insured loans are declining compared to the conventional loans and other government insurers.

Figure 3. Share of Conventional Loans in Total Loans Originated, 2004-2013, Tennessee



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 still 70 percent or more of all refinance loans originated were conventional.

Among the non-conventional government-insured loans (both the home purchase and refinance), the majority of the originated loans were FHA-insured. The share of FHA-insured loans in the total nonconventional loans originated for home purchase was declining from 2004 until 2007, but when the housing crisis started in 2008 it increased from 59 percent to 74 percent. During that time, the majority of nonconventional loans were insured by FHA. However, especially since 2010, the percent of FHA-insured home loans originated declined, while VA and FSA/RHS shares slightly increased. Increases in the mortgage insurance premiums (MIP) for the FHA insurance and the extended period required to pay the insurance were probably the factors that caused the decline in the FHA share of the nonconventional loans market.

Table 4. Non-Conventional, Government Insured First-Lien Loans Originated for Owner-Occupied 1-4 Family Dwellings by Insurer, 2004-2013, Tennessee

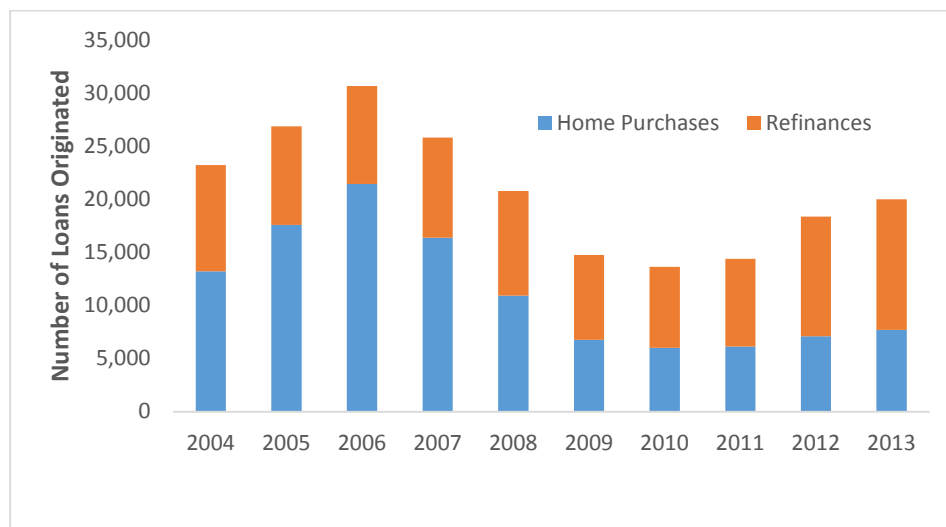
	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Home Purchase Loans										
FHA	69.9%	65.4%	64.4%	58.8%	74.2%	70.8%	71.3%	61.2%	59.0%	53.6%
VA	24.1%	28.0%	29.7%	32.1%	15.9%	16.8%	16.9%	22.2%	22.6%	25.8%
FSA/RHS	6.0%	6.6%	5.9%	9.1%	9.9%	12.4%	11.9%	16.6%	18.4%	20.6%
Refinance Loans										
FHA	63.7%	73.8%	86.2%	89.3%	93.7%	86.0%	82.3%	63.7%	61.0%	63.0%
VA	36.2%	26.0%	13.8%	10.6%	6.2%	13.7%	17.2%	35.6%	37.5%	35.3%
FSA/RHS	0.2%	0.2%	0.0%	0.1%	0.2%	0.3%	0.4%	0.7%	1.6%	1.8%

V. 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. As Figure 4 shows, the number of first-lien mortgage loans originated for non-owner-occupied home purchases increased until 2006, and substantially declined in subsequent years. Refinance loans for non-owner-occupied homes fluctuated year over year. Both home purchase and refinance loans for the non-owner-occupied homes started increasing in 2011, but the increase in refinance loans was more evident.

Between 2004 and 2008, there were more home purchase loans originated for non-owner-occupied more than for refinance loans. After 2008, refinance loans started to dominate the second home mortgage loan originations. First-lien loans for not owner-occupied home purchases increased in 2004 and 2005 and reached to the peak level of the 10-year period in 2006, and between 2006 and 2011, the home purchase loans declined. In 2013, home purchase loans for the not owner-occupied homes increased from the previous years, but they were still almost 64 percent lower than the highest level in 2006. In the meantime, the refinance loans increased and reached a level approximately 25 percent higher than the level in 2008.

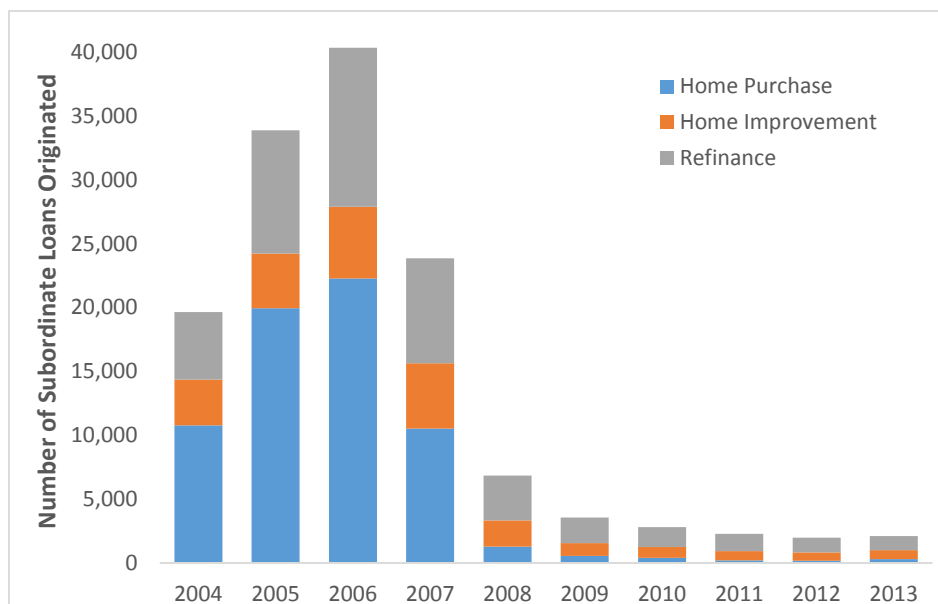
Figure 4. First-Lien Mortgages Originated for Non-Owner-Occupied Homes, 2004-2013, Tennessee



VI. SUBORDINATE (JUNIOR) LIEN LOANS

One option for borrowers who apply for home purchase loans when they have less than 20 percent of the purchase price as downpayment is to acquire junior lien loans. Borrowers may also use subordinate lien loans for refinancing their previous mortgage loans or for home improvement. During the years before the housing market crisis, there was a high volume of subordinate lien loan applications and a high volume of them were originated. Since the housing crisis in 2008, the subordinate lien loan applications and originations declined substantially. The following figure displays the trend in subordinate loans originated for one- to four-family owner-occupied home mortgage loans between 2004 and 2013 separated by the loan purpose.

Figure 5. Subordinate Lien Mortgages Originated for 1-4 Family Owner-Occupied Homes by Loan Purpose, 2004-2013, Tennessee



According to the figure, we can identify two distinct trends in the junior liens originated in Tennessee in the last 10 years. The first one is the sharp increase in junior lien loan originations between 2004 and 2006 and even sharper decline after that. The rate of decline is slowing down in recent years, but still junior lien loan originations are not anywhere close to their level before the housing crisis. For example, in 2006, almost 41,000 subordinate lien loans were originated in Tennessee. In 2007, junior lien loan originations declined by 41 percent to approximately 24,000. In 2008, the annual decline rate was 71 percent and the number of loans originated dropped to less than 7,000. The decline in the junior lien loans is coinciding with the increase in nonconventional loan originations. It is possible that applicants who do not have enough money for downpayment and closing costs and who cannot obtain junior lien loans are relying more on government backed mortgages.

The second trend is the change in the purpose of subordinate lien loans that were originated. Between 2004 and 2006, nearly 55 percent or more of the junior lien loans originated were for home purchase purposes. Prior to the housing market crisis, there was an increasing number of piggyback loans for applicants lacking enough money for downpayment and closing costs. Beginning in 2007 through 2012, the share of junior lien loans used for home purchase began declining. However, when the junior loan

market began to see small increases (six percent in 2013), the loans were being used more for refinance instead of purchase.

VII. LOAN SALES

The secondary market is important to increase the available funds in the mortgage industry. Of all the loans originated in 2013, approximately 77 percent were sold during the same calendar year. The remaining loans that were not sold within the year could be sold at a later time. Of all the first-lien loans originated for owner-occupied one- to four-family homes and sold during the calendar year, in 2013, 24 percent were purchased by Fannie Mae. When all government sponsored enterprises (Fannie Mae, Ginnie Mae, Freddie Mac and Farmer Mac) are considered, almost 56 percent of all originated and sold loans were purchased by the government.

For the home purchase loans, the majority of loans originated and sold during the calendar year were purchased by commercial banks, savings banks, or savings associations. In 2013, commercial banks purchased approximately 31 percent of home purchase loans originated and sold during the year. During the same calendar year, commercial banks purchased less than 15 percent of refinance and home improvement loans originated and sold. The financial institutions did not sell the majority of the home improvement loans they originated.

VIII. 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.⁸ For example, the income was not provided for approximately 15 percent of the reported loan applications in 2013.

The following table compares the average and median income levels (for those with non-missing income information) and average and median loan amounts for conventional and nonconventional loans separated by years.

Dollar values in the table are adjusted for inflation to have a meaningful year over year comparison, and they are in 2015 thousand dollar terms. An average borrower who applied for a conventional loan had a higher income than nonconventional loan applicants in every year between 2004 and 2013. Borrowers who applied for loans insured by FSA/RHS had the lowest average and median income. In 2013, borrowers who applied for conventional loans had \$92,000 in 2015 dollar terms while borrowers who used FSA/RHS insured loans had \$42,000 average annual income and borrowers with FHA-insured loans had \$59,000 of average annual income.

⁸ 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>

Table 5. Average and Median Income and Loan Amounts⁹, in Thousand \$, 2004-2013, Tennessee

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Conventional										
Average Income	\$78	\$80	\$79	\$81	\$86	\$96	\$101	\$98	\$97	\$92
Average Loan Amount	\$145	\$153	\$160	\$168	\$174	\$187	\$188	\$182	\$180	\$172
Median Income	\$60	\$59	\$59	\$60	\$64	\$72	\$74	\$72	\$72	\$68
Median Loan Amount	\$121	\$126	\$130	\$137	\$141	\$154	\$152	\$145	\$146	\$137
FHA										
Average Income	\$56	\$54	\$57	\$59	\$62	\$62	\$62	\$62	\$61	\$59
Average Loan Amount	\$133	\$129	\$150	\$142	\$152	\$157	\$154	\$148	\$148	\$146
Median Income	\$48	\$47	\$51	\$53	\$55	\$54	\$53	\$52	\$52	\$50
Median Loan Amount	\$129	\$125	\$137	\$139	\$142	\$144	\$141	\$136	\$136	\$133
VA										
Average Income	\$67	\$68	\$68	\$67	\$70	\$72	\$73	\$75	\$78	\$74
Average Loan Amount	\$166	\$170	\$177	\$177	\$182	\$187	\$187	\$180	\$184	\$185
Median Income	\$61	\$61	\$61	\$60	\$62	\$62	\$64	\$65	\$66	\$63
Median Loan Amount	\$150	\$161	\$163	\$162	\$167	\$168	\$169	\$163	\$165	\$165
Farm Service Agency or Rural Housing Service (FSA/RHS)										
Average Income	\$44	\$43	\$43	\$42	\$41	\$43	\$42	\$41	\$42	\$42
Average Loan Amount	\$109	\$112	\$113	\$112	\$111	\$121	\$122	\$122	\$123	\$122
Median Income	\$42	\$41	\$42	\$40	\$40	\$40	\$40	\$39	\$39	\$39
Median Loan Amount	\$106	\$106	\$107	\$106	\$104	\$117	\$117	\$118	\$120	\$118
ALL LOANS										
Average Income	\$77	\$79	\$78	\$79	\$79	\$85	\$87	\$86	\$87	\$84
Average Loan Amount	\$145	\$152	\$159	\$166	\$168	\$177	\$177	\$172	\$173	\$167
Median Income	\$60	\$58	\$58	\$59	\$60	\$65	\$65	\$64	\$65	\$61
Median Loan Amount	\$122	\$126	\$132	\$138	\$141	\$150	\$147	\$142	\$143	\$137

NOTE: The applications in the table include first-lien mortgage loans for owner-occupied one-to four-family dwellings.

Average loan amounts for all borrowers increased between 2004 and 2009, except for borrowers who applied for Farm Service Agency or Rural Housing Service (FSA/RHS) insured loans. Average loan amounts for VA insured loans were as high as, in fact some years even higher than, average conventional loan amounts. The applicants who used VA insurance also had higher average incomes than borrowers in other nonconventional loan categories.

IX. ANALYSIS BY DEMOGRAPHIC GROUPS AND INCOME LEVELS¹⁰

In this section of the report, we look at loan applications, originations and denials based on race, ethnicity and income levels of the applicants. In the HMDA data file, race, ethnicity and gender are reported for both applicant and coapplicant, if there is any.¹¹ Each applicant can report belonging to up

⁹ The Dollar amounts are inflation adjusted for 2015.

¹⁰ For the analysis from this point on, we will consider first-lien loans for owner-occupied one to four family dwellings.

¹¹ 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."

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

- White – Both applicant and coapplicant are white and no other race reported, or the applicant is white and there is no coapplicant
- Black – Both applicant and coapplicant are black and no other race reported, or the applicant is black and there is no coapplicant
- Asian – Both applicant and co-applicant are Asian and no other race reported, or the applicant is Asian and there is no coapplicant
- Multiracial – Both applicant and coapplicant are of different races or either applicant or co-applicant are multiracial, meaning at least one applicant reports more than one race
- Other minority – Both the applicant and coapplicant 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 coapplicant
- 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 coapplicant 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 coapplicant, if there is any.

We also looked at the applicants’ income compared to the estimated area median family income¹² (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, and determine if there was any differential treatment of loan applicants based on the income levels. A low-income applicant is defined as someone who earns less than 80 percent of area median family income. The middle-income borrowers earn more than 80 percent but less than 120 percent of the estimated AMFI. If the borrower’s income is more than 120 percent of the estimated AMFI, then the borrower is labeled as a high-income borrower.¹³

The following table looks at the originated first-lien loans for one- to four-family owner-occupied dwellings based on the borrower characteristics separated by loan purpose, i.e. for home purchase or refinance. According to the table, in recent years, the share of both home purchase and refinance loans originated for black or African American borrowers declined in the total loans originated. In 2005 and

¹² 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.

¹³ This definition of borrower income categories is consistent with Bhutta and Ringo’s analysis of 2013 HMDA data. For more information see Neil Bhutta and Daniel R. Ringo (2014), “The 2013 Home Mortgage Disclosure Act Data,” *Federal Reserve Bulletin*, vol. 100 (November), http://www.federalreserve.gov/pubs/bulletin/2014/pdf/2013_HMDA.pdf

2006, 12 percent of home purchase loans were made to black or African American borrowers, while the same ratio declined to six percent in 2013. Both the home purchase and refinance loans to Hispanic or Latino borrowers were slightly higher in 2013 compared to 2012. Home purchase loans to low-income borrowers slightly declined in 2013, while refinance loans slightly increased.

Table 6. Borrower Characteristics and Purpose of the Loan, 2004-2013, Tennessee

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
I. Home Purchase Loans										
Borrower Race										
Asian	1.5%	1.5%	1.4%	1.6%	1.3%	1.6%	1.4%	1.5%	1.6%	1.7%
Black or African American	11.4%	12.0%	11.9%	10.1%	8.0%	7.9%	8.6%	7.3%	7.1%	6.1%
White	76.9%	76.1%	77.3%	79.0%	81.9%	82.5%	82.9%	83.7%	83.9%	84.7%
Other Minority	0.5%	0.4%	0.4%	0.4%	0.3%	0.5%	0.6%	0.6%	0.4%	0.4%
Multi-Racial	2.0%	1.0%	0.9%	1.0%	1.0%	1.0%	0.9%	1.1%	1.1%	1.2%
Missing	7.8%	9.1%	8.0%	8.0%	7.5%	6.5%	5.6%	5.8%	5.8%	5.8%
Borrower Ethnicity										
Hispanic or Latino	3.0%	3.2%	3.5%	3.3%	2.7%	2.4%	2.5%	2.7%	2.7%	3.0%
Not Hispanic or Latino	81.0%	87.3%	88.9%	89.2%	90.2%	90.9%	91.7%	91.3%	91.3%	91.1%
Missing and/or NA	16.0%	9.5%	7.5%	7.5%	7.0%	6.6%	5.8%	5.9%	6.0%	5.9%
Borrower Income										
Low Income	30.2%	32.5%	31.0%	30.9%	31.2%	40.1%	38.4%	35.7%	34.8%	30.2%
Middle Income	23.2%	27.6%	26.9%	26.5%	26.8%	26.1%	25.3%	25.5%	25.5%	25.8%
High Income	29.5%	35.7%	38.4%	40.4%	40.3%	32.5%	35.2%	37.8%	38.7%	43.0%
Missing	17.0%	4.3%	3.8%	2.3%	1.6%	1.3%	1.0%	1.0%	0.9%	1.1%
II. Refinance Loans										
Borrower Race										
Asian	0.7%	0.6%	0.5%	0.6%	0.7%	1.0%	1.0%	1.2%	1.1%	1.1%
Black or African American	11.0%	11.7%	12.6%	10.9%	7.5%	4.6%	4.3%	4.7%	5.3%	6.8%
White	76.8%	76.8%	76.3%	77.7%	81.9%	84.6%	85.5%	85.1%	84.8%	82.9%
Other Minority	0.3%	0.3%	0.2%	0.3%	0.2%	0.3%	0.3%	0.4%	0.3%	0.4%
Multi-Racial	1.1%	0.8%	0.7%	0.9%	0.9%	1.0%	0.9%	1.0%	1.1%	1.2%
Missing	10.1%	9.8%	9.6%	9.6%	8.8%	8.5%	8.0%	7.7%	7.4%	7.6%
Borrower Ethnicity										
Hispanic or Latino	1.5%	1.4%	1.9%	1.8%	1.7%	1.6%	1.6%	1.8%	1.8%	2.1%
Not Hispanic or Latino	81.7%	87.9%	88.6%	89.2%	90.4%	90.0%	90.3%	90.6%	90.7%	90.1%
Missing and/or NA	16.8%	10.8%	9.4%	9.0%	7.9%	8.4%	8.1%	7.6%	7.5%	7.8%
Borrower Income										
Low Income	23.7%	29.9%	30.7%	28.2%	26.5%	21.9%	21.7%	21.3%	20.7%	21.2%
Middle Income	19.2%	26.0%	27.4%	27.2%	25.7%	22.1%	22.5%	21.7%	20.9%	21.4%
High Income	26.3%	34.9%	36.8%	40.1%	41.6%	42.5%	46.7%	44.5%	44.5%	43.0%
Missing	30.8%	9.2%	5.2%	4.6%	6.2%	13.5%	9.1%	12.5%	13.8%	14.3%
# of Purchase Loans	89,203	98,307	95,477	81,647	56,122	51,377	45,433	42,716	50,279	58,613
# of Refinance Loans	93,988	80,420	66,105	65,456	63,839	105,611	80,768	68,283	98,720	79,463

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

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. 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 percent of nonconventional loans made to black borrowers, for example, as percent of all loans made to black borrowers (including conventional and nonconventional loans).

Table 7. Borrower Characteristics and Purpose of the Loan, Nonconventional Loans, 2004-2013, Tennessee

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<i>I. Home Purchase Loans</i>										
Borrower Race										
Asian	12.5%	10.9%	8.9%	8.5%	20.2%	35.4%	35.1%	37.9%	33.4%	22.3%
Black or African American	27.8%	18.5%	17.5%	25.4%	69.2%	86.3%	87.6%	83.3%	81.3%	76.5%
White	18.2%	15.0%	14.8%	16.0%	39.8%	57.3%	56.6%	54.1%	49.2%	44.0%
Other Minority	29.3%	18.1%	15.3%	18.2%	34.9%	38.6%	31.1%	35.5%	34.8%	34.1%
Multi-Racial	45.8%	23.0%	24.2%	26.0%	48.1%	60.3%	60.5%	64.2%	56.5%	54.1%
Missing	13.4%	8.1%	8.6%	12.7%	36.1%	54.3%	54.5%	50.7%	43.1%	37.4%
Borrower Ethnicity										
Hispanic or Latino	34.7%	25.6%	19.9%	21.6%	55.1%	75.2%	75.1%	72.6%	65.5%	61.5%
Not Hispanic or Latino	19.3%	15.2%	14.9%	16.9%	41.8%	59.1%	58.8%	55.9%	51.2%	45.5%
Missing and/or NA	17.8%	7.7%	8.7%	11.8%	34.5%	51.3%	50.1%	45.4%	39.3%	35.2%
Borrower Income										
Low Income	28.8%	20.9%	19.5%	20.1%	52.8%	71.6%	73.0%	70.0%	65.8%	60.9%
Middle Income	22.7%	17.7%	19.3%	22.8%	50.8%	65.5%	65.2%	64.2%	58.3%	55.1%
High Income	9.8%	8.0%	8.5%	10.7%	27.6%	39.3%	39.4%	37.5%	33.2%	29.2%
<i>All Borrowers</i>	<i>19.5%</i>	<i>14.8%</i>	<i>14.6%</i>	<i>16.7%</i>	<i>41.7%</i>	<i>59.0%</i>	<i>58.7%</i>	<i>55.8%</i>	<i>50.9%</i>	<i>45.3%</i>
<i>II. Refinance Loans</i>										
Borrower Race										
Asian	6.8%	5.1%	6.6%	6.9%	17.4%	12.4%	11.8%	11.0%	12.2%	12.7%
Black or African American	15.9%	9.6%	7.0%	16.3%	44.8%	58.5%	48.4%	50.7%	48.9%	45.9%
White	6.4%	4.2%	4.4%	8.4%	22.3%	24.4%	20.5%	20.6%	22.7%	22.0%
Other Minority	11.0%	5.8%	5.6%	9.5%	34.3%	18.3%	14.1%	19.4%	25.5%	24.6%
Multi-Racial	24.0%	11.9%	8.8%	14.9%	32.5%	32.8%	27.7%	29.5%	35.3%	33.6%
Missing	6.5%	3.9%	3.3%	8.7%	30.3%	29.3%	22.1%	23.2%	27.0%	27.3%
Borrower Ethnicity										
Hispanic or Latino	16.4%	15.0%	5.2%	13.4%	34.6%	39.4%	29.8%	33.6%	36.5%	36.5%
Not Hispanic or Latino	7.5%	4.8%	4.8%	9.4%	24.4%	25.9%	21.7%	21.9%	24.3%	23.6%
Missing and/or NA	7.6%	3.7%	3.3%	8.1%	26.9%	28.5%	20.5%	21.8%	23.8%	25.4%
Borrower Income										
Low Income	3.8%	2.1%	4.2%	9.3%	26.2%	27.0%	24.4%	20.6%	18.4%	15.0%
Middle Income	3.1%	2.1%	4.8%	10.9%	29.4%	23.4%	22.1%	20.9%	17.6%	15.6%
High Income	1.9%	1.0%	2.3%	5.7%	16.6%	12.3%	12.1%	11.8%	10.0%	9.6%
<i>All Borrowers</i>	<i>7.6%</i>	<i>4.8%</i>	<i>4.7%</i>	<i>9.3%</i>	<i>24.7%</i>	<i>26.3%</i>	<i>21.8%</i>	<i>22.1%</i>	<i>24.5%</i>	<i>24.1%</i>

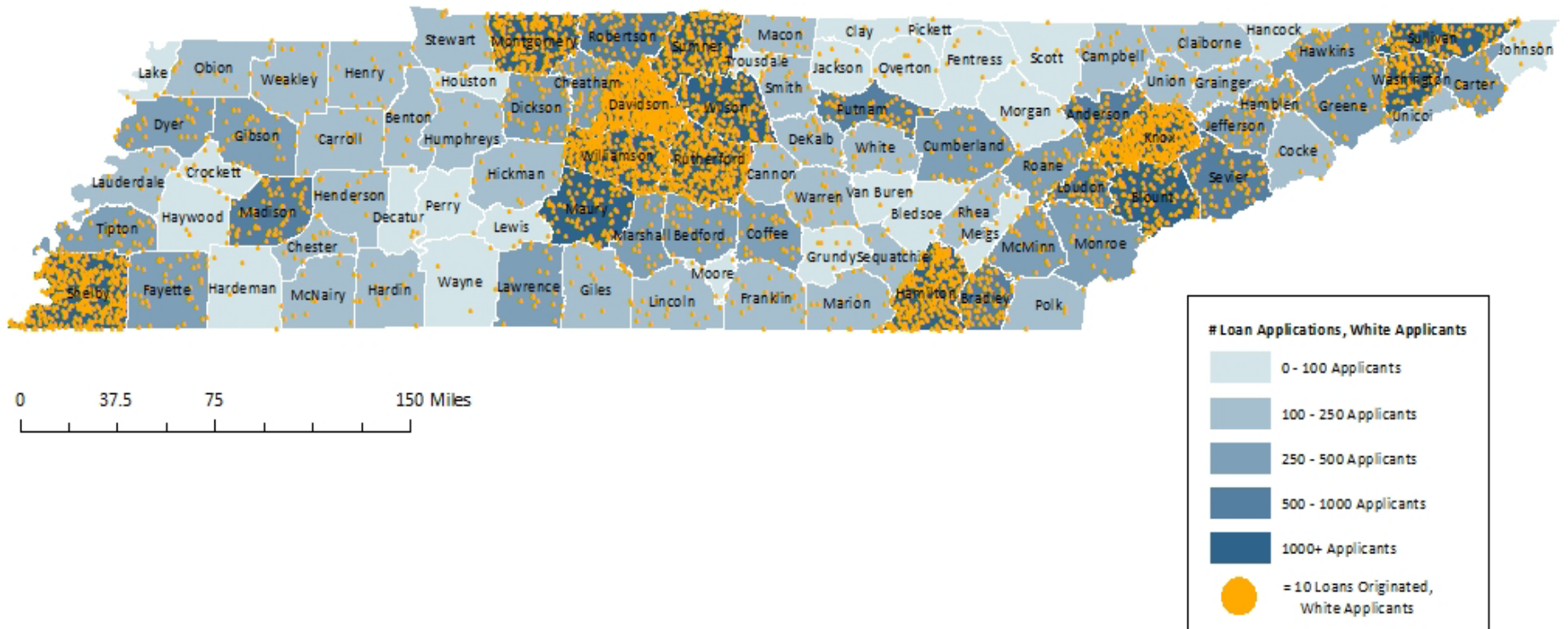
NOTE: Nonconventional, first-lien mortgage loans originated for one- to four-family owner-occupied homes.

The data on the table reveal that minority and lower income borrowers used nonconventional government-insured (FHA, VA and/or FSA/RHS insured) loans more often than conventional loans. In 2013, for example, almost 77 percent of all black borrowers and 62 percent of all Hispanic or Latino borrowers used nonconventional loans for home purchase, while in the same year, only 45 percent of all home purchase loans were nonconventional. Low-income borrowers also mostly preferred nonconventional loans in 2013. The data also shows that, in all race, ethnicity and income categories the share of nonconventional loans substantially increased in 2008. For example, in 2007, 25 percent of black home buyers preferred nonconventional loans while that percentage increased to 69 percent in 2008 and to 86 percent in 2009. Similar trends are visible in other race categories.

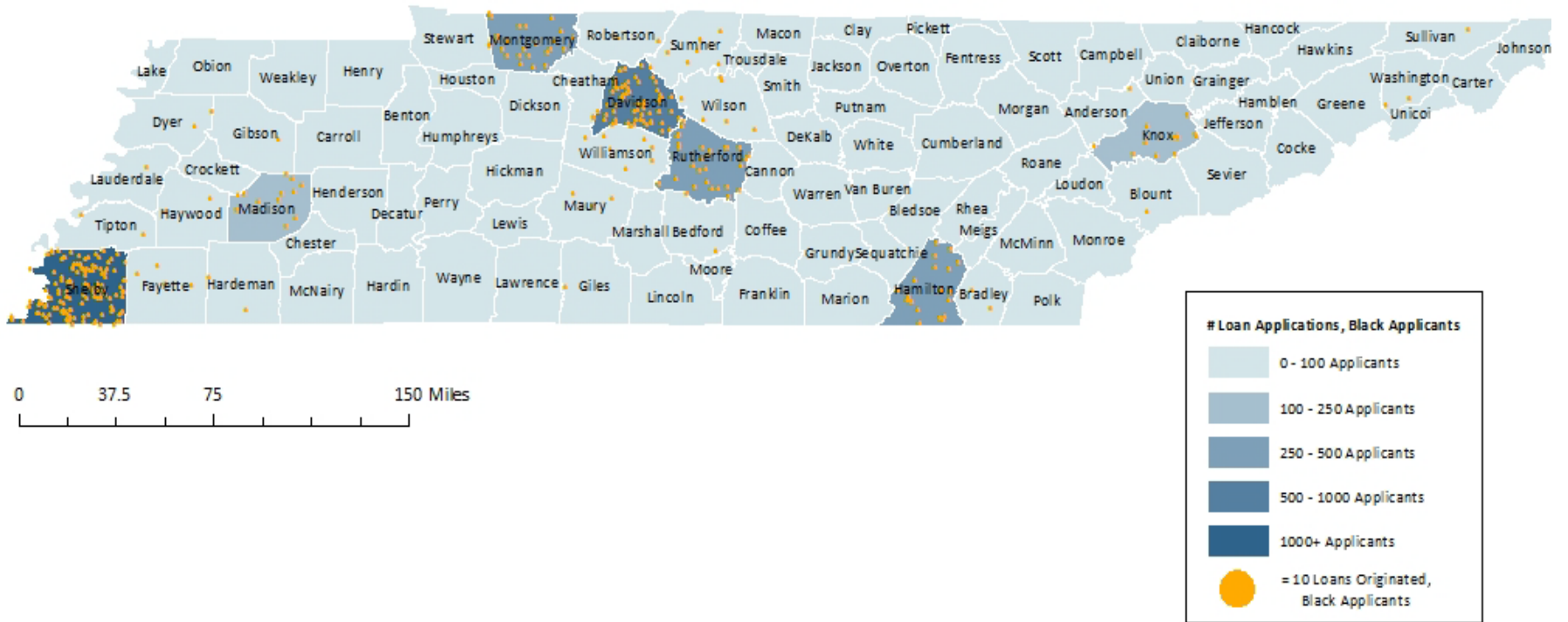
This trend in higher share of nonconventional loans among lower income and minority homebuyers is another sign of the demand for low downpayment loans among these groups.

The following maps display the loan applications and originations for white and African American borrowers in 2013:

Map 1: Total Loan Applications and Originations, White Applicants, 2013



Map 2: Total Loan Applications and Originations, African American Applicants, 2013



X. DENIAL RATES AND DENIAL REASONS

Consistent with Bhutta and Ringo’s analysis of 2013 HMDA data (2014), we calculated the denial rates by dividing the number of loans denied by the financial institution by the total number of loan applications, which excludes 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.*

Table 8. Denial Rates, Conventional and Nonconventional Home Purchase Loans, 2004-2013, Tennessee

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<i>I. Home Purchase Loans</i>										
Conventional and Nonconventional										
All Applicants	15.7%	15.5%	16.8%	16.4%	15.5%	13.5%	14.0%	14.7%	15.6%	14.6%
Race										
Asian	12.3%	13.5%	12.8%	12.5%	16.7%	13.4%	15.4%	16.8%	16.4%	16.3%
Black or African American	24.7%	26.3%	30.7%	31.8%	30.2%	21.0%	21.2%	22.6%	24.7%	24.6%
White	13.0%	12.8%	12.7%	12.9%	13.1%	12.3%	12.7%	13.3%	14.4%	13.3%
Other Minority	23.2%	21.7%	20.6%	22.6%	23.7%	14.1%	16.0%	12.7%	17.6%	20.7%
Multi-Racial	9.5%	13.9%	14.5%	14.9%	17.2%	14.3%	16.0%	14.4%	17.0%	17.9%
Missing	24.9%	19.2%	25.8%	24.1%	20.1%	17.4%	19.6%	21.0%	20.0%	19.3%
Ethnicity ¹⁴										
Hispanic	19.2%	18.9%	17.7%	18.6%	19.5%	16.5%	17.0%	16.1%	19.0%	19.6%
Not Hispanic	14.8%	14.9%	15.9%	15.6%	14.9%	13.0%	13.5%	14.0%	15.1%	14.1%
Conventional Only										
All Applicants	16.5%	16.2%	17.7%	16.9%	15.8%	15.4%	15.1%	15.6%	15.5%	13.0%
Race										
Asian	11.9%	13.9%	13.1%	12.8%	16.8%	13.1%	13.5%	17.0%	16.0%	13.9%
Black or African American	27.0%	28.1%	33.0%	34.5%	39.0%	37.1%	35.3%	31.6%	31.9%	27.7%
White	13.4%	13.2%	13.2%	13.1%	13.4%	14.2%	14.0%	14.5%	14.6%	11.9%
Other Minority	27.5%	24.1%	22.4%	24.1%	27.2%	16.3%	15.3%	14.2%	18.1%	20.6%
Multi-Racial	12.4%	14.6%	16.1%	15.3%	18.0%	17.7%	20.4%	14.3%	17.3%	17.0%
Missing	25.4%	19.5%	26.6%	24.8%	20.0%	18.3%	19.6%	21.3%	17.4%	17.5%
Ethnicity										
Hispanic	20.8%	20.0%	18.7%	19.3%	21.8%	21.7%	20.9%	18.8%	20.6%	17.3%
Not Hispanic	15.6%	15.6%	16.8%	16.1%	15.2%	15.0%	14.6%	14.7%	14.9%	12.4%

In 2013, the denial rate of all borrowers in different race categories (including conventional and nonconventional loans) who applied for a home purchase loan was 14.6 percent in Tennessee. With 24.6 percent, black or African American borrowers had the highest denial rate in 2013, followed by the other minority, which includes American Indians and Native Hawaiians. Among the nonwhite race categories Asian applicants had the lowest denial rates. Borrowers who applied for conventional home

¹⁴ Ethnicity does not add up to 100 percent because “not applicable” category was not displayed here.

purchase loans had higher denial rates in almost all race categories for all years in the 10-year period. Hispanic borrowers also had higher denial rates than the white borrowers and all borrowers who applied for a home purchase loan. The difference between denial rates of whites and other races was even more noticeable for conventional loans. In 2013, 12 percent of white applicants who applied for a conventional home purchase loan were denied, while almost 28 percent of African American applicants and 21 percent of “other minority” applicants were denied for a conventional home purchase loan.

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

Table 9. Denial Rates, Conventional and Nonconventional Refinance Loans, 2004-2013, Tennessee

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<i>II. Refinance Loans</i>										
Conventional and Nonconventional										
All Applicants	38.3%	42.7%	43.3%	44.2%	39.7%	24.3%	26.4%	26.8%	22.6%	26.8%
Race										
Asian	34.3%	37.1%	38.9%	40.2%	35.6%	26.0%	26.4%	25.9%	27.1%	30.2%
Black or African American	49.7%	52.8%	53.4%	60.1%	61.5%	44.6%	45.6%	43.1%	34.7%	39.0%
White	31.9%	34.6%	36.7%	37.4%	34.7%	21.0%	23.1%	23.7%	20.3%	23.7%
Other Minority	54.1%	51.8%	51.8%	47.4%	61.1%	29.3%	37.4%	28.3%	31.1%	32.6%
Multi-Racial	40.1%	43.0%	46.4%	51.5%	48.1%	26.1%	29.4%	26.8%	23.9%	26.3%
Missing	53.6%	63.3%	59.6%	57.5%	47.7%	35.6%	39.6%	41.5%	34.2%	40.3%
Ethnicity										
Hispanic	40.7%	44.4%	38.8%	45.6%	47.5%	30.9%	31.9%	31.7%	28.8%	31.7%
Not Hispanic	35.9%	37.6%	40.5%	42.0%	38.5%	22.9%	24.8%	25.1%	21.4%	25.5%
Conventional Only										
All Applicants	39.5%	43.5%	44.0%	45.1%	39.4%	21.8%	22.9%	24.7%	22.3%	26.4%
Race										
Asian	35.3%	37.9%	39.7%	40.3%	36.0%	24.1%	23.9%	24.4%	26.9%	30.8%
Black or African American	52.5%	54.4%	54.5%	62.5%	67.4%	51.7%	44.1%	45.0%	37.7%	43.2%
White	32.8%	35.2%	37.3%	38.2%	34.2%	19.3%	20.7%	22.2%	20.2%	23.4%
Other Minority	56.8%	52.8%	52.2%	48.3%	65.3%	26.9%	35.0%	27.1%	34.5%	32.9%
Multi-Racial	45.3%	45.0%	47.7%	53.7%	50.1%	25.0%	24.7%	23.9%	24.0%	25.9%
Missing	54.6%	64.0%	60.2%	58.3%	45.0%	28.3%	32.4%	36.9%	32.9%	39.5%
Ethnicity										
Hispanic	43.8%	47.4%	39.1%	47.3%	49.2%	31.8%	30.1%	31.8%	30.1%	34.6%
Not Hispanic	37.1%	38.3%	41.2%	43.0%	38.5%	21.0%	21.9%	23.3%	21.1%	25.1%

Denial rates for refinance loans, in general, were higher than the home purchase loans. In 2013, approximately 27 percent of all borrowers who applied for either conventional or nonconventional loans were denied. In the refinance category, African American and Hispanic borrowers had higher denial rates than white applicants.

Financial institutions reporting to HMDA can report (they are not required to report) up to three reasons for denial by choosing among nine¹⁵ possible reasons when they deny an applicant. In 2013 among the

¹⁵ 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

applications for first-lien one- to four-family owner occupied home purchase loans, financial institutions did not give any reason for 31 percent of applicants they denied. Credit history was the most cited reason for denials followed by debt-to-income (DTI) ratio among the denied applications.

XI. HIGH COST 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 subordinate-lien loans for a home-purchase loan, a refinancing, or a dwelling-secured home improvement loan that you originated.¹⁶

The following table compares the occurrence of high cost 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 2013, the proportion of all home purchase loans (conventional and nonconventional) with interest rates above the higher-priced threshold increased from the previous year for all race groups. For example, almost 18 percent of all African American borrowers who had a home purchase loan in 2013 received a loan with an interest rate higher than the threshold. In 2004 and 2005, all borrowers in various race categories received higher-priced home purchase loans. It was still high in 2006, but substantially declined in the subsequent years. An especially higher proportion of African American borrowers had home purchase loans with higher than the threshold interest rates.

Almost every year in the 10-year period for all race groups, the borrowers who used conventional home purchase loans had higher proportion of loans with interest rates higher than the spread threshold. However, in 2013, the proportion of high cost loans for conventional and nonconventional loans was completely reversed. In 2013, 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.

¹⁶ 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 subordinate-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.

Table 10. High Cost Loans, Conventional and Nonconventional Home Purchase Loans, 2004-2013, Tennessee

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<i>I. Home Purchase Loans</i>										
Conventional and Nonconventional										
All Applicants	13.8%	25.0%	23.9%	14.3%	9.4%	6.0%	3.8%	5.2%	6.8%	8.9%
Race										
Asian	6.3%	15.3%	13.0%	7.3%	5.0%	3.6%	2.3%	3.7%	4.2%	5.8%
Black or African American	30.8%	54.8%	52.6%	33.5%	17.1%	5.9%	3.6%	9.1%	11.5%	17.7%
White	11.1%	19.3%	19.5%	11.8%	9.0%	6.3%	4.0%	5.0%	6.6%	8.5%
Other Minority	21.8%	37.5%	29.8%	24.7%	12.2%	4.5%	3.2%	5.1%	4.5%	10.7%
Multi-Racial	6.2%	22.4%	19.9%	8.8%	6.9%	4.0%	3.0%	4.3%	6.1%	8.9%
Missing	18.4%	34.4%	26.6%	15.6%	7.0%	3.1%	1.5%	3.3%	5.3%	6.4%
Ethnicity										
Hispanic	14.1%	26.0%	31.0%	20.2%	12.1%	6.1%	3.4%	6.3%	7.8%	11.4%
Not Hispanic	13.7%	23.7%	23.5%	14.0%	9.5%	6.2%	3.9%	5.3%	6.9%	8.9%
Conventional Only										
All Applicants	17.0%	29.3%	27.9%	16.6%	10.8%	10.1%	8.1%	7.3%	7.7%	7.1%
Race										
Asian	7.0%	17.1%	14.0%	7.8%	5.2%	4.3%	3.1%	3.3%	3.7%	3.5%
Black or African American	42.6%	67.2%	63.3%	42.8%	25.4%	12.1%	16.3%	14.8%	8.1%	10.7%
White	13.5%	22.7%	22.7%	13.8%	10.6%	10.9%	8.4%	7.7%	8.2%	7.5%
Other Minority	30.2%	45.5%	35.1%	29.7%	17.0%	4.3%	4.6%	4.5%	5.5%	10.8%
Multi-Racial	11.5%	29.0%	26.2%	11.5%	9.8%	5.3%	7.0%	4.8%	6.4%	6.0%
Missing	21.0%	37.4%	29.0%	17.0%	6.3%	3.1%	1.8%	1.6%	2.7%	2.2%
Ethnicity										
Hispanic	21.4%	34.8%	38.5%	25.3%	18.2%	17.7%	12.4%	9.8%	11.7%	11.2%
Not Hispanic	16.9%	27.9%	27.5%	16.3%	10.9%	10.6%	8.4%	7.6%	7.9%	7.3%
Nonconventional Only										
All Applicants	0.3%	0.3%	0.9%	2.6%	7.5%	3.1%	0.8%	3.5%	6.0%	11.1%
Race										
Asian	1.2%	0.6%	2.4%	2.8%	4.0%	2.4%	0.9%	4.2%	5.2%	13.7%
Black or African American	0.1%	0.3%	2.0%	5.9%	13.4%	4.9%	1.8%	7.9%	12.2%	19.9%
White	0.3%	0.2%	0.7%	1.7%	6.5%	2.9%	0.6%	2.8%	5.0%	9.8%
Other Minority	1.5%	1.3%	0.0%	1.9%	3.3%	4.9%	0.0%	6.2%	2.6%	10.5%
Multi-Racial	0.0%	0.5%	0.0%	0.9%	3.8%	3.2%	0.4%	4.0%	5.9%	11.5%
Missing	1.1%	1.0%	0.6%	6.1%	8.3%	3.2%	1.2%	4.9%	8.6%	13.4%
Ethnicity										
Hispanic	0.5%	0.4%	0.7%	1.7%	7.2%	2.2%	0.5%	5.0%	5.8%	11.5%
Not Hispanic	0.2%	0.3%	0.9%	2.4%	7.5%	3.2%	0.8%	3.4%	6.0%	11.0%

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

These patterns also differed by the type of nonconventional loan. Among nonconventional loans, while the borrowers who used VA or FSA/RHS insured loans received comparably less higher-priced loans, more borrowers with FHA-insured loans had high cost loans and this proportion increased substantially in recent years. For example in 2004, less than one percent of applicants in all nonconventional loan categories had higher-priced loans, in 2012, 10 percent of all borrowers with FHA-insured loans and a negligible proportions of borrowers with VA and FSA/RHS insured loans had higher-priced loans. This proportion of higher-priced FHA-insured loans increased to 20 percent in 2013. Increasing mortgage

insurance premiums on FHA insurance is one of the reason that led to increase in higher-priced loans in recent years.

Table 11. High Cost Loans, Nonconventional Home Purchase Loans, 2004-2013, Tennessee

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<i>I. Home Purchase Loans</i>										
FHA-Insured										
All Applicants	0.3%	0.4%	1.3%	4.2%	9.6%	4.1%	1.0%	5.6%	10.2%	20.1%
Race										
Asian	0.7%	0.8%	3.0%	3.4%	4.5%	2.4%	1.0%	4.9%	6.2%	16.1%
Black or African American	0.2%	0.4%	2.7%	8.7%	15.7%	5.9%	2.2%	10.8%	16.9%	27.2%
White	0.3%	0.3%	1.0%	2.8%	8.4%	3.8%	0.8%	4.6%	8.8%	18.6%
Other Minority	1.0%	0.0%	0.0%	6.3%	5.9%	7.1%	0.0%	11.5%	5.1%	21.1%
Multi-Racial	0.0%	0.9%	0.0%	1.8%	5.4%	4.8%	0.7%	8.4%	12.5%	28.3%
Missing	1.4%	1.1%	0.9%	10.0%	10.4%	4.3%	1.7%	7.9%	13.3%	22.6%
Ethnicity										
Hispanic	0.6%	0.6%	1.3%	3.0%	9.4%	3.2%	0.7%	8.0%	9.7%	20.2%
Not Hispanic	0.2%	0.4%	1.3%	4.0%	9.6%	4.1%	1.0%	5.5%	10.1%	19.9%
VA-Insured										
All Applicants	0.3%	0.1%	0.1%	0.1%	1.0%	0.8%	0.1%	0.1%	0.1%	0.1%
Race										
Asian	4.0%	0.0%	0.0%	0.0%	0.0%	2.8%	0.0%	0.0%	0.0%	0.0%
Black or African American	0.0%	0.0%	0.2%	0.6%	3.2%	1.6%	0.2%	0.5%	0.2%	0.2%
White	0.3%	0.1%	0.1%	0.1%	0.8%	0.8%	0.1%	0.0%	0.1%	0.1%
Other Minority	3.4%	2.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Multi-Racial	0.0%	0.0%	0.0%	0.0%	1.1%	0.9%	0.0%	0.0%	0.0%	0.0%
Missing	0.0%	0.5%	0.0%	0.0%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Ethnicity										
Hispanic	0.4%	0.0%	0.0%	0.4%	0.0%	0.4%	0.0%	0.4%	0.0%	0.0%
Not Hispanic	0.2%	0.1%	0.1%	0.1%	1.1%	0.9%	0.1%	0.0%	0.1%	0.1%
FSA/RHS-Insured										
All Applicants	0.2%	0.0%	0.4%	0.5%	2.3%	0.8%	0.2%	0.1%	0.1%	1.5%
Race										
Asian	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Black or African American	0.0%	0.0%	2.8%	2.1%	2.9%	0.0%	0.0%	0.0%	0.0%	2.5%
White	0.2%	0.0%	0.3%	0.4%	2.4%	0.9%	0.2%	0.1%	0.1%	1.4%
Other Minority	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%
Multi-Racial	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Missing	0.0%	0.0%	0.0%	0.0%	1.5%	0.0%	0.0%	0.0%	0.0%	5.6%
Ethnicity										
Hispanic	0.0%	0.0%	0.0%	0.0%	2.4%	0.0%	0.0%	0.0%	0.0%	2.3%
Not Hispanic	0.1%	0.0%	0.4%	0.5%	2.4%	0.8%	0.2%	0.1%	0.1%	1.4%

The following table provides the proportion of higher-priced refinance loans. The proportion of higher-priced refinance loans also increased in 2013, but the magnitude of the increase was not comparable to the increase in the proportion of higher-priced home purchase loans during the same period.

Table 12. High Cost Loans, Conventional and Nonconventional Refinance Loans, 2004-2013, Tennessee

	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<i>II. Refinance Loans</i>										
Conventional and Nonconventional										
All Applicants	23.2%	33.2%	39.8%	29.1%	18.8%	7.3%	4.2%	4.6%	3.6%	4.4%
Race										
Asian	12.4%	22.2%	27.9%	17.7%	6.1%	2.3%	1.0%	0.9%	1.2%	1.9%
Black or African American	43.0%	57.4%	64.7%	48.4%	32.3%	13.1%	8.3%	7.3%	4.9%	4.8%
White	19.6%	28.3%	34.8%	26.2%	18.2%	7.4%	4.2%	4.8%	3.8%	4.6%
Other Minority	27.7%	38.1%	43.8%	37.3%	13.9%	5.2%	4.3%	4.9%	2.6%	5.2%
Multi-Racial	15.4%	31.3%	39.1%	29.7%	12.7%	5.0%	2.2%	2.9%	2.0%	3.6%
Missing	31.3%	43.3%	47.0%	30.7%	15.0%	4.4%	2.0%	1.7%	1.0%	1.8%
Ethnicity										
Hispanic	20.7%	26.7%	48.2%	28.3%	16.0%	6.5%	3.8%	3.2%	2.6%	3.9%
Not Hispanic	22.8%	32.0%	38.9%	29.0%	19.2%	7.6%	4.3%	4.9%	3.8%	4.6%
Conventional Only										
All Applicants	25.1%	34.8%	41.6%	31.3%	19.7%	7.6%	4.1%	4.4%	3.5%	4.3%
Race										
Asian	12.9%	23.4%	29.6%	19.0%	6.6%	2.2%	1.0%	0.8%	1.4%	1.8%
Black or African American	50.9%	63.4%	69.5%	56.2%	43.1%	19.1%	7.8%	7.3%	4.8%	4.8%
White	20.8%	29.5%	36.4%	28.1%	19.2%	7.8%	4.3%	4.7%	3.8%	4.6%
Other Minority	29.5%	40.4%	46.3%	39.9%	14.4%	5.2%	4.1%	4.0%	2.6%	4.8%
Multi-Racial	20.0%	35.5%	42.4%	33.7%	12.2%	4.2%	2.2%	2.3%	1.5%	2.9%
Missing	33.4%	45.0%	48.5%	32.4%	11.5%	2.4%	1.0%	0.9%	1.0%	1.8%
Ethnicity										
Hispanic	24.6%	31.4%	50.9%	32.0%	16.7%	7.3%	3.7%	2.6%	2.6%	4.1%
Not Hispanic	24.6%	33.6%	40.8%	31.4%	20.5%	8.0%	4.3%	4.7%	3.7%	4.5%

NOTE: First-lien refinance loans originated for owner occupied one- to four-family dwellings.

XII. HOME LOAN MARKET SHARE OF THDA

In this report, we also measured THDA's share in the home 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 to determine how competitive THDA loan programs with the other similar loan programs 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.

Using HMDA data to measure THDA's share in the home loan market faces some limitations because of the nature of the HMDA data and THDA's loan program's eligibility requirements. As explained previously, 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.

THDA loans are for low- to moderate-income Tennesseans. To be eligible for a THDA loan, borrowers need to meet income limit requirements for the county where they are purchasing a home. THDA income limits depend on the family size. Borrowers with three or more people in the households are allowed to have higher incomes and still be eligible for THDA loans. However, HMDA data do not provide any information about the number of people in the household. Therefore, it limits our ability to measure THDA's market share in the home loan market accurately.

THDA's loan programs are meant for modest homes, therefore maximum purchase price limits are in place and vary by county. Financial institutions report the loan amounts rather than the purchase price of the homes. Therefore, even if a record of home purchase is within THDA's purchase price range based on the loan amount, depending on the downpayment amount, it might exceed THDA's eligible purchase price limit.

THDA home loan products are designed for the first-time homebuyers unless borrower is buying a home in a federally targeted area or borrower is a veteran. HMDA data does not provide any information on whether borrowers who were reported in the database were first-time homebuyers. Therefore, some of the reported borrowers might not be eligible for a THDA loan even if they met income and purchase price eligibility requirements. However, in the absence of the first-time homebuyer status reporting, first-time homebuyers cannot be estimated.

Keeping these limitations in mind, THDA's market share for years 2011, 2012 and 2013 was estimated in two ways.

1. Market Share Analysis Comparing All THDA Funded Loans to First Lien Home Purchase Loans at THDA's Price (Calculated by Adding 4% of Loan Amount as Downpayment) and Income Range for Owner Occupied 1-4 Family Dwellings

As explained previously, 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. To determine the eligibility based on the income limits, THDA's income limits for a large family (households with three or more people) were used. 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

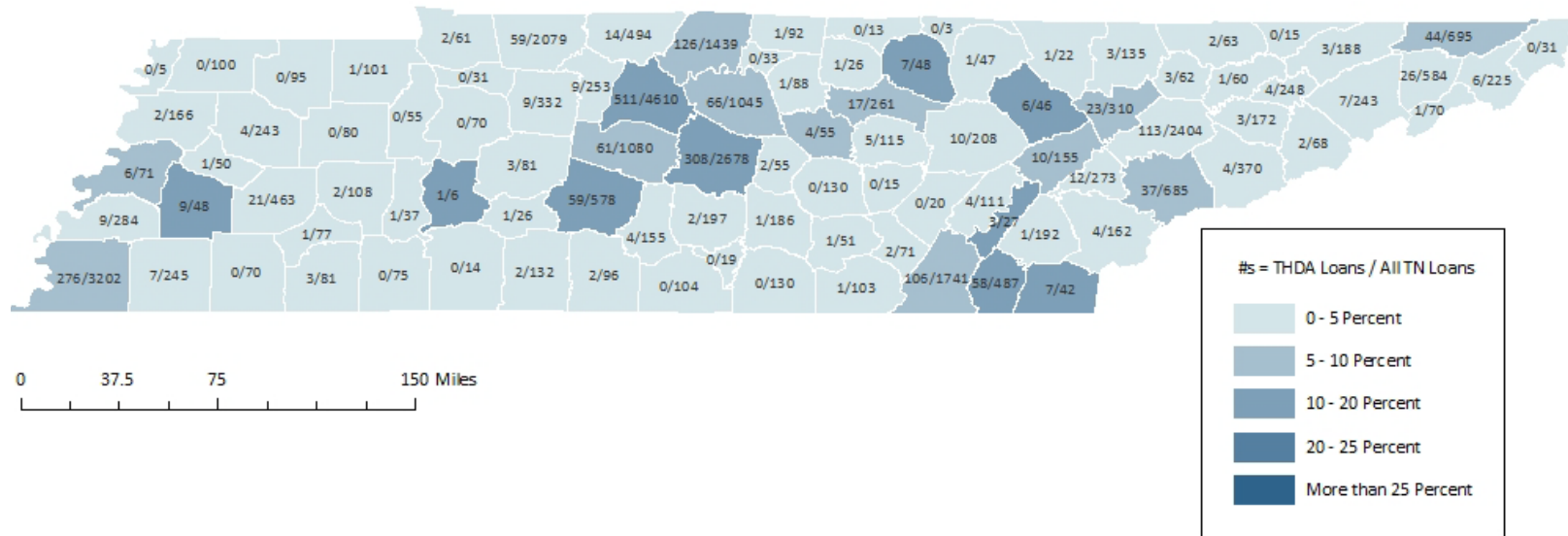
insured loans and borrowers may use private mortgage insurance (PMI) and pay less than 20 percent downpayment, four percent is a good average for an estimated downpayment.

In 2011, there were 26,722 first lien home purchase loans reported for owner-occupied one- to four-family dwellings that met THDA's purchase price and income limit requirements, and THDA funded 2,160 loans in 2011. Therefore, THDA was able to serve 8.1 percent of potential homebuyers in the market. In 2012, THDA's share in the home loan market declined to 6.5 because THDA was able to fund relatively fewer loans compared to 2011, while the loans in the market reported to HMDA at THDA's purchase price and income limit range increased compared to 2011. Similarly, in 2013, THDA's share in the home loan market declined to 5.6 percent.

In 2011, THDA's market share varied by county from zero percent in the counties where THDA did not fund any loans to 30 percent in Sequatchie County where THDA funded 14 loans. In Sequatchie County, there were 47 loans made to the homebuyers meeting THDA's income and purchase price requirement who would be potential THDA borrowers. THDA was able to attract 11 percent or more of the potential borrowers in each of Davidson, Rutherford and Shelby Counties, while THDA's market share was relatively low in Knox, Montgomery and Williamson Counties. In 2012, THDA's market share was highest in Haywood County with 18.8 percent. In Rutherford County, even though the number of THDA funded loans increased annually between 2011 and 2013 (256, 308, and 330 respectively), THDA's market share declined (12.6, 11.5 and 10.3 percent in 2011, 2012 and 213, respectively), since the number of loans in the market increased even more.

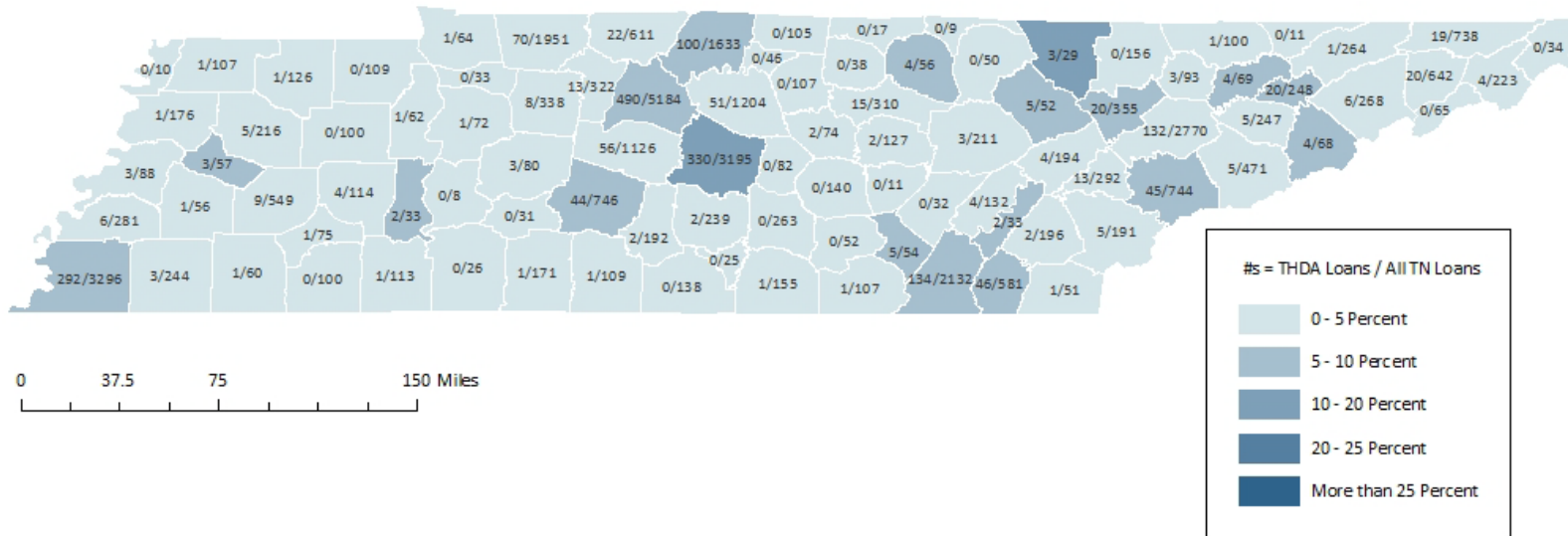
The following maps display THDA's market share in 2012 and 2013 assuming that borrowers, on average, paid four percent downpayment to determine the THDA loan eligible borrowers in the market.

Map 3: THDA's Share in the Home Loans Market, 2012¹⁷



¹⁷ The home loan market refers to the first-lien home purchase loans for owner occupied 1-4 family dwellings that are originated in 2012 by financial institutions and reported in HMDA data. Only the loans to the borrowers who would be eligible to receive THDA loans based on their income, which was less than or equal to THDA's large family (households with three or more people) income limit of the county they purchased their homes, and purchased homes that are less than or equal to THDA's purchase price limit (estimated by adding a four percent downpayment amount to the loan amount) are included.

Map 4: THDA’s Share in the Home Loans Market, 2013¹⁸



¹⁸ The home loan market refers to the first-lien home purchase loans for owner occupied 1-4 family dwellings that are originated in 2013 by financial institutions and reported in HMDA data. Only the loans to the borrowers who would be eligible to receive THDA loans based on their income, which was less than or equal to THDA’s large family (households with three or more people) income limit of the county they purchased their homes, and purchased homes that are less than or equal to THDA’s purchase price limit (estimated by adding a four percent downpayment amount to the loan amount) are included.

2. Market Share Analysis Comparing FHA-Insured THDA Loans to FHA-Insured First Lien Home Purchase Loans at THDA's Price (Calculated by Adding 4% of Loan Amount as Downpayment) and Income Range for Owner Occupied 1-4 Family Dwellings

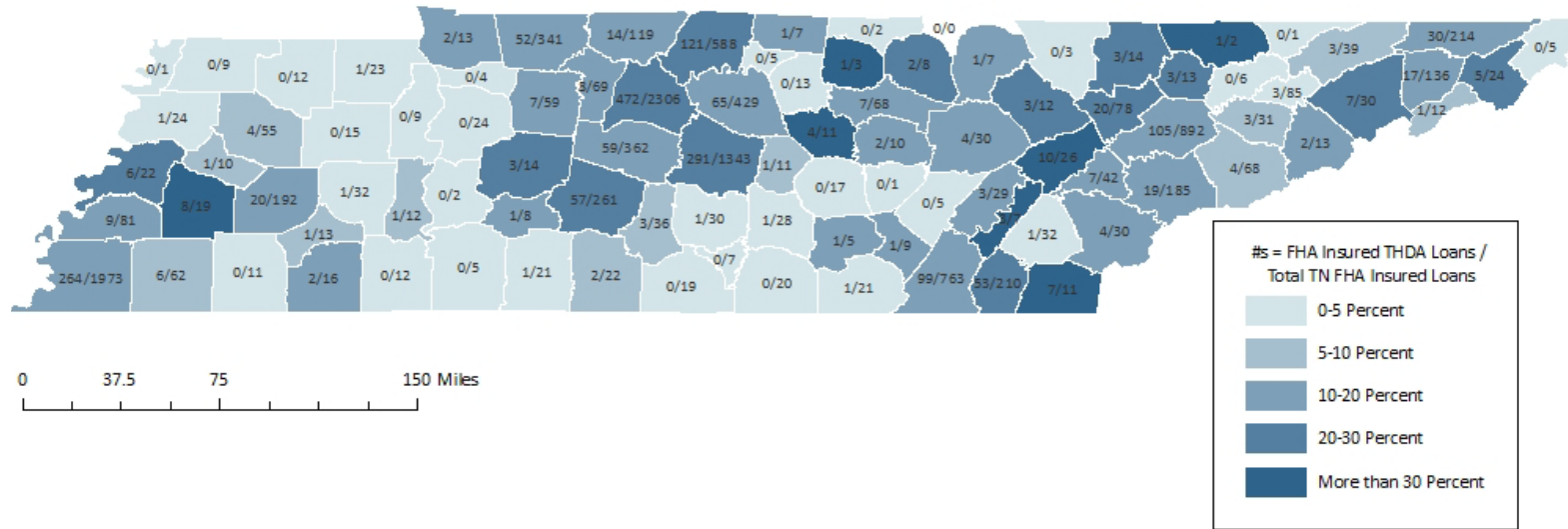
For this version of the market share analysis, FHA-insured THDA loans were compared to the FHA-insured loans originated and reported by financial institutions in the HMDA data. This is probably a more accurate measure of THDA's market share because between 2011 and 2013 almost 90 percent of all THDA funded loans were FHA insured. Among the comparable loans originated in the market, 41 percent were FHA insured in 2011, and that fraction declined to 36 percent and 31 percent in 2012 and 2013, respectively. Therefore, it makes more sense to compare FHA-insured THDA loans to FHA-insured market loans.

We applied the before mentioned criteria to determine the loans to borrowers who would be eligible to receive a THDA loan. Only the FHA-insured loans to the borrowers who would be eligible to receive an FHA-insured THDA loan based on income, which was less than or equal to the income limit of the county they purchased their homes, and purchased homes that are less than or equal to THDA's purchase price limit (estimated by adding a four percent downpayment amount to the loan amount) are included. To determine the eligibility based on the income limits, THDA's income limits for a large family (households with three or more people) were used.

In 2011, THDA's market share among FHA-insured loans was 18 percent and it declined to 16 percent in 2012 and 2013. In Rutherford County, THDA funded FHA-insured loans were approximately 22 percent of comparable FHA-insured loans reported in HMDA data.

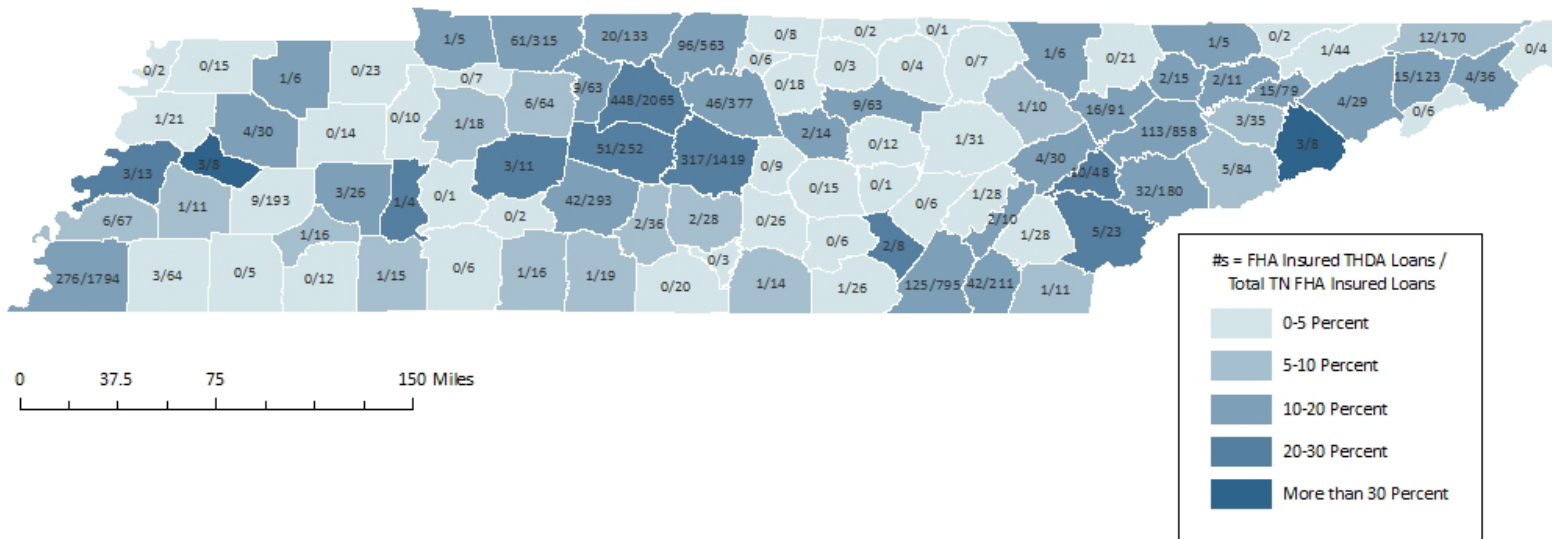
Following maps display THDA's share in the FHA-insured loans market in 2012 and 2013.

Map 5: THDA's Share in FHA-Insured Home Loans Market, 2012¹⁹



¹⁹ 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 2012 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 large family (households with three or more people) income limit of the county they purchased their homes, and purchased homes that are less than or equal to THDA's purchase price limit (estimated by adding a four percent downpayment amount to the loan amount) are included.

Map 6: THDA's Share in FHA-Insured Home Loans Market, 2013²⁰



²⁰ 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 2012 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 large family (households with three or more people) income limit of the county they purchased their homes, and purchased homes that are less than or equal to THDA's purchase price limit (estimated by adding a four percent downpayment amount to the loan amount) are included.