TENNESSEE HOME LOAN TRENDS IN 2021:

ANALYSIS FROM HOME MORTGAGE DISCLOSURE ACT (HMDA) DATA

Tennessee Housing Development Agency

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EXECUTIVE SUMMARY

Congress originally enacted the Home Mortgage Disclosure Act (HMDA) in 1975 to provide information about the mortgage activity. As a component of the Act, financial institutions are required to collect and disclose data on mortgage loan applications. Data reported includes information about each mortgage application, whether approved or denied, in addition to loans that financial institutions originated previously and purchased during the calendar year. Among other uses, these data are primarily valuable for determining whether lending institutions are serving the needs of their clients without discriminating.

This report uses HMDA data to answer the following questions: How do trends in Tennessee compare between 2018 and 2021, e.g. before the COVID-19 pandemic and later? Did refinance activity surge in Tennessee over this period, as reported nationally? How did conventional loans compare to government-insured loans such as FHA loans? Were there regional differences in investment property and second home purchases? What were the main reasons for denials? For all of these research questions, we incorporate analytic frames that consider trends by social demographic characteristics and geography.

In the past, THDA has used 10-year lookbacks to assess trends in mortgage activity in Tennessee using HMDA data, which was appropriate given the housing market crash of 2008. Since 2018, HMDA has added new data fields and publicly disclosed them,[1] which has provided the opportunity for new insights. As such, this analysis utilizes HMDA data from 2018 through 2021 to provide a cohesive analysis utilizing these new fields as well as a proper comparison of pre-pandemic activity to current activity.

Overall, in comparison to pre-pandemic activity, Tennessee's loan applications were almost 80 percent higher, with a 100 percent increase in originations for 1-4 family site-built homes.

The largest contributor to this increase in originations volume were refinance loan originations, which experienced a nearly fourfold increase from 2018 to 2021.

Given the overall increase in mortgage originations, Tennessee had an opportunity to close the racial homeownership gap in Tennessee. However, this opportunity was largely unrealized as the share of home purchase loans originated for Black borrowers remained consistent over the period. Furthermore, Black borrowers received more higher-priced loans compared to other borrowers and were denied loans at almost twice the rate as that of White applicants, despite an overall trend of declining denial rates. Hispanic borrowers, in contrast, experienced a continuous and steady increase in the share of home purchase loans originated increasing from 4.4 percent in 2018 to 6.2 percent in 2021.

[1] The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (DFA) and the 2015 HMDA Rule issued by Consumer Financial Protection Bureau (CFPB) mandated reporting of following new data fields: Age; Total Points and Fees; Rate Spread for all loans; Prepayment Penalty Term; Property Value; Introductory Rate Period; Non-Amortizing Features; Loan Term; Application Channel; Credit Score; Mortgage Loan Originator Identifier; Universal Loan Identifier; Property Address; Origination Charges; Discount Points; Lender Credits; Mandatorily Reported Reasons for Denial; Interest Rate; Debt-to-Income Ratio; Combined Loan-to-Value Ratio; Manufactured Home Secured Property Type; Manufactured Home Land Property Interest; Multifamily Affordable Units; Automated Underwriting System; Reverse Mortgage Flag; Open-End Line of Credit Flag; and Business or Commercial Purpose Flag.

KEY FINDINGS

- **In 2021, mortgage activity for all applications regardless of outcome, including home purchase, refinancing and home improvement in Tennessee increased.** More than 500,000 applications for home purchase, refinancing, and home improvement loans in Tennessee led to nearly 300,000 closed-end loan originations, which represented a four percent increase from 2020, similar to the nation where the number of closed-end loan applications increased by 3.6 percent.[2] Loan originations in 2021 more than doubled compared to 2018 (p.6).

Originations by Loan Type (First Lien, 1-4 family, site-built)	2018	2019	2020	2021	Percent Change				
					18-19	19-20	20-21		18-21
All Loans Originated	138,952	169,767	269,966	281,373	22%	59%	4%		102%
Home Purchase Loans	96,075	102,933	114,145	118,311	7%	11%	4%		23%
For Owner Occupancy	84,275	89,813	100,679	100,266	7%	12%	0%		19%
For Second Residences	3,273	3,844	4,699	5,764	17%	22%	23%		76%
For Investment Properties	8,527	9,276	8,767	12,281	9%	-5%	40%		44%
Refinance Loans, regardless of occupancy	40,826	64,691	153,694	160,227	58%	138%	4%		292%
Non Cash-Out Refinances	17,665	35,737	111,332	98,127	102%	212%	-12%		455%
Cash-Out Refinances	23,161	28,954	42,362	62,100	25%	46%	47%		168%
Home Improvement Loans	2,051	2,143	2,127	2,835	4%	-1%	33%		38%

- **In 2021, both home purchase and refinance loan originations were four percent higher than the previous year.** However, 2020 was a very different year compared to 2019 and 2021. In 2020, home purchase loan originations increased by 11 percent from 2019 while refinance originations more than doubled with nearly 140 percent year-over-year increase, Tennessee markets mimicking the refinance boom in the nation (p.8).

- **In 2020 and 2021, homeowners refinanced their previous mortgages to take advantage of low interest rates.** Refinance loan originations in 2021 increased by four percent compared to 2020 despite the fact that non-cash-out refinancing declined by 12 percent. The primary reason for increased refinance loan volume was a nearly 50 percent increase in cash-out refinances in 2021, which was stimulated by low interest rates and increased equity caused by home price appreciation in recent years (p.8).

- **The share of home purchase loans originated for Black borrowers remained largely consistent.** The share of loans for Black borrowers slightly declined from 7.5 percent in 2018 to 7.3 percent in 2019, increased to 7.6 percent in 2020 (slightly exceeding the share in 2018), and in 2021 stayed same. The share of home purchase loans originated for Hispanic borrowers with continuous and steady increases reached to 6.2 percent in 2021 compared to 4.4 percent in 2018 (p.13).

- **Lenders originated the majority of both home purchase and refinance loans in middle- and high-income neighborhoods.** Low and middle-income (LMI) neighborhoods represented the sites of around 15 percent of all originated home purchase loans between 2018 and 2021. LMI neighborhoods' share in all refinance loan originations was lower in 2021 than it was in 2018. In 2021, of all home purchase loans

[2] Summary of 2021 Data on Mortgage Lending, retrieved from: https://www.consumerfinance.gov/data-research/hmda/summary-of-2021-data-on-mortgage-lending/

originated for Black borrowers, 21 percent were located in LMI neighborhoods, compared to only 15 percent of home purchase loans for White borrowers (p.15).

- **In 2021, the denial rate for home purchase loans declined across all race categories, but Black applicants were still denied mortgages at almost twice the rate of White applicants.** The overall denial rate for all home-purchase loan applicants was 8 percent in 2021, lower than 8.9 percent in 2020. For Black applicants, the denial rate declined from 16.9 percent in 2020 to 13.5 percent in 2021. Yet, the denial rate of Black applicants was still higher than all other race groups each year. In fact, the odds that Black applicants are denied a mortgage was 1.94 times that of White applicants per 2021 data. Even after accounting for debt-to-Income ratio, the odds that Black Tennesseans are denied a mortgage is still 1.61 times that of White Tennesseans (p.18).

- **In 2021, the proportion of all higher-priced home purchase loans declined from the previous year for all race groups except a slight increase in Asian borrowers, and it was the lowest level in four years.** Nearly six percent of all borrowers received higher-priced loans in 2021 compared to seven percent in 2020. In 2019, there was an increased prevalence of higher-priced home purchase loans for all racial groups, except for Asian borrowers. Meanwhile, the percent of higher-priced loans declined in 2020 and 2021. Black borrowers received the highest percentage of higher-priced loans, across all race categories in all four years, while Asian borrowers had the lowest percentage of higher-priced loans (p.20).

INTRODUCTION

This report provides an overview of mortgage market activity and lending patterns, and compares different borrower demographic attributes and lender types in Tennessee using Home Mortgage Disclosure Act (HMDA) data[3] from 2018 to 2021. We focused on the period of 2018-2021, which is a departure from the 10-year lookbacks of prior THDA HMDA reports. We chose these four years for our analysis because significant changes were made to the HMDA data starting in 2018 that would allow for a rich analysis using new and modified data points if we limit the period to these four years. Furthermore, we wanted to analyze the possible impacts of the COVID-19 pandemic on Tennessee mortgage markets and provide a pre- and post-pandemic perspective. All the information provided in this report is related to the mortgage loan applications and mortgages originated in Tennessee, unless noted otherwise.

In early 2020, when the COVID-19 pandemic started, policy makers and industry leaders were concerned about its impact on housing markets recalling the events that took place after the housing crash of 2008. Due to several demand and supply side factors,[4] the ultimate outcome was much more favorable than what was expected in comparison to the housing crash of 2008. Stimulus checks and extended unemployment insurance benefits mitigated the impact of the sharp increase in unemployment in early 2020, and provided a cushion for households. Many homeowners were thus able to pay their mortgages, which prevented widespread foreclosures, an unfortunate outcome of the aftermath of the 2008 crisis.[5] Additionally the possibility of remote work for many workers created both challenges and opportunities that affected housing demand. Challenges included the need for more space and rooms, and opportunities included the flexibility of pursuing housing outside of job centers, which are usually more expensive cities and urban areas. Furthermore, the declining interest rates that resulted from the Federal Reserve Bank's monetary policy actions further stimulated the housing demand (for both purchases and refinances). In contrast to robust demand for housing over this period, housing supply severely tightened. Some reasons included supply chain disruptions and restrictions placed on construction work because of the pandemic, which created impediments to the building industry. Additionally, the pandemic made homeowners reluctant to list their homes for sale, further tightening the housing supply.

This report aims to analyze the mortgage activities and trends in Tennessee during these times. The primary research questions of interest include the following. How do trends in Tennessee compare between 2018 and 2021, e.g. before the pandemic and later? Did refinance activity surge in Tennessee over this period, as reported nationally? How did conventional loans compare to government-insured loans such as FHA loans? Were there regional differences in investment property and second home purchases? What were the main reasons for denials? For each of these research questions, we incorporate analytic frames that consider trends by social demographic characteristics and geography.

FINDINGS

A. Mortgage Applications and Originations

In 2021, 1,286 institutions reported data on 515,934 closed-end home mortgage loan applications and purchased loans in Tennessee.[6] In 2021, these loan applications led to 292,093 loan originations (regardless of occupancy, construction type or lien status, including both single family and multifamily dwellings), for $81 billion. Both the number of applications and originations in 2021 were higher than they were in 2020. In 2021, Tennessee's applications were six percent higher than in 2020 and 80 percent higher than the applications in 2018. Nationally, the trends were similar as applications in 2021 increased by three percent from 2020 and 80 percent from 2018.[7]

In Table 1, the number of loans reported to HMDA and various types of action taken by the financial institutions are separated for 1-4 family, multifamily[8] and manufactured dwellings. Loans for 1-4 family dwellings are further separated based on the loan purpose, which includes purchase, refinance and home improvement.

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[3] For more information about what HMDA data is and what are the new and revised data elements in 2019 HMDA data, please check Appendix A at the end of the report.
[4] Federal Reserve bank of Dallas, https://www.dallasfed.org/research/economics/2021/1228.aspx
[5] Mortgage payment forbearance and American Rescue Plan (the ARP) Homeowner Assistance Fund also helped homeowners stay in their homes.
[6] The 2015 HMDA rule required institutions that originated at least 100 open-end line of credits (LOCs) in each of the two preceding calendar years to report data on open-end LOCs beginning with data collected in 2018. However, in 2017, the Bureau temporarily increased the open-end reporting threshold to 500 open-end LOCs for calendar years 2018 and 2019. To make this data comparable to the data reported in previous years, we excluded all open-end LOCs, except those open-end LOCs that are reverse mortgages, and applications for a loan purpose other than home purchase, home improvement, or refinance.
[7] For more information about the national trends, please see Data Point: 2021 Mortgage Market Activity and Trends from Consumer Financial Protection Bureau (CFPB)
[8] A multifamily property consists of five or more units.

Table 1: Total Loan Applications and Action Taken by the Financial Institutions, 2018-2021

	2018	2019	2020	2021	Percent Change			
ALL					**18-19**	**19-20**	**20-21**	**18-21**
Applications*	286,805	335,525	487,165	515,934	17%	45%	6%	80%
Originated	148,214	180,048	279,756	292,093	21%	55%	4%	97%
Denied	39,125	37,643	47,042	49,553	-4%	25%	5%	27%
Purchased**	46,623	52,371	59,776	63,684	12%	14%	7%	37%
Other***	52,843	65,463	100,591	110,604	24%	54%	10%	109%
1-4 Family								
Home Purchase					**18-19**	**19-20**	**20-21**	**18-21**
Applications*	167,232	176,369	188,565	198,342	5%	7%	5%	19%
Originated	97,018	104,355	115,333	119,412	8%	11%	4%	23%
Denied	10,342	9,903	11,591	10,841	-4%	17%	-6%	5%
Purchased**	36,873	36,440	31,629	34,361	-1%	-13%	9%	-7%
Other***	22,999	25,671	30,012	33,728	12%	17%	12%	47%
Refinancing					**18-19**	**19-20**	**20-21**	**18-21**
Applications*	92,295	131,056	269,933	285,289	42%	106%	6%	209%
Originated	41,861	65,694	154,359	160,701	57%	135%	4%	284%
Denied	18,747	18,388	25,941	29,341	-2%	41%	13%	57%
Purchased**	8,797	14,994	27,579	28,545	70%	84%	4%	224%
Other***	22,890	31,980	62,054	66,702	40%	94%	7%	191%
Home Improvement					**18-19**	**19-20**	**20-21**	**18-21**
Applications*	6,338	6,570	5,400	6,358	4%	-18%	18%	0%
Originated	2,972	3,148	2,696	3,426	6%	-14%	27%	15%
Denied	1,843	2,195	1,449	1,411	19%	-34%	-3%	-23%
Purchased**	494	164	137	110	-67%	-16%	-20%	-78%
Other***	1,029	1,063	1,118	1,411	3%	5%	26%	37%
Multifamily								
Applications*	982	1,090	1,134	1,328	11%	4%	17%	35%
Originated	796	888	946	1,159	12%	7%	23%	46%
Denied	75	78	72	55	4%	-8%	-24%	-27%
Purchased**	1	3	2	0	200%	-33%	-100%	-100%
Other***	110	121	114	114	10%	-6%	0%	4%
Manufactured								
Applications*	19,958	20,440	22,133	24,617	2%	8%	11%	23%
Originated	5,567	5,963	6,422	7,395	7%	8%	15%	33%
Denied	8,118	7,079	7,989	7,905	-13%	13%	-1%	-3%
Purchased**	458	770	429	668	68%	-44%	56%	46%
Other***	5,815	6,628	7,293	8,649	14%	10%	19%	49%

*Applications reported by financial institutions to HMDA during the year regardless of the action taken, lien status or occupancy type. Only open-end LOCs (except reverse mortgage) and loans for purposes other than purchase, refinance and home improvement are excluded.

**Purchased includes loans purchased by the financial institution during the year.

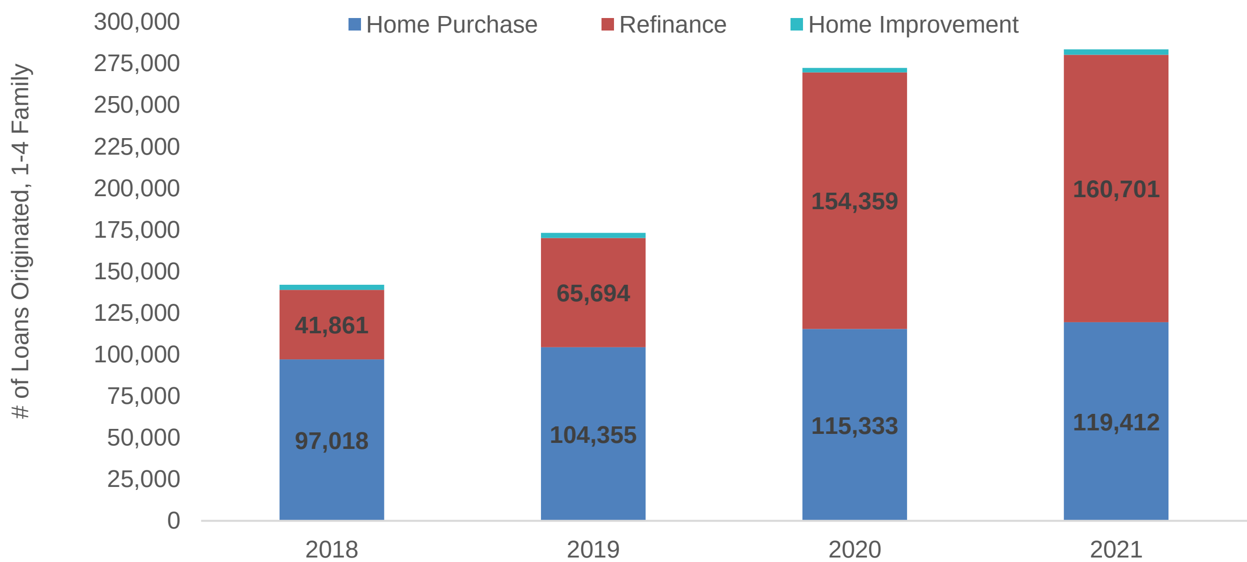
***Other includes applications that were approved but not accepted by the applicant, applications withdrawn by the applicant, and files closed for incompleteness in addition to Preapproval Requests that were denied and Preapproval Requests that were approved but not accepted by the applicant.

B. Loan Purpose

Overall loan originations for 1-4 family site-built homes increased by 100 percent from 2018 to 2021. The largest contributor to this increase in originations volume were refinance loan originations, which experienced a nearly fourfold increase from 2018 to 2021.

In 2021, nearly 490,000 (95 percent of total) applications were for 1-4 family site-built homes (including purchase refinance and home improvement loans), 1,328 were for site-built multifamily dwellings and remaining 24,617 loan applications were for manufactured homes (both 1-4 family and multifamily). **In 2021, both home purchase and refinance loan originations were four percent higher than the previous year.** In 2020, home purchase loan originations increased by 11 percent from 2019 while refinance originations more than doubled with a 135 percent year-over-year increase. With this increase, both in 2020 and 2021, the total share of refinance loan originations exceeded the share of purchase originations (for site-built 1-4 family homes).[9] While more households chose to become homeowners in 2020 and 2021, refinance loan originations dominated the loan volume increase, especially in 2020.

Figure 1: Mortgage Loans Originated for 1-4 Family, Site-Built Dwellings, 2018-2021



The drastic jump in refinance loan originations in 2020 and in 2021 was likely related to the decrease in interest rates over the same period. Monthly average interest rates declined during 2020 and were still lower in 2021 than they were in 2019. According to Freddie Mac's Primary Mortgage Market Survey,[10] the average rate for a 30-year fixed mortgage declined from 3.62 percent in January 2020 to a historically lowest level of 2.68 percent in December 2020. By the end of 2021, the monthly average interest rates increased to 3.10 percent until the end of 2021.

Originations for multifamily and manufactured dwellings also increased in 2021 from 2020. Whereas in 2019 and 2020, the increase in non-cash-out refinance loans fueled the year-over-year growth of refinance loan originations, in 2021, cash-out refinances carried the annual growth in refinance volume. For example, in 2020, refinance loan originations increased by 138 percent from 2019, which was already 58 percent higher than the refinance origination volume in 2018. An over 200 percent increase in non-cash-out refinance volume was the major reason for the increased refinance volume in 2019. **In 2021, a four percent increase in refinance volume was accomplished despite of 12 percent decline in non-cash-out refinance due to a 47 percent increase in the cash-out refinance originations.**

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[9] In the years following the financial crisis of 2008, declining interest rates encouraged the homeowners to refinance their previously high interest rate loans. Therefore, after the crisis, a majority of mortgage activity was for refinancing purposes rather than home purchasing. As the interest rates started increasing from their historically low levels, the refinance activity slowed down, and home purchase mortgages increased. In 2014, 57 percent of all loans originated by reporting lending institutions were for home purchase and 37 percent were for refinancing, while, for example, in 2009, 63 percent of all loans originated in Tennessee were for refinance purposes. Even though, both the purchase and refinance originations fluctuated annually, there were more purchase loans originated than refinance loans until 2020.

[10] Monthly average interest rate data is from https://www.freddiemac.com/pmms/pmms_archives.

Table 2: First-lien Refinance Loans Originated for 1-4 Family, Site-Built Dwellings, 2018-2021

	2018	2019	2020	2021	Year-over-Year % Change 18-19	19-20	20-21
Total Refinance	40,826	64,691	153,694	160,227	58%	138%	4%
Non-Cash-Out Refinance	17,665	35,737	111,332	98,127	102%	212%	-12%
Cash-out Refinance	23,161	28,954	42,362	62,100	25%	46%	47%
Non-Cash-Out Refi % of Total Refi	43%	55%	72%	61%			
Cash-out Refi % of Total Refi	57%	45%	28%	39%			

Home purchase loan originations by occupancy indicated that in 2021, first lien home purchase loans originated for 1-4 family, site-built dwellings that were owner occupied remained unchanged from 2020, while loans for the purchase of investment properties increased by 40 percent. In 2020, the loans for purchasing investment properties declined by five percent and owner-occupied home purchase loan originations increased by 12 percent. In both years, loans for second residences steadily increased by around 20 percent.

Table 3: First-lien Home Purchase Loans Originated for 1-4 Family, Site-Built Dwellings by Occupancy, 2018-2021

	2018	2019	2020	2021	Percent Change 18-19	19-20	20-21
Total Home Purchase Loans	96,075	102,933	114,145	118,311	7%	11%	4%
For Owner Occupancy	84,275	89,813	100,679	100,266	7%	12%	0%
For Second Residences	3,273	3,844	4,699	5,764	17%	22%	23%
For Investment Properties	8,527	9,276	8,767	12,281	9%	-5%	40%
Owner-Occupied % of Total	88%	87%	88%	85%			
Second Residences % of Total	3%	4%	4%	5%			
Investment % of Total	9%	9%	8%	10%			

C. Trends in First-Lien Mortgage Loans on Owner-Occupied, 1-4 Family Dwellings[11]

In 2021, closed-end, first-lien home purchase loan originations for owner-occupied, site-built, 1-4 family dwellings were unchanged from the previous year, but geographic trends were mixed. Table 4 provides a look at trends in home purchase loan originations in the Metropolitan Statistical Areas (MSAs)[12] between 2018 and 2021.

Table 4: First-Lien Home Purchase Loans Originated for Owner-Occupied 1-4 Family Dwellings, 2018-2021, MSA and State

	2018	2019	2020	2021	Percent Change 18-19	19-20	20-21	18-21
Chattanooga	5,037	5,699	6,258	6,379	13%	10%	2%	27%
Clarksville	4,867	5,264	6,209	6,666	8%	18%	7%	37%
Cleveland	1,378	1,429	1,669	1,743	4%	17%	4%	26%
Jackson	1,359	1,914	2,027	2,053	41%	6%	1%	51%
Johnson City	2,087	2,282	2,513	2,648	9%	10%	5%	27%
Kingsport-Bristol	2,188	2,489	2,887	2,897	14%	16%	0%	32%
Knoxville	12,103	12,569	14,201	14,120	4%	13%	-1%	17%
Memphis	9,841	9,911	10,601	10,297	1%	7%	-3%	5%
Morristown	1,246	1,405	1,571	1,715	13%	12%	9%	38%

[11] The discussion in the following sections is based on first-lien mortgage loans on owner-occupied one- to four-family, site-built dwellings, unless otherwise specified.
[12] Data for the Metropolitan Statistical Areas (MSAs), which include counties from other neighboring states, are only for the counties in Tennessee. "Kingsport" refers to the Kingsport-Bristol-Bristol MSA and Nashville refers to the Nashville-Davidson–Murfreesboro–Franklin MSA.

Nashville	31,560	33,706	38,198	36,093	7%	13%	-6%	14%
Balance of State	12,609	13,145	14,545	15,655	4%	11%	8%	24%
TENNESEE	84,275	89,813	100,679	100,266	7%	12%	0%	19%

The upward trend in home purchase loan originations in the recent years was subdued across MSAs in 2021. Home purchase loan originations declined in the Knoxville, Memphis and Nashville MSAs, stayed consistent in the Kingsport MSA and increased in others. Nevertheless, in all MSAs and the state, the volume of home purchase loan originations was higher in 2021 than it was 2018, before COVID-19 started. For example, the Nashville MSA, experienced a six percent year-over-year decrease, yielding the largest decline in the home purchase loan origination volume in 2021 across all MSAs. However, originations in the Nashville MSA were still 14 percent higher than in 2018. In all four years, purchase loan origination rates were highest in the Nashville MSA followed by the Knoxville MSA. In 2021, for example, 36 percent of all home purchase loan originations in Tennessee were in the Nashville MSA.

In 27 counties, home purchase loan originations declined in 2021, while in 2020, only 10 counties experienced declining loan originations from prior year. For example, in Davidson County, originations declined by two percent in 2021 and in each of the following two years, the county experienced 10 percent increase in loan originations. First lien refinance loan origination rates were higher in 2021 than in 2020 in all MSAs except the Nashville MSA where rates declined by four percent.

Table 5: First-Lien *Refinance* Loans Originated for Owner-Occupied 1-4 Family Dwellings, 2018-2021, MSA and State

					Percent Change			
	2018	2019	2020	2021	18-19	19-20	20-21	18-21
Chattanooga	2,198	3,467	8,722	9,297	58%	152%	7%	323%
Clarksville	1,027	2,229	5,389	6,060	117%	142%	12%	490%
Cleveland	575	875	2,026	2,278	52%	132%	12%	296%
Jackson	465	883	2,071	2,337	90%	135%	13%	403%
Johnson City	866	1,217	2,980	3,338	41%	145%	12%	285%
Kingsport-Bristol	989	1,290	2,820	3,267	30%	119%	16%	230%
Knoxville	4,730	7,499	18,911	20,340	59%	152%	8%	330%
Memphis	3,718	6,151	16,296	16,751	65%	165%	3%	351%
Morristown	568	997	1,910	2,318	76%	92%	21%	308%
Nashville	14,744	26,283	65,185	62,287	78%	148%	-4%	322%
Balance of State	6,550	8,836	18,217	21,188	35%	106%	16%	223%
Total	36,430	59,727	144,527	149,461	64%	142%	3%	310%

D. Conventional versus Government-Insured Loans

In 2021, conventional loans represented more than 67 percent of all originated loans, following an increasing trend for over a decade. In 2007, before the housing market crash, more than 80 percent of all home purchase loans originated in Tennessee were conventional. Afterwards, government-insured loans were the only option available for many households who wanted to obtain a home purchase loan. The decline in conventional loans for home purchases in in the years immediately following the housing market crash was mostly related to the decline in the availability of conventional loan options in the Tennessee housing market.[13] Over the years, changes in the mortgage insurance premium (MIP) structure of the FHA-insured loans caused fluctuations in the share of FHA-insured home purchase loan originations.[14]

[13] For example, Avery et al., analyzing 2008 HMDA data, 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.

[14] Starting in 2009, FHA increased the MIP and upfront mortgage insurance payments several times and required MIP for the life of the loan unless borrowers refinance the loan. These changes increased the cost of purchasing a home using FHA-insured mortgage loans and led to a declining share of FHA-insured loans in the total home purchase loan originations compared to conventional and other government insured loans. In 2015, for loans less than $625,500 with loan-to-value (LTV) ratio greater than 95 percent, the annual FHA mortgage insurance rate was reduced from 135 base points to 85 base points, which led to an increase in the use of FHA-insured home purchase loans.

Recent increases in the share of conventional loans happened at the expense of declining shares of FHA- and USDA-insured loans. In contrast, the share of VA-insured loans remained unchanged from 2020. The share of conventional loans within originated refinance loans also increased in 2021.

Table 6: First-Lien Loans Originated for Owner-Occupied 1-4 Family Dwellings Share of each Loan Type, 2018-2021

	2018	2019	2020	2021
Home Purchase				
Conventional	59.4%	60.6%	62.6%	67.2%
FHA	22.2%	21.5%	18.8%	15.5%
VA	12.3%	12.7%	12.2%	12.2%
FSA/RHS	6.1%	5.3%	6.3%	5.1%
Refinance				
Conventional	69.6%	65.9%	75.3%	77.7%
FHA	16.7%	15.7%	8.7%	8.8%
VA	13.5%	18.2%	15.7%	13.3%
FSA/RHS	0.1%	0.2%	0.3%	0.2%

E. Loans by Occupancy

Starting with HMDA data reported for 2018, the occupancy field was modified to require financial institutions to report whether an application was intended for principal residence, second residence or for an investment property rather than just as "owner-occupied" vs. "non-owner-occupied." **Overall, a majority of first-lien loan originations for single family, site-built dwellings were for principal residences. This trend, particularly true for refinance loans, did not change significantly in the last four years.**

Table 7: Loans Originated for First Lien, 1-4 Family, Site-built Dwellings by Occupancy and Purpose, 2018-2021

		Home Purchase	Refinancing		Home Improvement	Other	TOTAL by Occupancy
			Non Cash-out	Cash-out			
2018	Principal Residence	84,275	14,764	21,666	1,604	1,441	123,750
	Second Residence	3,273	237	149	40	80	3,779
	Investment Property	8,527	2,664	1,346	407	230	13,174
	TOTAL by Purpose	96,075	17,665	23,161	2,051	1,751	140,703
2019	Principal Residence	89,813	32,376	27,351	1,613	1,555	152,708
	Second Residence	3,844	438	196	34	79	4,591
	Investment Property	9,276	2,923	1,407	496	251	14,353
	TOTAL by Purpose	102,933	35,737	28,954	2,143	1,885	171,652
2020	Principal Residence	100,679	104,538	39,989	1,715	1,536	248,457
	Second Residence	4,699	1,541	349	30	74	6,693
	Investment Property	8,767	5,253	2,024	382	229	16,655
	TOTAL by Purpose	114,145	111,332	42,362	2,127	1,839	271,805
2021	Principal Residence	100,266	91,223	58,238	2,319	1,724	253,770
	Second Residence	5,764	1,219	504	43	115	7,645
	Investment Property	12,281	5,685	3,358	473	277	22,074
	TOTAL by Purpose	118,311	98,127	62,100	2,835	2,116	283,489

In 2021, Sevier County ranked number one with the highest number of single-family site-built home loans originated for *second residences* followed by Davidson County. Nearly 1,500 loans originated for second homes, such as vacation properties, in Sevier County, represented one-fourth of all first-lien loans originated for site-built single family dwellings (regardless of loan purpose). In Shelby County, while the second home loan originations was not that as high as Sevier County, the number of loans originated for investment properties was the highest in the state, closely followed by Davidson County.

Nearly all loans originated for second residences and investment properties were conventional. FHA and VA insured a small number of refinance loans for investment properties, but, especially in the second residence loan market, government-insured loans were nonexistent.

F. Demographic[15] and Income Trends[16]

HMDA data allow for the 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.[17]

Financial institutions reporting HMDA data report the loan amounts requested and the applicant incomes considered in making the underwriting decision. However, income information is not always required.[18]

HMDA data has significant missing demographic information about borrowers, particularly race and ethnicity. However, a detailed analysis of missing information reveals that any bias associated with coverage is consistent across years. For first-lien closed-end mortgages for 1-4 family site built homes, the percentages of applicants with missing race or ethnicity information were largely consistent each year between 2018 and 2021, fluctuating between 22 and 25 percent. The mean and median incomes for those without race information were consistently higher than for White and Black applicants, and lower than for Asian applicants.[19] For example, in 2021, the average income of the applicants denoted as "Race NA" was $117,478, while the average income of White applicants was $115,056 and for Asian applicants was $139,121. A detailed analysis of applicants with missing race and/or ethnicity information can be found in the methodology section at the end of this report.

Table 8: Borrower Race and Purpose of the Home Purchase Loans Originated, 2018-2021

	2018	2019	2020	2021	2018	2019	2020	2021
	I. Home Purchase Loans				*II. Refinance Loans*			
Borrower Race								
American Indian	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%	0.3%
Asian	2.3%	2.2%	2.1%	2.8%	0.8%	1.2%	1.9%	1.8%
African American	7.5%	7.3%	7.6%	7.6%	8.7%	7.7%	5.8%	7.2%
Native Hawaiian	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%	0.1%
White	80.9%	80.1%	79.6%	77.1%	77.4%	75.5%	77.5%	74.8%
Other*	1.5%	1.6%	1.7%	1.9%	1.0%	1.2%	1.3%	1.3%
Race NA	7.5%	8.5%	8.6%	10.2%	11.7%	14.0%	13.3%	14.5%
Borrower Ethnicity								
Hispanic or Latino	4.4%	4.9%	5.5%	6.2%	2.5%	2.6%	2.9%	3.1%
TOTAL Loans	84,275	89,813	100,679	100,266	36,430	59,727	144,527	149,461

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

**Other includes 2 or more races, joint and text only categories.*

[15] For analysis of race and ethnicity, we relied on "derive race" and "derived ethnicity" categories, which combine the applicant and co-applicant's race. For more information about how the derived race and ethnicity categories are determined, please see https://github.com/cfpb/hmda-platform/wiki/Derived-Fields-Categorization-2018-Onward
[16] For the analysis from this point on, unless otherwise specified, we will consider first-lien loans for owner-occupied, site-built, one- to four-family dwellings.
[17] 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 used the "derived race" and "derived ethnicity" variables provided with the data starting 2018. More information about how these derived variables are determined, see: https://github.com/cfpb/hmda-platform/wiki/Derived-Fields-Categorization-2018-Onward
[18] 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, 2022), Federal Financial Institutions Examination Council, at https://www.ffiec.gov/hmda/pdf/2022Guide.pdf. In 2021, of all loans reported (regardless of purpose or action), more than 90,000 did not have income information. That number represents 16 percent of all loans. Observations without income decline to one percent among the first-lien, site-built, owner occupied, 1-4 family home purchase loans originated.
[19] National Community Reinvestment Coalition (NCRC) did an exploratory analysis to determine if there are any identifiable trends. They conclude that "the rate spread and income differences may indicate that No Data loans in fact include a higher share of White and Asian borrowers than the rest of the loan records." To read more about their analysis, see https://www.ncrc.org/the-critical-need-to-address-missing-data-in-hmda/

Between 2018 and 2021, the share of home purchase loans originated for White borrowers declined from 81 percent to 77 percent, while the share of loans originated for borrowers without race information[20] increased from 7.5 percent to over 10 percent. The share of home purchase loans originated for Black borrowers fluctuated slightly from 7.5 percent in 2018 to 7.3 percent in 2019, and to 7.6 percent in 2020 and 2021. The share of Asian borrowers among home purchase loan originations also increased in 2021. The share of home purchase loans originated for Hispanic borrowers increased continuously and steadily reaching 6.2 percent in 2021 compared to 4.4 percent in 2018.

With 29 percent of total borrowers, Haywood County had the highest percent of home purchase loan borrowers who were Black followed by Shelby County with 28 percent and Hardeman County with 24 percent. These counties have been at the top of the list for the share of Black borrowers since 2018. This correlates strongly with each county's existing population. More than 50 percent of the population in Haywood and Shelby counties are Black and in Hardeman County, 42 percent of all people were Black in 2020.[21]

The following table compares the racial distribution of total population and home purchase loan borrowers in ten counties with the highest percent of Black people in total population. In Shelby County, 54 percent of the total population is Black, the highest share in the state followed by Haywood County. In Shelby and Haywood Counties, Black borrowers also represented the highest percent of total borrowers in each county. Lake, Hamilton and Davidson counties had relatively low representation of Black borrowers in overall home purchase loan origination compared to their share in total population. For example, nearly 28 percent of the total population in Lake County is Black, while only five percent of home purchase loans originated in the county are for Black applicants.

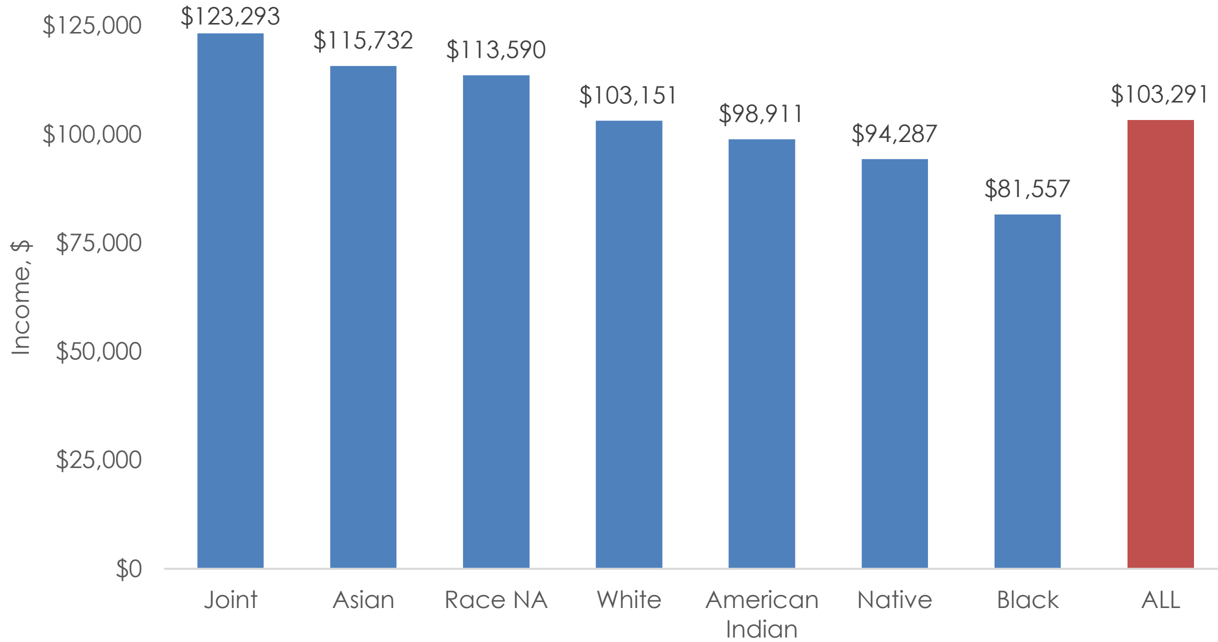
Table 9: Total Population in 2020 and Home Purchase Loans Originated in 2021 by Race

	Total Population			Loans Originated			
	White	Black	Other	White	Black	Other	NA
Shelby	38.1%	53.9%	8.0%	55.9%	28.0%	7.8%	8.3%
Haywood	45.4%	50.8%	3.8%	59.0%	28.6%	5.7%	6.7%
Hardeman	54.8%	42.4%	2.9%	67.8%	23.7%	2.8%	5.7%
Madison	57.4%	37.1%	5.5%	67.6%	19.8%	3.2%	9.4%
Lauderdale	62.5%	33.8%	3.6%	67.1%	22.6%	2.6%	7.7%
Lake	67.1%	27.8%	5.1%	82.1%	5.1%	5.1%	7.7%
Fayette	68.8%	27.5%	3.7%	67.9%	19.8%	3.2%	9.1%
Davidson	62.8%	26.9%	10.3%	71.2%	8.8%	6.8%	13.1%
Montgomery	69.1%	19.8%	11.1%	64.2%	15.0%	6.2%	14.6%
Hamilton	74.4%	18.8%	6.8%	76.7%	6.3%	4.6%	12.5%
Tennessee	76.7%	16.7%	6.6%	77.1%	7.6%	5.1%	10.2%

In 2021, the median income of home purchase loan borrowers[22] was $77,000 and the average income was $103,000. Black borrowers of home purchase loans had the lowest average income among all other race categories. Borrowers without race information had higher incomes, on average, than White borrowers, while their average income was lower than the average income of the Asians and borrowers denoted as joint[23] race.

[20] Loans initiated online do not require the lender to submit demographic information unless the applicant offers it. Furthermore, lenders can delete demographic data information on loan records that they purchase from other institutions.
[21] American Community Survey (ACS), 5-year estimates, 2016-2020.
[22] First-lien, owner-occupied, home purchase loans for one- to four-family site-built homes.
[23] Joint is one of the derived race categories including both the race for applicant and co-applicant. An applicant is identified as "joint" if either the applicant is White and co-applicant is one of the minority race categories or the applicant is one of the minority race categories and co-applicant is White.

Figure 2: Average Income by Race, Home Purchase Loans Originated, 2021



Average income also varied by whether borrowers used conventional or government-insured loans. . In 2021, the median income of conventional loan borrowers was $87,000, unchanged from the previous year (adjusted for inflation). In contrast, for FSA/RHS insured loan applicants, the median income was $51,000. In between the two, the median income of FHA-insured loan applicants was $60,000. Williamson County home purchase loan borrowers had the highest median income among counties with $148,000, followed by Wilson County with $94,000. The lowest median income was $48,000 in Lake County followed by McNairy and Lauderdale Counties with $50,000.

Furthermore, we conduct an analysis of applicants' income compared to the estimated area median family income[24] (AMFI) of the census tract in which they applied for a loan to identify the percent of loan applications, originations and denials for low-income applicants,[25] and loan terms that may vary based on income. The share of home purchase loans for low-to-moderate-income (LMI) borrowers also followed a similar pattern to Black borrowers overall by fluctuating slightly. Beginning at 28 percent in 2018, it declined slightly to 26 percent in 2019 and increased to 28 percent in 2020, and then declined again in to rates similar to those in 2019.

Table 10: Borrower Income and Purpose of the Home Purchase Loans Originated, 2018-2021

	2018	2019	2020	2021	2018	2019	2020	2021
	I. Home Purchase Loans				*II. Refinance Loans*			
Borrower Income								
Low to Moderate Income	27.9%	26.2%	28.4%	26.5%	31.3%	21.8%	16.7%	21.7%
Middle Income	27.4%	28.0%	28.1%	27.4%	24.7%	21.2%	19.6%	21.8%
High Income	43.7%	44.9%	42.6%	45.0%	38.4%	40.3%	43.7%	41.4%
Missing	1.1%	1.0%	0.9%	1.1%	5.6%	16.6%	20.1%	15.1%
TOTAL Loans	84,275	89,813	100,679	100,266	36,430	59,727	144,527	149,461

[24] 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.

[25] 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.

The trend between the distribution of loan originations among race and income categories for refinance loan originations were similar between 2018 and 2021. In 2020, while refinance loan originations more than doubled for all borrowers, refinance loans for Black borrowers increased only 80 percent, and the share of loans originated for Black borrowers actually declined to 5.8 percent. The share of loans for borrowers without race information was higher among refinance loan originations and similar to home purchase loan originations, was higher in 2021 than in 2018. The percent of borrowers without income information was a lot higher for refinance loan originations than overall loans, particularly in 2019 and 2020.

Based on the ratio of census tract median family income to AMFI, tracts are categorized as low-to-moderate-income (LMI) tracts, middle-income tracts, or high-income tracts.[26] The following table displays the closed-end first-lien loans originated for site-built, 1-4 family dwellings by tract income and loan purpose.

Table 11: Originated Loans by Neighborhood Characteristics and Loan Purpose, 2018-2021

	Home Purchase				Refinance			
	2018	2019	2020	2021	2018	2019	2020	2021
LMI-tract	12,566	13,522	15,001	15,630	5,794	7,891	15,812	18,302
Moderate-Income-tract	39,322	41,566	47,371	47,788	18,048	28,282	62,507	68,251
High-Income-tract	32,101	34,455	37,957	36,545	12,423	23,377	65,769	62,510
Missing	286	270	350	303	165	177	439	398
ALL LOANS	84,275	89,813	100,679	100,266	36,430	59,727	144,527	149,461
% in LMI Tract	15%	15%	15%	16%	16%	13%	11%	12%

Lenders originated the majority of both home purchase and refinance loans in middle- and high-income neighborhoods. LMI neighborhoods represented around 15 percent of all originated home purchase loans between 2018 and 2021. LMI neighborhoods' share in all refinance loan originations was lower in 2021 than it was in 2018. In 2021, of all the home purchase loans originated for Black borrowers, 21 percent were located in LMI neighborhoods, compared to 15 percent of home purchase loans to White borrowers.

Table 12: Originated Loans by Neighborhood Characteristics, Race and Loan Purpose, 2021

	Home Purchase					Refinance				
	White	Black	NA	Other	Total by Tract	White	Black	NA	Other	Total by Tract
LMI-Tract	11,748	1,630	1,608	644	15,630	12,830	2,266	2,688	518	18,302
Moderate-Income-Tract	37,862	3,282	4,663	1,981	47,788	52,441	4,273	9,687	1,850	68,251
High-Income-tract	27,436	2,689	3,985	2,435	36,545	46,174	4,259	9,270	2,807	62,510
Missing	265	18	16	4	303	338	23	26	11	398
Total by Race	77,311	7,619	10,272	5,064	100,266	111,783	10,821	21,671	5,186	149,461
% in LMI Tract	15%	21%	16%	13%	16%	11%	21%	12%	10%	12%

Thirty-six percent of Black borrowers had incomes at or below 80 percent of Area Median Income (AMI), meaning that they were "low-to moderate-income (LMI)," compared to 26 percent of all borrowers who were LMI in 2021. Approximately 34 percent of Hispanic/Latino borrowers were also considered LMI borrowers based on their reported income.

[26] The ratio of tract median family income (MFI) to area median family income (AMFI) is defined as Tract to MSA income percentage and provided with HMDA data. Its categories are determined similar to applicants (a tract is defined as an LMI neighborhood if the ratio of tract median family income to Area median family income is 80% or less, defined as middle-income tract if the ratio is more than 80% but less than 120% and defined as high-income tract if the ratio is greater than 120%).

Table 13: Originated Home Purchase Loans by Borrower Race, Ethnicity and Income, 2021

	Black	NA	Other	White	ALL	Hispanic
Low-to-mod-Income	2,713	2,422	979	20,449	26,563	2,123
Moderate-Income	2,449	2,664	1,347	21,022	27,482	1,809
High-Income	2,412	5,094	2,694	34,954	45,154	2,271
Missing	45	92	44	886	1,067	58
Total	7,619	10,272	5,064	77,311	100,266	6,261
LMI Borrowers % of Total	36%	24%	19%	26%	26%	34%

Minority borrowers, with the exception of Asians, heavily rely on nonconventional loan products. The following table displays the nonconventional,[27] first-lien home purchase loans originated for site-built, one- to four-family owner-occupied homes separated by borrower race. 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 2021, 13 percent of all loans made to Asian borrowers were nonconventional loan products. The table below reveals that minority borrowers, except Asians, heavily rely on nonconventional loan products. Nonconventional loans usually have lower downpayment requirements, which may be more attractive to households with lower incomes. However, nonconventional loans maybe costlier than conventional loans for the borrowers.

Table 14: Home Purchase Loans, Borrower Race, Nonconventional Loans, 2018-2021

	Nonconventional				Conventional and Nonconventional				% Nonconventional			
	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
Asian	330	334	394	352	1,935	1,979	2,156	2,769	17%	17%	18%	13%
Black	4,313	4,202	4,685	4,303	6,350	6,540	7,637	7,619	68%	64%	61%	56%
White	26,537	27,344	28,552	24,012	68,168	71,945	80,112	77,311	39%	38%	36%	31%
Joint	530	577	698	609	1,145	1,322	1,609	1,762	46%	44%	43%	35%
Race NA	2,313	2,729	3,097	3,357	6,309	7,624	8,691	10,272	37%	36%	36%	33%
Other Minority	198	214	225	253	368	403	474	533	54%	53%	47%	47%
ALL LOANS	34,221	35,400	37,651	32,886	84,275	89,813	100,679	100,266	41%	39%	37%	33%
Hispanic-Latino	1,856	2,056	2,479	2,375	3,721	4,378	5,570	6,261	50%	47%	45%	38%

NOTE: "Other Minority" includes American Indian, Native Hawaiian, 2- or more-minority races and text only categories

The following table displays the average cost paid by home purchase loan borrowers between 2018 and 2021 depending on loan type.[28] Every year between 2018 and 2021, on average, nonconventional loans cost more than conventional loans. FHA loan borrowers, in particular, paid nearly 100 percent more than what conventional loan borrowers paid in any given year. On average, the difference in the total loan costs between the conventional loan borrowers and borrowers who used FSA/RHS insured loans was smaller. This analysis considers only the amount of total loan costs paid by closed-end, first lien, owner occupied, site-built, 1-4 family home purchase loan borrowers, and does not control for borrower and loan characteristics that might be influencing the total loan cost.[29]

[27] Nonconventional loans are the ones insured by FHA, VA or FSA/RHS.
[28] Starting in 2018, the new and modified data fields include "total loan costs," which applies to originated loans that are subject to the TILA-RESPA Integrated disclosure requirements in Regulation Z. Institutions that qualify for the partial exemption under the EGRRCPA are not required to report Total Loan Costs or Total Points and Fees. See "Introducing New and Revised Data Points in HMDA" by Office of Research at https://www.consumerfinance.gov/data-research/research-reports/introducing-new-revised-data-points-hmda/. Total loan costs reported at HMDA are the costs paid by the borrower such as appraisal fees, credit report fees, title insurance, and so on. If there is any seller paid costs, they are not included in total loan costs.
[29] The differences in total loan costs should be treated carefully. According to Consumer Financial Protection Bureau's (CFPB) examination of the new HMDA data fields, loan costs may be tied to the size of the loan and can be affected by factors such as the size of the down payment relative to the loan (as that will drive the need for mortgage insurance) as well as by choices made by consumers (such as the purchase of owners title insurance). The summary statistics reported in this section do not control for any such factors and these factors may explain some of the differences observed across enhanced loan types, loan purpose, demographic groups, etc.

Table 15: Average Loan Cost Paid by Borrower by Loan Type, 2018-2021

	Conventional	FHA	VA	FSA/RHS	ALL LOANS	FHA % of Conventional	VA % of Conventional	FSA/RHS % of Conventional
2018	$3,658	$6,655	$5,553	$4,436	$4,625	1.82	1.52	1.21
2019	$3,973	$7,270	$5,873	$4,767	$4,987	1.83	1.48	1.20
2020	$3,856	$7,724	$6,808	$5,160	$5,055	2.00	1.77	1.34
2021	$4,266	$8,129	$7,710	$5,373	$5,354	1.91	1.81	1.26

There is no noticeable trend in the age of the borrowers by race categories. Compared to the other home purchase loan borrowers in 2021, a lower percentage of Black borrowers were younger than 35 years old. Relatively, a higher percentage of Hispanic/Latino borrowers were younger than 35 years of age.

Table 16: Home Purchase Loans Originated, Borrower Age by Race/Ethnicity, 2021

	Asian	Black	Joint	Missing	Other	White	Total	Hispanic
<25	4%	4%	6%	5%	9%	8%	7%	9%
25-34	36%	28%	40%	30%	33%	34%	33%	35%
35-44	38%	29%	28%	28%	26%	23%	25%	29%
45-54	15%	21%	14%	17%	16%	16%	16%	15%
55-64	6%	13%	7%	12%	12%	12%	11%	8%
65-74	1%	4%	4%	5%	4%	6%	6%	3%
>74	0%	1%	1%	1%	0%	2%	1%	1%
Missing	0%	0%	0%	0%	0%	0%	0%	0%
Total # of Borrowers	2,769	7,619	1,762	10,272	533	77,311	100,266	6,261

G. Denial Rates and Denial Reasons

We calculated denial rates by dividing the number of loans denied by financial institutions by the total number of loan applications. We exclude withdrawn applications, applications closed for incompleteness, and loans that were originated previously and purchased by financial institutions during the reporting calendar year.

In 2021, the denial rate for home purchase loans declined across all race categories. The overall denial rate for all home-purchase loan applicants was 8 percent in 2021, lower than 8.9 percent in 2020. For Black applicants, the denial rate declined from 16.9 percent in 2020 to 13.5 percent in 2021. **The denial rate of Black applicants was higher than other race groups each year.** The category defined as "Other minority" category includes American Indian and native Hawaiian applicants and applicants with two or more minority race had the second highest denial rates behind Black applicants. The denial rate for "Joint" race applicants declined from 7.8 percent in 2020 to 6.4 percent in 2021, and had the lowest denial rates among all groups. Hispanic applicants who applied for a home purchase loan also had higher denial rates than non-Hispanic applicants who applied for a similar home purchase loan. However, the denial rate for Hispanic applicants in 2021 was lower than the previous year.

Table 17: Denial Rates, Home Purchase Loans, Conventional and Nonconventional, Race and Ethnicity, 2018-2021

	ALL	Asian	Black	Joint	Missing	Other	White	Hispanic	Not Hispanic	Ethnicity Missing
2018	9.4%	10.9%	16.0%	9.2%	13.0%	14.7%	8.3%	11.5%	8.9%	13.5%
2019	8.5%	10.3%	15.4%	7.1%	12.0%	12.7%	7.4%	11.3%	8.0%	11.7%
2020	8.9%	11.1%	16.9%	7.8%	11.3%	13.8%	7.7%	10.9%	8.5%	11.5%
2021	8.0%	8.3%	13.5%	6.4%	10.1%	13.8%	7.1%	9.6%	7.6%	10.1%

Compared to 2018, in 2019, denial rates declined for all race categories. In 2020, the denial rates increased again for nearly all racial groups while staying lower than rates in 2018, with the exception of Asian and Black applicants.

In 2021, the odds that Black applicants were denied a mortgage was 1.94 times that of White applicants. Even after controlling for debt-to-income ratio (DTI), the odds that Black Tennesseans were denied a mortgage fell only slightly to 1.61 times that of White Tennesseans. However, these odds were lower than in 2020, in which the denial odds for Black applicants was 2.31 times higher than for White applicants and declined to only 2.0 percent after controlling for DTI and income. Although the Black applicants' denial odds improved in 2021 compared to 2020, their likelihood of denials was still disproportionally higher than for White applicants.

Furthermore, applicants who applied for nonconventional (FHA-, VA- or FSA/RHS-insured) loans were denied more often than counterparts who applied for conventional loan products.

Table 18: Denial Rates, Home Purchase Loans, Nonconventional, Race and Ethnicity, 2018-2021

	ALL	Asian	Black	Joint	Missing	Other	White	Hispanic	Not Hispanic	Ethnicity Missing
2018	11.8%	15.5%	16.2%	10.7%	15.6%	13.5%	10.6%	12.7%	11.3%	16.1%
2019	10.5%	12.2%	15.6%	8.0%	14.6%	10.9%	9.2%	12.9%	10.0%	14.2%
2020	11.3%	10.2%	18.5%	7.5%	13.8%	3.6%	10.1%	12.0%	11.0%	13.4%
2021	10.4%	12.0%	13.5%	9.1%	12.1%	16.8%	9.5%	10.7%	10.1%	12.4%

Until the 2018 HMDA data release, for denied applicants, financial institutions *could* report up to three denial reasons,[30] but this was not mandatory. The 2015 HMDA rule required listing a denial reason for all denied applicants. As such, starting in 2018, except the applicants who were denied by exempt financial institutions,[31] financial institutions provided at least one denial reason for all denied applicants.

In every year between 2018 and 2021, the most prevalent denial reason was debt-to-income ratio (DTI) followed by credit history and collateral for home purchase applicants. For refinance mortgage applicants, credit history was cited more often than other reasons for denial, followed by high DTI and incomplete credit application.

Table 19 below shows the variation among racial categories by denial reason. DTI was the most cited reason for denial across all racial categories, especially for joint race and Black applicants. Asian applicants had a higher presence of denial for incomplete credit application compared to applicants in other racial categories. Credit history was reported as a denial reason more often for Black applicants than for all other applicants.

Table 19: Denial Reason, Home Purchase Loans, 2021

ALL DENIAL REASONS COMBINED	Asian	Black	Joint	NA	Other Minority	White	Total
Debt-to-Income Ratio	33.8%	36.7%	40.8%	27.9%	31.5%	27.4%	29.1%
Employment History	5.8%	5.9%	10.4%	6.2%	9.0%	7.3%	7.0%
Credit History	12.7%	28.4%	26.4%	16.6%	28.1%	19.6%	20.4%
Collateral	7.3%	11.3%	10.4%	16.8%	19.1%	16.2%	15.3%
Insufficient Cash (downpayment, closing costs)	10.0%	8.9%	4.8%	7.7%	13.5%	8.2%	8.3%
Unverifiable Information	13.1%	5.3%	4.0%	7.8%	7.9%	7.3%	7.2%
Credit Application Incomplete	23.8%	10.1%	14.4%	20.0%	12.4%	16.3%	16.1%
Mortgage Insurance Denied	0.4%	0.4%	0.0%	0.4%	1.1%	0.1%	0.2%
Other	13.1%	13.8%	12.8%	12.0%	9.0%	12.5%	12.6%

[30] Selecting from nine potential denial reasons including Debt-to-Income Ratio, Employment History, Credit History, Collateral, Insufficient Cash (for downpayment and/or closing costs), Unverifiable Information, Credit Application Incomplete, Mortgage Insurance Denied and Other.

[31] HMDA reporters that are insured depository institutions or insured credit unions and that originated fewer than 500 closed-end mortgages in each of the two preceding years qualify for this partial exemption with respect to reporting their closed-end transactions. HMDA reporters that are insured depository institutions or insured credit unions that originated fewer than 500 open-end lines of credit in each of the two preceding years also qualify for this partial exemption with respect to reporting their open-end transactions.

G. Higher-Priced Loans

Before 2018, Regulation C required financial institutions to report rate spread data on higher-priced mortgage loans only.[32] The 2015 HMDA rule concerning the collection of data, which was implemented beginning in 2018, made rate spread reporting required for most originations, regardless of rate. Rate spread reporting is not required for purchased loans, reverse mortgages, assumptions, and loans that are not subject to Regulation Z.[33] Since rate spread has to be reported regardless of loan price, Regulation C no longer specifies a threshold for defining higher-priced loans. To compare 2021 data to data from earlier years, we emulate the methodology of the Consumer Financial Protection Bureau.[34] We use a post-2009 classification, which defines higher-priced loans as first-lien loans with an APR[35] 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 first-lien home purchase loans for site-built 1-4 -family owner-occupied homes by race and ethnicity of the applicants and by loan type (conventional or government insured).

Table 20: Percent of Borrowers with Higher-Priced Loans by Race, Ethnicity and Loan Type, 2018-2021

	2018	2019	2020	2021	2018	2019	2020	2021	2018	2019	2020	2021
	Conventional and Nonconventional				Conventional Only				Nonconventional Only			
All Borrowers	**8.3%**	**10.1%**	**6.9%**	**5.8%**	**4.2%**	**4.6%**	**3.6%**	**3.2%**	**14.4%**	**18.5%**	**12.5%**	**11.1%**
Race												
Asian	4.1%	3.7%	2.4%	2.5%	1.6%	1.6%	1.1%	1.7%	16.4%	14.4%	8.4%	8.0%
Black	15.7%	19.3%	14.8%	13.5%	9.7%	8.4%	8.3%	6.8%	18.6%	25.4%	18.9%	18.7%
Joint	6.0%	9.3%	7.0%	5.3%	3.4%	3.8%	3.4%	3.0%	9.1%	16.5%	11.7%	9.5%
Race Not Available	7.7%	8.3%	5.1%	4.3%	3.1%	3.3%	2.3%	2.3%	15.5%	17.4%	10.2%	8.5%
Other-Minority	10.1%	11.2%	6.5%	4.1%	6.5%	5.8%	3.2%	5.0%	13.1%	15.9%	10.2%	3.2%
White	7.8%	9.6%	6.5%	5.3%	4.1%	4.7%	3.5%	3.1%	13.7%	17.6%	11.8%	10.3%
Ethnicity												
Hispanic or Latino	12.6%	15.4%	9.7%	9.0%	9.4%	13.0%	8.2%	7.6%	15.7%	18.1%	11.6%	11.4%
Not Hispanic or Latino	8.1%	9.9%	6.9%	5.7%	4.0%	4.3%	3.4%	3.0%	14.2%	18.6%	12.7%	11.4%

In 2021, the proportion of all higher-priced home purchase loans (conventional and nonconventional with interest rates above the threshold) declined from the previous year for all race groups except for Asian borrowers, for whom it was the lowest level in four years. Nearly six percent of *all* borrowers received higher-priced loans in 2021 compared to seven percent in 2020. In 2019, there was an increased prevalence of higher-priced home purchase loans for all racial groups, except for Asian borrowers. Black borrowers received the highest percentage of higher-priced loans in all four years, while Asian borrowers had the lowest percentage of higher-priced loans.

The trend and distribution by racial groups were similar for conventional only and nonconventional, government-insured loans, except a much higher percentage of nonconventional loans were considered higher priced compared to conventional loans. For example, in 2021, little over three percent of all borrowers with conventional loans had higher-priced loans, while this ratio was 11 percent for the borrowers with nonconventional loans.

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32 Until October 2009, loans were classified as higher-priced if the spread between the Annual Percentage Rate (APR) and the rate on a Treasury bond of comparable term exceeded 3 percentage points for first-lien loans or 5 percentage points for junior-lien loans. After a change in regulations in October 2009, loans were classified as higher-priced if the APR exceeded the average prime offer rate (APOR) for loans of a similar type by at least 1.5 percentage points for first-lien loans or 3.5 percentage points for junior-lien loans.

33 12 CFR Part 1026 - Truth in Lending (Regulation Z)

34 The Bureau defines higher-priced loans according to the classification used in Regulation C after 2009 https://www.consumerfinance.gov/data-research/research-reports/data-point-2019-mortgage-market-activity-and-trends/

35 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.

METHODOLOGY AND DATA

Data and Coverage

The HMDA data are the most comprehensive source of publicly available information on the mortgage market to determine whether financial institutions are serving the housing needs in their communities and to identify possible discriminatory lending patterns. Many depository and non-depository lenders are required 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 (CFPB). 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. Because some institutions are exempt from HMDA reporting requirements HMDA data do not include all residential loan applications.

Starting in January 2018, the data points collected with HMDA increased based on Congress's amendment after Dodd-Frank Act in 2010. 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. This 25 loans coverage threshold was increased to 100 loans in May of 2020 by the 2020 HMDA rule, and became effective on July 1, 2020.

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 these 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.

The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 made reporting open-end lines of credit (OLCs)[36] mandatory. In this report, unless otherwise specified, the open-end lines of credit (except reverse mortgages) and loans for purposes other than home purchase, refinance and home improvement are excluded.

In previous HMDA reports, we used 10 years of data to identify longer-term trends. This 10-year lookback was especially useful in the years following the housing market crisis to determine if markets recovered. Because the mortgage markets recovered fully from these events and to take advantage of new and improved data present in 2018 data and onwards, we decided to analyze HMDA data for 2018 through 2021 (a four-year trend). This also allows us to both consider a depth of issues not possible before as well as the impact of COVID-19 on mortgage markets.

HMDA data includes applications for open-end and closed-end mortgages; for home purchase, refinance, home improvement and other purposes; for first and second lien; for owner occupancy, second residence and investment properties; single and multifamily residences; for manufactured and site-built homes. In this report, we focused on selected closed-end mortgages for first lien, owner-occupied, 1-4 family site-built homes. These were similar to the loans THDA funded, which enabled us to infer about THDA's share in a market with comparable products.

"Refinance" and "Cash-out Refinance" Loans

The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 modified the definitions and values of some existing data points, and required reporting of 27 new data points. Refinance loans were separated into "refinance" and "cash-out refinance," a nuance that was not available in previous years. A refinancing is a closed-end mortgage loan or open-end line of credit in which a new dwelling-secured debt obligation satisfies and replaces an existing dwelling-secured debt obligation by the same borrower.[37] A financial institution reports a covered loan or an application as a cash-out refinancing if it is a refinancing and the financial institution considered it to be a cash-out refinancing when processing the application or setting the terms under its or an investor's guidelines. One of the reasons could be the amount of cash received by the borrower at closing or account opening. If a financial institution does not distinguish between cash-out refinancing and refinancing under its own guidelines, sets the terms of all refinancing without regard to the amount of cash received by the

[36] Open-end lines of credit secured by a dwelling (excluding reverse mortgages) are called home equity lines of credit (HELOCs).
[37] See 2018 Guide to HMDA Reporting (page 58) for more detail.

borrower at loan closing or account opening, and does not offer loan products under investor guidelines, the institution reports all refinancing as refinancing, rather than cash-out refinancing.[38] Cash-out refinance borrowers use the equity in their homes for other purposes, while non-cash-out refinance borrowers aim to take advantage of lower rates or adjust the length of their mortgage (change to longer term to reduce the monthly payments or to shorter term to pay off the mortgage sooner while lowering the rate).

Missing Demographic Information

Missing race and ethnicity data within HMDA has been and continues to be a concern. As a component of data validation, we compared the characteristics of applicants whose race or ethnicity was missing (either left blank or coded as NA) with other applicants to determine the extent of potential bias. For this analysis of missing data, we compare income, loan amounts, and loan-to-value ratios. Although we wanted to compare their debt-to-income ratios (DTI) as well, in the publicly available HMDA data, DTI is provided as a range rather than actual value, which makes comparison difficult. Furthermore, we apply this analysis to the base sample of this report, which includes closed-end mortgages for first lien 1-4 family site-built homes. The following tables provide this information separated by years to consider both the extent and persistence of these trends over time.

Percentages of applicants without race information (Race is NA) were consistent each year; 22 to 24 percent of applicants were missing race each year. The average and median incomes for those without race information are consistently higher than for White and Black applicants, and lower than Asian applicants. The loan amount for applicants with missing race, on average, was higher than White and Black applicants, but lower than Asian applicants, except 2019 and 2020 when the average loan amount of the applicant with missing race was slightly higher than White applicants. Median loan-to-value ratio (LTV) of the applicants with missing race information was very close to the LTV of Asian applicants.

[38] See 2018 Guide to HMDA Reporting (page 59) for more detail.

2018			Income		Loan Amount		Lon-to-value Ratio	
RACE	Count	%	Average	Median	Average	Median	Average	Median
2 or more minority	218	0%	$72,559	$54,000	$185,688	$165,000	84.77	89.83
American Indian Alaska Native	711	0%	$68,849	$55,000	$171,090	$155,000	81.02	85.00
Asian	5,069	2%	$114,817	$85,000	$242,013	$205,000	80.21	80.00
Black	21,232	8%	$76,708	$57,000	$173,821	$155,000	117.82	92.79
Joint	2,730	1%	$113,573	$90,000	$236,634	$215,000	84.62	89.99
Race NA	***60,095***	***22%***	***$103,427***	***$71,000***	***$208,006***	***$175,000***	***96.77***	***80.00***
Native Hawaiian or Pacific Islander	329	0%	$74,502	$62,000	$185,912	$175,000	83.18	87.27
Text-Only	12	0%	$82,333	$61,500	$197,500	$205,000	73.78	80.00
White	179,065	66%	$97,109	$69,000	$205,299	$175,000	92.02	83.25
Total	269,461	100%	$96,449	$68,000	$204,300	$175,000	94.49	83.60

2019			Income		Loan Amount		Lon-to-value Ratio	
RACE	Count	%	Average	Median	Average	Median	Average	Median
2 or more minority	261	0%	$72,135	$61,000	$207,299	$195,000	84.32	90.19
American Indian Alaska Native	867	0%	$69,913	$56,000	$198,126	$175,000	81.16	85.00
Asian	6,054	2%	$119,642	$94,000	$264,371	$245,000	79.17	80.00
Black	23,334	7%	$72,908	$59,000	$189,116	$175,000	170.12	93.00
Joint	3,526	1%	$121,939	$94,000	$254,909	$235,000	83.26	86.75
Race NA	***71,965***	***23%***	***$104,482***	***$76,000***	***$226,086***	***$195,000***	***176.50***	***80.00***
Native Hawaiian or Pacific Islander	339	0%	$79,124	$60,000	$191,313	$185,000	82.22	85.00
Text-Only	12	0%	$61,545	$67,000	$182,500	$195,000	68.93	68.56
White	209,143	66%	$105,471	$74,000	$227,282	$195,000	88.99	81.97
Total	315,501	100%	$103,113	$73,000	$225,070	$195,000	106.69	82.18

2020			Income		Loan Amount		Lon-to-value Ratio	
RACE	Count	%	Average	Median	Average	Median	Average	Median
2 or more minority	400	0%	$298,448	$66,000	$222,050	$205,000	86.20	90.00
American Indian Alaska Native	1121	0%	$87,223	$63,000	$220,700	$195,000	79.11	80.00
Asian	10,502	2%	$330,708	$102,000	$280,500	$255,000	75.72	77.94
Black	30,862	7%	$310,314	$63,000	$209,256	$195,000	83.63	90.00
Joint	5,494	1%	$413,773	$102,000	$274,059	$245,000	80.57	80.87
Race NA	***105,630***	***22%***	***$322,127***	***$84,000***	***$243,385***	***$215,000***	***75.51***	***78.00***
Native Hawaiian or Pacific Islander	435	0%	$93,680	$75,000	$228,218	$205,000	82.58	85.46
Text-Only	5	0%	$344,000	$246,000	$303,000	$245,000	63.56	59.37
White	315,295	67%	$329,219	$81,000	$245,079	$215,000	76.92	80.00
Total	469,744	100%	$327,147	$81,000	$243,383	$215,000	77.23	80.00

2021			Income		Loan Amount		Lon-to-value Ratio	
RACE	Count	%	Average	Median	Average	Median	Average	Median
2 or more minority	547	0%	$134,554	$68,000	$225,018	$205,000	305.35	80.00
American Indian Alaska Native	1600	0%	$91,118	$64,000	$229,844	$200,000	75.91	80.00
Asian	12,447	3%	$139,121	$108,000	$305,901	$275,000	74.71	75.33
Black	35,511	7%	$84,457	$65,000	$219,306	$195,000	79.33	80.00
Joint	6,132	1%	$134,238	$101,000	$301,269	$255,000	77.66	80.00
Race NA	***120,201***	***24%***	***$117,478***	***$84,000***	***$274,417***	***$235,000***	***73.27***	***75.00***
Native Hawaiian or Pacific Islander	492	0%	$89,237	$66,000	$233,191	$205,000	78.36	80.00
Text-Only	33	0%	$67,097	$61,000	$185,909	$155,000	70.08	76.06
White	315,621	64%	$115,056	$80,000	$259,327	$215,000	73.67	76.87
Total	492,584	100%	$113,995	$80,000	$261,658	$225,000	74.39	77.00