TENNESSEE HOME LOAN TRENDS IN 2022:

ANALYSIS FROM HOME MORTGAGE DISCLOSURE ACT (HMDA) DATA

Tennessee Housing Development Agency

Analysis by
Hulya Arik, Ph.D.
Economist

THDA.ORG

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Tennessee Housing Development Agency

EXECUTIVE SUMMARY

This year marks the first time since 2011 that Tennessee has experienced a decline in loan applications. Compared to 2021, 2022 data from the Home Mortgage Disclosure Act (HMDA) reveals that Tennessee's loan applications were almost 40 percent lower, with a similar decline in originations for 1-4 family site-built homes. This is largely because of the mortgage activity boom following the pandemic in 2021. Therefore, mortgage activity in Tennessee is still consistent with trends that have been present since 2004. With more than 100,000 home purchase loan mortgages originated in 2022, the volume was still 100 percent higher than that of 2011, when it was at its lowest. When we compare mortgage loan originations to 2019, home purchase mortgage loans are only down by four percent and refinance loan volume is down by eight percent.

The historically low interest rates of 2020 and 2021, which resulted from the Federal Reserve Bank's actions to curb the recessionary concerns in the aftermath of COVID-19 pandemic, stimulated both home purchase and refinance loan activity. Subsequently, the state experienced exceptionally high mortgage loan volumes in 2020 and 2021, even higher than the period before the housing bubble of 2008. To restrain inflationary pressure, the Federal Reserve Bank started to raise interest rates near the end of 2021. These high mortgage rates which were also accompanied by high home prices led to a steep decline in the mortgage activity, especially in the refinance mortgage demand, which declined by 63 percent from 2021.

High interest rates and increased home prices increased the cost of homeownership significantly in 2022. The median estimated monthly payment for principal and interest increased to $1,625 from $1,155 in 2021 (not adjusted for inflation). In 2020, the median was three percent lower than in 2019. In 2021, it increased by 11 percent. This annual jump in the median estimated monthly payment was the result of increases in the median interest rate on all home purchase loans, which went from three percent in 2021 to five percent in 2022.

Demographic trends in 2022 were reminiscent of those in 2018, prior to the COVID-19 pandemic. The share of home purchase loans originated for Black borrowers did not significantly change over this period, although it fluctuated slightly year to year beginning at 7.5 percent in 2018 and ending at 7.3 percent in 2022. The percentage of refinance loan originations for Black borrowers also fluctuated, reaching nearly 10 percent in 2022, and even exceeding the share in 2018, after a dip in 2020. Hispanic borrowers experienced a continuous and steady increase in the share of home purchase loans originated increasing from 4.4 percent in 2018 to 6.9 percent in 2022.

Although Black borrowers received higher-priced loans compared to other borrowers and were denied loans at twice the rate as that of White applicants, the percent of Black borrowers receiving higher-priced loans declined in 2022, which was in contrast to the fact that all other racial categories experienced an increase in their share of higher-priced loans.

KEY FINDINGS

- **In 2022, mortgage activity for all applications regardless of outcome, including home purchase, refinancing and home improvement in Tennessee declined.** Close to 330,000 applications for home purchase, refinancing, and home improvement loans in Tennessee led to nearly 175,000 closed-end loan originations, which represented a 40 percent decline from 2021. Loan originations also declined by 40 percent in 2022 compared to 2021. Tennessee trends were similar to the nation where the number of loan applications declined by 38.6 percent and originations declined by 44.1 percent (p.6).

- **In 2022, both home purchase and refinance loan originations were lower than the previous year, 16 percent and 63 percent, respectively.** However, both home purchase and refinance loan originations were still slightly higher than their volumes in 2018, a sign that mortgage markets slowed down significantly in 2022 following the home purchase and refinance frenzy of Covid19 pandemic and possibly going back to normal levels (p.8).

- **Higher interest rates in 2022 discouraged homeowners from refinancing, especially not for cash-out purposes, which are usually used for improving the rate and term of the existing loan.** In 2020, when the mortgage rates were at historically low levels, non-cash-out refinances increased more than threefold, comprising 72 percent of total refinance loan originations. In 2022, only 33 percent of total refinance loan originations were not for cash-out purpose (p.9).

- **The share of home purchase loans originated for Black borrowers slightly declined.** The share of loans for Black borrowers slightly decreased to 7.3 percent in 2022 from 7.6 percent in 2020 and 2021. The share of home purchase loans originated for Hispanic borrowers with continuous and steady increases reached to 6.9 percent in 2022 compared to 4.4 percent in 2018 (p.13).

- **Lenders originated the majority of home purchase and refinance loans in middle- and high-income neighborhoods.** Low-to-moderate-income (LMI) neighborhoods represented the sites of around 17 percent of all originated home purchase loans in 2022, which was slightly higher than 16 percent in 2021. LMI neighborhoods' share in all refinance loan originations was also higher in 2022 than it was in 2021, but same as it was in 2018. In 2022, of all home purchase loans originated for Black borrowers, 28 percent were located in LMI neighborhoods, compared to only 16 percent of home purchase loans for White borrowers (p.15).

- **In 2022, the denial rate for home purchase loans increased across all race categories, and Black applicants were still denied mortgages at twice the rate of White applicants.** The overall denial rate for all home purchase loan applicants was 8.9 percent in 2022, higher than 8 percent in 2021. For Black applicants, the denial rate increased from 13.5 percent in 2021 to 16 percent in 2022. The odds that Black applicants are denied a mortgage was 2.18 times that of White applicants per 2022 data. Even after accounting for debt-to-income ratio, the odds that Black Tennesseans are denied a mortgage is still 1.86 times that of White Tennesseans (p.17).

- **Although Black borrowers still received the greatest share of higher-priced loans in all five years, the proportion of them receiving higher-priced loans declined in contrast to the increasing trend for all other races in 2022.** Six percent of all borrowers received higher-priced loans in 2022 compared to 5.8 percent in 2021. 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 (p.19)

INTRODUCTION

Each year, we aim to provide an overview of mortgage market activity and lending patterns; compare the characteristics of borrowers' demographic attributes and lender types in Tennessee using Home Mortgage Disclosure Act (HMDA) data.[i] We focus the analysis on the five-year period of 2018-2022. Changes made to the HMDA data starting in 2018 allow for a rich analysis using new and modified data points over this period.[ii] All the information provided in this report is related to mortgage loan applications and mortgages that originated in Tennessee, unless noted otherwise.

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 2022? Did refinance activity decline in Tennessee, 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 2022, 1,219 institutions reported data on 329,514 closed-end home mortgage loan applications and purchased loans in Tennessee.[iii] These loan applications led to 174,730 closed-end loan originations (regardless of occupancy, construction type or lien status, including both single-family and multifamily dwellings), for $58 billion. Both the number of applications and originations in 2022 were lower than they were in 2021. In 2022, Tennessee's loan applications were 36 percent lower than in 2021. Nationally, the trends were similar as the number of closed-end loan applications declined by 46 percent, and the number of originated closed-end loans declined by 51 percent from 2021 to 2022.[iv]

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[v] and manufactured dwellings. Loans for 1-4 family dwellings are further separated based on the loan purpose, which includes home purchase, refinance and home improvement.

Table 1: Total Loan Applications and Action Taken by the Financial Institutions, 2018-2022

	2018	2019	2020	2021	2022	Percent Change				
ALL						18-19	19-20	20-21	21-22	18-22
Applications*	286,805	335,525	487,165	515,934	329,514	17%	45%	6%	-36%	15%
Originated	148,214	180,048	279,756	292,093	174,730	21%	55%	4%	-40%	18%
Denied	39,125	37,643	47,042	49,553	39,010	-4%	25%	5%	-21%	0%
Purchased**	46,623	52,371	59,776	63,684	38,287	12%	14%	7%	-40%	-18%
Other***	52,843	65,463	100,591	110,604	77,487	24%	54%	10%	-30%	47%
1-4 Family										
Home Purchase						18-19	19-20	20-21	21-22	18-22
Applications*	167,232	176,369	188,565	198,342	170,705	5%	7%	5%	-14%	2%
Originated	97,018	104,355	115,333	119,412	100,471	8%	11%	4%	-16%	4%
Denied	10,342	9,903	11,591	10,841	10,220	-4%	17%	-6%	-6%	-1%
Purchased**	36,873	36,440	31,629	34,361	27,443	-1%	-13%	9%	-20%	-26%
Other***	22,999	25,671	30,012	33,728	32,571	12%	17%	12%	-3%	42%
Refinancing						18-19	19-20	20-21	21-22	18-22
Applications*	92,295	131,056	269,933	285,289	123,136	42%	106%	6%	-57%	33%
Originated	41,861	65,694	154,359	160,701	61,123	57%	135%	4%	-62%	46%
Denied	18,747	18,388	25,941	29,341	18,254	-2%	41%	13%	-38%	-3%
Purchased**	8,797	14,994	27,579	28,545	9,473	70%	84%	4%	-67%	8%
Other***	22,890	31,980	62,054	66,702	34,286	40%	94%	7%	-49%	50%
Home Improvement						18-19	19-20	20-21	21-22	18-22
Applications*	6,338	6,570	5,400	6,358	8,768	4%	-18%	18%	38%	38%
Originated	2,972	3,148	2,696	3,426	4,705	6%	-14%	27%	37%	58%
Denied	1,843	2,195	1,449	1,411	2,276	19%	-34%	-3%	61%	23%
Purchased**	494	164	137	110	53	-67%	-16%	-20%	-52%	-89%
Other***	1,029	1,063	1,118	1,411	1,734	3%	5%	26%	23%	69%
Multifamily										
Applications*	982	1,090	1,134	1,328	1,399	11%	4%	17%	5%	42%
Originated	796	888	946	1,159	1,175	12%	7%	23%	1%	48%
Denied	75	78	72	55	91	4%	-8%	-24%	65%	21%
Purchased**	1	3	2	0	1	200%	-33%	-100%	NA	0%
Other***	110	121	114	114	132	10%	-6%	0%	16%	20%
Manufactured										
Applications*	19,958	20,440	22,133	24,617	25,506	2%	8%	11%	4%	28%
Originated	5,567	5,963	6,422	7,395	7,256	7%	8%	15%	-2%	30%
Denied	8,118	7,079	7,989	7,905	8,169	-13%	13%	-1%	3%	1%
Purchased**	458	770	429	668	1,317	68%	-44%	56%	97%	188%
Other***	5,815	6,628	7,293	8,649	8,764	14%	10%	19%	1%	51%

*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.

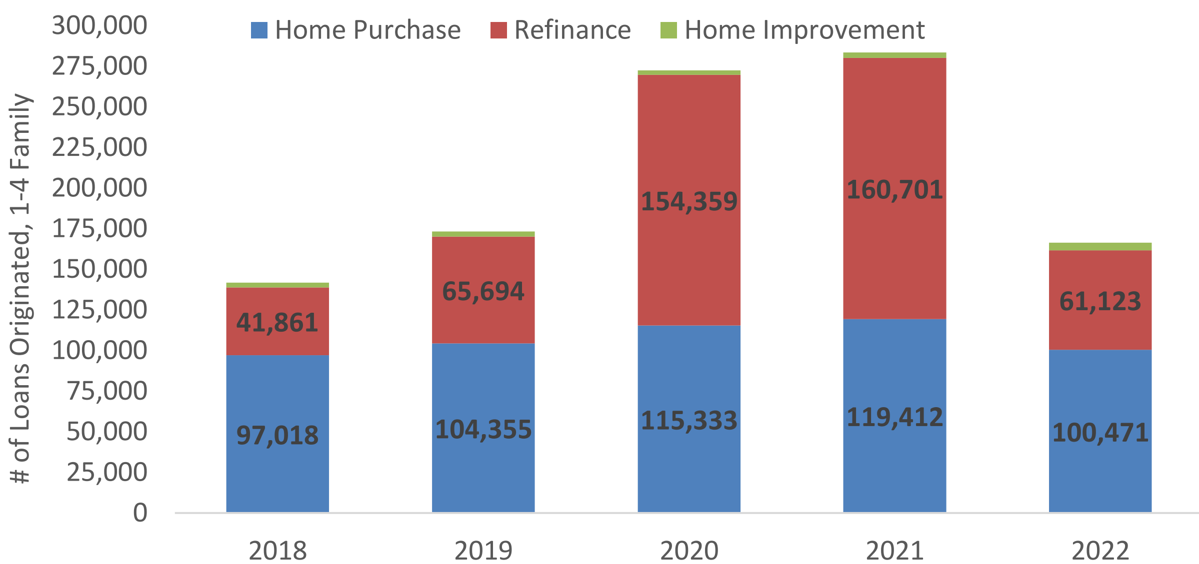
***Other includes: Applications that were approved but not accepted by the applicant, applications withdrawn by the applicant, and files closed for incompleteness, Preapproval Requests that were denied and Preapproval Requests that were approved but not accepted by the applicant.

B. Loan Purpose

Overall loan originations for 1-4 family site-built homes declined by 41 percent from 2021 to 2022. The largest contributor to this decline in originations volume was refinance loan originations, which experienced a 62 percent decline from 2021 to 2022.

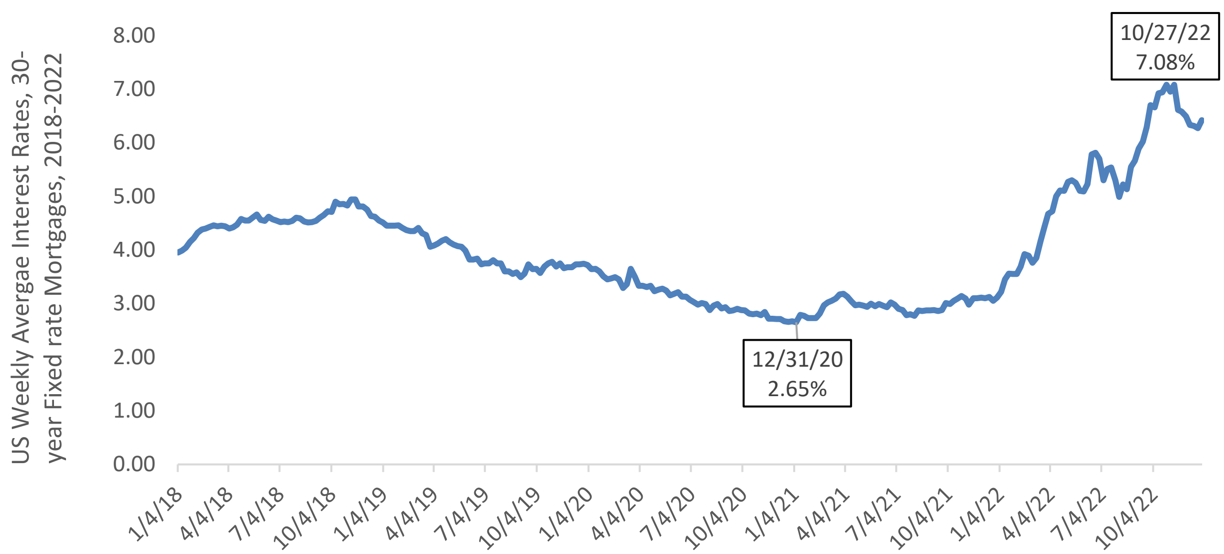
In 2022, nearly 300,000 (92 percent of total) applications were for 1-4 family site-built homes (including purchase, refinance and home improvement loans), 1,399 were for site-built multifamily dwellings and remaining 25,506 loan applications were for manufactured homes (both 1-4 family and multifamily). In 2020 and 2021, each year, 57 percent of total loan originations were for refinance purpose. However, this situation changed in 2022 when a 62 percent year-over-year decline caused refinance share to decline to only 30 percent of total originations.

Figure 1: Mortgage Loans Originated for 1-4 Family, Site-Built Dwellings, 2018-2022



The drastic decline in refinance loan originations in 2022 was likely the result of homeowners' reaction to the increasing interest rates that started toward the end of 2021 as the Federal Reserve Bank pushed the fund rates up to curb the inflation. Average interest rates declined during 2020. Despite slight increases, interest rates were still lower in 2021 than they were in 2019. According to Freddie Mac's Primary Mortgage Market Survey,[vi] the average rate for a 30-year fixed mortgage declined from 3.72 percent in the first week of January 2020 to a historically lowest level of 2.66 percent in December 2020. By the end of 2021, the average interest rates increased to 3.10, despite being higher than the favorable mortgage rates of 2020, it was still low enough to encourage homeowners to refinance their previously received higher rate mortgages. This led to the volume of refinance loans to increase slightly by four percent in 2021. However, interest rates continued their rise in 2022, at times exceeding seven percent, nearly three times the rate of the lowest rate achieved at the end of 2020. These high interest rates made home purchase and refinancing a lot harder and costlier compared to previous two years. The trend in average interest rate for 30-year fixed rate mortgages can be seen in Figure 2.

Figure 2: Weekly Average U.S. Interest Rate for 30-Year Fixed Mortgages, Freddie Mac, Primary Mortgage Market Survey, 2018-2022



In 2022, both cash-out and non-cash-out refinance volume declined, leading to a 63 percent decline in total refinance volume. As the ascent of interest rate continued in 2022, refinances, overall, declined significantly. In 2018 and 2019, non-cash-out refinances comprised the majority of all refinance originations. In 2021 and 2022, cash-out refinances ensured that the total refinance volume either increased or remained stable. In 2021, a 47 percent increase in cash-out refinance originations contributed to a four percent increase in refinance volume overall despite a 12 percent decline in non-cash-out refinance. Similarly, in 2022, the decline in total refinance volume would have been far more drastic if cash-out refinances declined as much as the non-cash-out refinances (35 percent and 80 percent decline, respectively).

Table 2: First-lien Refinance Loans Originated for 1-4 Family, Site-Built Dwellings by Purpose, 2018-2022

	2018	2019	2020	2021	2022	Year-over-Year % Change			
						18-19	19-20	20-21	21-22
Total Refinance	40,826	64,691	153,694	160,227	59,738	58%	138%	4%	-63%
Non-Cash-Out Refinance	17,665	35,737	111,332	98,127	19,534	102%	212%	-12%	-80%
Cash-out Refinance	23,161	28,954	42,362	62,100	40,204	25%	46%	47%	-35%
Non-Cash-Out Refi % of Total Refi	43%	55%	72%	61%	33%				
Cash-out Refi % of Total Refi	57%	45%	28%	39%	67%				

In 2022, the decline in the first-lien home purchase loans originations for 1-4 family, site-built, owner-occupied dwellings was relatively less than the decline in the similar loan originations for second residences, while originations for investment property purchase loans only declined by two percent from 2021.

Table 3: First-lien Home Purchase Loans Originated for 1-4 Family, Site-Built Dwellings by Occupancy, 2018-2022

	2018	2019	2020	2021	2022	Percent Change 18-19	19-20	20-21	21-22
Total Home Purchase Loans	96,075	102,933	114,145	118,311	99,136	7%	11%	4%	-16%
For Owner Occupancy	84,275	89,813	100,679	100,266	83,495	7%	12%	0%	-17%
For Second Residences	3,273	3,844	4,699	5,764	3,623	17%	22%	23%	-37%
For Investment Properties	8,527	9,276	8,767	12,281	12,018	9%	-5%	40%	-2%
Owner-Occupied % of Total	88%	87%	88%	85%	84%				
Second Residences % of Total	3%	4%	4%	5%	4%				
Investment % of Total	9%	9%	8%	10%	12%				

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

In 2022, closed-end, first-lien home purchase loan originations for owner-occupied, site-built, 1-4 family dwellings declined from the previous year in all MSAs. Table 4 provides a look at trends in home purchase loan originations in the Metropolitan Statistical Areas (MSAs)[viii] between 2018 and 2022.

Table 4: First-Lien Home Purchase Loans Originated for Owner-Occupied 1-4 Family Dwellings, 2018-2022, MSA and State

	2018	2019	2020	2021	2022	Percent Change 18-19	19-20	20-21	21-22	18-22
Chattanooga	5,037	5,699	6,258	6,379	5,312	13%	10%	2%	-17%	5%
Clarksville	4,867	5,264	6,209	6,666	5,428	8%	18%	7%	-19%	12%
Cleveland	1,378	1,429	1,669	1,743	1,479	4%	17%	4%	-15%	7%
Jackson	1,359	1,914	2,027	2,053	1,742	41%	6%	1%	-15%	28%
Johnson City	2,087	2,282	2,513	2,648	2,174	9%	10%	5%	-18%	4%
Kingsport-Bristol	2,188	2,489	2,887	2,897	2,357	14%	16%	0%	-19%	8%
Knoxville	12,103	12,569	14,201	14,120	11,723	4%	13%	-1%	-17%	-3%
Memphis	9,841	9,911	10,601	10,297	8,633	1%	7%	-3%	-16%	-12%
Morristown	1,246	1,405	1,571	1,715	1,614	13%	12%	9%	-6%	30%
Nashville	31,560	33,706	38,198	36,093	29,358	7%	13%	-6%	-19%	-7%
Balance of State	12,609	13,145	14,545	15,655	13,675	4%	11%	8%	-13%	8%
TENNESEE	84,275	89,813	100,679	100,266	83,495	7%	12%	0%	-17%	-1%

The upward trend in home purchase loan originations in the last three years ended across MSAs in 2022, although origination volume was still higher than 2018's volume in most MSAs, before Covid19 started. The state and all of its MSAs experienced double-digit declines in 2022, except the Morristown MSA where the originations declined by just six percent. Home purchase loan originations declined from 2018 in the Knoxville, Memphis and Nashville MSAs and increased in others. In 11 counties, home purchase loan originations increased in 2022 from the prior year and stayed the same in three counties, while originations declined in the rest of the counties. Counties with increasing origination volume and those whose volume remained stable were mostly small counties with low mortgage activity. Notably, Loudon County experienced a six percent increase in loan originations in 2022 compared to 2021 and has relatively sizable home purchase activity. First-lien refinance loan origination volumes were lower in 2022 than in 2021 in all MSAs.

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	2022	18-19	19-20	2021	21-22	18-22
Chattanooga	2,198	3,467	8,722	9,297	3,204	58%	152%	7%	-66%	46%
Clarksville	1,027	2,229	5,389	6,060	2,395	117%	142%	12%	-60%	133%
Cleveland	575	875	2,026	2,278	878	52%	132%	12%	-61%	53%
Jackson	465	883	2,071	2,337	1,026	90%	135%	13%	-56%	121%
Johnson City	866	1,217	2,980	3,338	1,265	41%	145%	12%	-62%	46%
Kingsport-Bristol	989	1,290	2,820	3,267	1,277	30%	119%	16%	-61%	29%
Knoxville	4,730	7,499	18,911	20,340	7,346	59%	152%	8%	-64%	55%
Memphis	3,718	6,151	16,296	16,751	5,556	65%	165%	3%	-67%	49%
Morristown	568	997	1,910	2,318	1,024	76%	92%	21%	-56%	80%
Nashville	14,744	26,283	65,185	62,287	18,996	78%	148%	-4%	-70%	29%
Balance of State	6,550	8,836	18,217	21,188	10,201	35%	106%	16%	-52%	56%
Total	36,430	59,727	144,527	149,461	53,168	64%	142%	3%	-64%	46%

D. Conventional versus Government-Insured Loans

In 2022, conventional loans represented 70 percent of all originated loans, on track to matching levels equivalent to before the housing market crash (In 2007, more than 80 percent of all home purchase loans originated in Tennessee were conventional). After the housing market crash, government-insured loans were the only option available for many households who wanted to obtain a home purchase loan. Thus, the decline in conventional loans for home purchases in in the years immediately following the housing market crash was related to the decline in the availability of conventional loan options in the Tennessee housing market.[ix] 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.[x] In February 2023, the Department of Housing and Urban Development (HUD), through the Federal Housing Administration (FHA), announced a 30 basis point reduction to the annual mortgage insurance premiums (annual MIP) charged to homebuyers who obtain an FHA-insured mortgage. The impact of this reduction on FHA insurance premiums will be seen in 2023 mortgage originations.

Recent increases in the share of conventional loans happened at the expense of declining shares of FHA-, VA- and USDA-insured loans. The share of conventional loans within originated refinance loans declined in 2022, while the share of FHA-insured refinance loans increased from 2021.

Table 6: First-Lien Loans Originated for Owner-Occupied 1-4 Family Dwellings Share of each Loan Type, 2018-2022

Home Purchase	2018	2019	2020	2021	2022
Conventional	59.4%	60.6%	62.6%	67.2%	69.8%
FHA	22.2%	21.5%	18.8%	15.5%	14.9%
VA	12.3%	12.7%	12.2%	12.2%	12.1%
FSA/RHS	6.1%	5.3%	6.3%	5.1%	3.2%
Refinance	**2018**	**2019**	**2020**	**2021**	**2022**
Conventional	69.6%	65.9%	75.3%	77.7%	73.5%
FHA	16.7%	15.7%	8.7%	8.8%	14.1%
VA	13.5%	18.2%	15.7%	13.3%	12.3%
FSA/RHS	0.1%	0.2%	0.3%	0.2%	0.1%

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 five years. Mortgages for investment properties were more common for home improvement loans.**

In 2022, Sevier County ranked first in the state for the highest number of single-family site-built home loans originated for *second residences* followed by Davidson County. The nearly 1,000 loans originated for second homes, such as vacation properties, in Sevier County, represented almost a quarter of all first-lien loans originated for site-built single-family dwellings (regardless of loan purpose) in the state. In Shelby County, the second home loan originations was not that as high as Sevier County; however, 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. The FHA and VA insured a small number of refinance loans for investment properties; especially in the second residence loan market, government-insured loans were nonexistent.

F. Demographic[xi] and Income Trends[xii]

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.[xiii] 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 (See Methodology Section for more detail).

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.[xv] 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 2022, fluctuating between 22 and 26 percent. The median income and median loan amount for those without race information were consistently higher than for White and Black applicants, and lower than for Asian applicants.[xvi] For example, in 2022, the median income of the applicants denoted as "Race NA" was $86,000, while the median income of White applicants was $84,000 and for Asian applicants was $116,000. 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, 2018-2022

	I. Home Purchase Loans					*II. Refinance Loans*				
Borrower Race	**2018**	**2019**	**2020**	**2021**	**2022**	**2018**	**2019**	**2020**	**2021**	**2022**
American Indian	0.2%	0.3%	0.3%	0.3%	0.3%	0.3%	0.3%	0.2%	0.3%	0.3%
Asian	2.3%	2.2%	2.1%	2.8%	3.2%	0.8%	1.2%	1.9%	1.8%	1.0%
Black	7.5%	7.3%	7.6%	7.6%	7.3%	8.7%	7.7%	5.8%	7.2%	9.7%
Native Hawaiian	0.1%	0.1%	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%	75.8%	77.4%	75.5%	77.5%	74.8%	72.8%
Other*	1.5%	1.6%	1.7%	1.9%	2.1%	1.0%	1.2%	1.3%	1.3%	1.2%
Race NA	7.5%	8.5%	8.6%	10.2%	11.1%	11.7%	14.0%	13.3%	14.5%	14.9%
Borrower Ethnicity	**2018**	**2019**	**2020**	**2021**	**2022**	**2018**	**2019**	**2020**	**2021**	**2022**
Hispanic or Latino	4.4%	4.9%	5.5%	6.2%	6.9%	2.5%	2.6%	2.9%	3.1%	3.1%
TOTAL Loans	84,275	89,813	100,679	100,266	83,495	36,430	59,727	144,527	149,461	53,168

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.*

Between 2018 and 2022, the share of home purchase loans originated for White borrowers declined from 81 percent to 76 percent, while the share of loans originated for borrowers without race information[xvii] increased from 7.5 percent to 11.1

percent. The share of home purchase loans originated for Black borrowers fluctuated slightly year to year beginning at 7.5 percent in 2018 and ending at 7.3 percent in 2022. The share of Asian borrowers among home purchase loan originations also increased in to 3.2 percent 2022 from 2.8 percent in 2021. The share of home purchase loans originated for Hispanic borrowers has increased steadily reaching 6.9 percent in 2022 compared to 4.4 percent in 2018.

The trends in the distribution of loan originations among race and income categories for refinance loan originations were similar to trends in home purchase loan originations between 2018 and 2022. In 2020, while refinance loan originations more than doubled for all borrowers, refinance loans for Black borrowers increased by only 80 percent, and the share of loans originated for Black borrowers actually declined to 5.8 percent. **After that dip in 2020, the percent of refinance loans originated for Black applicants started increasing, and in 2022, it reached nearly 10%, exceeding the percentage in 2018**. 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 2022 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.

With 31 percent of total borrowers, Hardeman County had the highest percent of home purchase loan borrowers who were Black followed by Shelby County with 28 percent and Haywood County with 25 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 2021.[xviii]

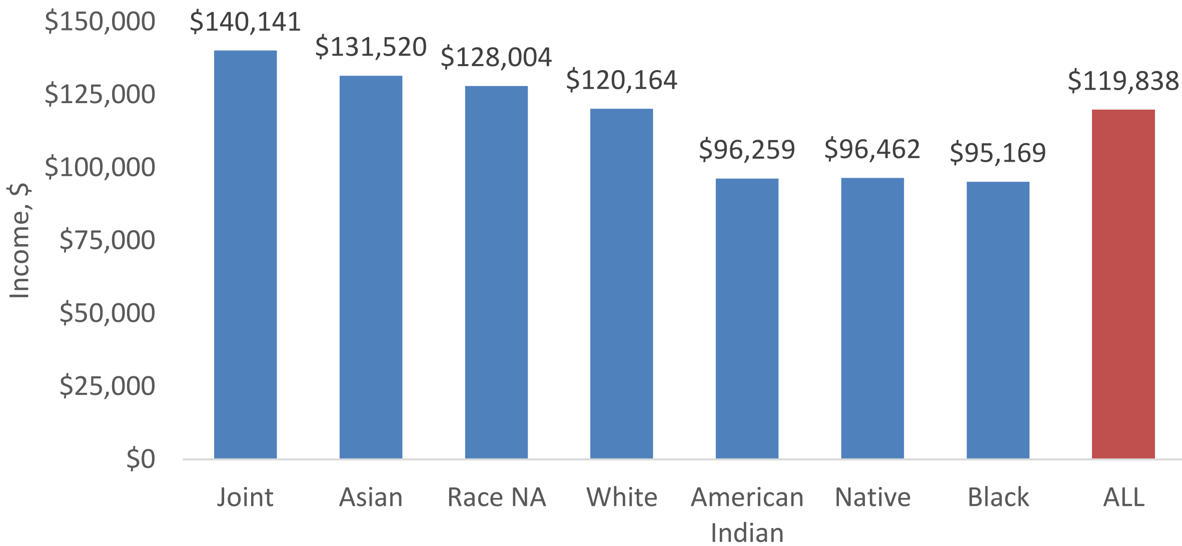
The following table compares the racial distribution of total population and home purchase loan borrowers in ten counties with the highest percent of Black people in total population. In Shelby County, 54 percent of the total population is Black, the highest share in the state followed by Haywood County. In Shelby and Haywood Counties, Black borrowers also represented the highest percent of total borrowers in each county. Lake, Tipton and Davidson counties had relatively low representations of Black borrowers in overall home purchase loan origination compared to each county's racial composition. For example, nearly 26 percent of the total population in Lake County is Black, while only three percent of home purchase loans originated in the county are for Black applicants.

Table 9: Total Population in 2021 and Home Purchase Loans Originated in 2022 by Race

	Total Population				Loans Originated				
	White	Black	Other	Hispanic	White	Black	Other	NA	Hispanic
Shelby	35%	54%	5%	7%	54%	28%	8%	10%	8%
Haywood	43%	50%	2%	4%	56%	25%	0%	19%	4%
Hardeman	54%	41%	3%	2%	57%	31%	3%	9%	3%
Madison	55%	37%	4%	4%	68%	17%	4%	11%	6%
Lauderdale	59%	34%	4%	3%	74%	19%	1%	6%	2%
Fayette	67%	27%	3%	3%	64%	21%	5%	10%	5%
Davidson	56%	26%	7%	10%	70%	9%	8%	13%	8%
Lake	67%	26%	5%	3%	76%	3%	3%	18%	3%
Montgomery	62%	19%	9%	11%	63%	15%	7%	15%	12%
Tipton	75%	18%	4%	3%	82%	7%	3%	7%	5%
Tennessee	73%	16%	5%	6%	76%	7%	6%	11%	7%

In 2022, the median income of home purchase loan borrowers[xix] was $77,000 and the average income was $120,000. At $95,000, 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 race.[xx]

Figure 3: Average Income by Race, Home Purchase Loans Originated, 2022



Average income also varied by conventional or government-insured loans. In 2022, the median income of conventional loan borrowers was $100,000, increased from $87,000 in the previous year (not adjusted for inflation). In contrast, for FSA/RHS insured loan applicants, the median income was $59,000. In between the two, the median income of FHA-insured loan applicants was $73,000. Williamson County home purchase loan borrowers had the highest median income among counties with $178,000, followed by Davidson County with $110,000. The lowest median income was $53,500 in Lake County followed by Hancock County with $56,000.

Furthermore, we conducted an analysis of applicants' income compared to the estimated area median family income (AMFI)[xxi] 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,[xxii] and loan terms that may vary based on income. The share of home purchase loans for low-to-moderate-income (LMI) borrowers followed a pattern similar to Black borrowers overall by fluctuating slightly. Percent of LMI borrowers among all home purchase loan borrowers fluctuated between 28 percent in 2018 and 26 percent in 2022. Among refinance loan originations, loans for LMI borrowers increased to 37 percent of all refinance loan originations in 2022 from 31 percent in 2018. Similarly, percent of refinance loans originated for middle income applicants also increased in 2022. These increases in refinance borrowers of LMI and middle income backgrounds followed a large decline in percent of borrowers with missing income information.

Table 10: Borrower Income and Purpose of the Home Purchase Loans Originated, 2018-2022

	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
	Home Purchase Loans					Refinance Loans				
LMI	28%	26%	28%	26%	26%	31%	22%	17%	22%	37%
Middle Income	27%	28%	28%	27%	28%	25%	21%	20%	22%	27%
High Income	44%	45%	43%	45%	45%	38%	40%	44%	41%	33%
Missing	1%	1%	1%	1%	1%	6%	17%	20%	15%	4%
Total Loans	84,275	89,813	100,679	100,266	83,495	36,430	59,727	144,527	149,461	53,168

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.[xxiii] 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, 2018-2022

	Home Purchase					Refinance				
Tract	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
LMI-tract	12,566	13,522	15,001	15,630	14,370	5,794	7,891	15,812	18,302	8,290
Middle-Income-tract	39,322	41,566	47,371	47,788	40,561	18,048	28,282	62,507	68,251	27,613
High-Income-tract	32,101	34,455	37,957	36,545	27,948	12,423	23,377	65,769	62,510	16,876
Missing	286	270	350	303	616	165	177	439	398	389
ALL LOANS	84,275	89,813	100,679	100,266	83,495	36,430	59,727	144,527	149,461	53,168
% in LMI Tract	15%	15%	15%	16%	17%	16%	13%	11%	12%	16%

Lenders originated the majority of both home purchase and refinance loans in middle- and high-income neighborhoods. LMI neighborhoods represented 15 percent of all originated home purchase loans between 2018 and 2020, which increased 17 percent in 2022. LMI neighborhoods' share in all refinance loan originations was lower in 2020 and 2021 than it was in 2018 and 2019, which increased back to 2018 percentage in 2022. In 2022, of all the home purchase loans originated for Black borrowers, 28 percent were located in LMI neighborhoods, compared to 16 percent of home purchase loans originated for White borrowers. Black borrowers were over represented in LMI tracts.

Table 12: Originated Loans by Neighborhood Characteristics, Race and Loan Purpose, 2022

	Home Purchase						Refinance					
Tract	White	Black	NA	Other	Hispanic	Total	White	Black	NA	Other	Hispanic	Total
LMI-tract	10,393	1,705	1,595	677	1,237	14,370	5,318	1,526	1,242	204	272	8,290
Middle-Income-tract	31,581	2,657	4,364	1,959	2,870	40,561	20,729	2,238	4,038	608	879	27,613
High-Income-tract	20,823	1,741	3,243	2,141	1,622	27,948	12,299	1,353	2,631	593	512	16,876
Missing	509	21	51	35	44	616	344	22	16	7	6	389
Total by Race	63,306	6,124	9,253	4,812	5,773	83,495	38,690	5,139	7,927	1,412	1,669	53,168
% in LMI Tract	16%	28%	17%	14%	21%	17%	14%	30%	16%	14%	16%	16%

Thirty-four 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 2022. Approximately 31 percent of Hispanic/Latino borrowers were also considered LMI borrowers based on their reported income.

Table 13: Originated Home Purchase Loans by Borrower Race, Ethnicity and Income, 2022

	Black	NA	Other	White	ALL	Hispanic
Low-to-mod-Income	2,081	2,152	873	16,461	21,567	1,812
Middle-Income	2,017	2,510	1,411	17,576	23,514	1,807
High-Income	2,007	4,486	2,490	28,423	37,406	2,084
Missing	19	105	38	846	1,008	70
Total	6,124	9,253	4,812	63,306	83,495	5,773
LMI Borrowers % of Total	34%	23%	18%	26%	26%	31%

Borrowers of minority race groups, with the exception of Asian borrowers, heavily rely on nonconventional loan products. The following table displays the conventional and nonconventional,[xxiv] 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).. In 2022, 12 percent of all loans made to Asian borrowers were nonconventional loan products, while 53 percent of Black borrowers used nonconventional loan products to finance their home purchases. 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, 2018-2022

Race/Ethnicity	Conventional and Non-Conventional 2018	2019	2020	2021	2022	% Non-Conventional 2018	2019	2020	2021	2022
Asian	1,935	1,979	2,156	2,769	2,651	17%	17%	18%	13%	12%
Black	6,350	6,540	7,637	7,619	6,124	68%	64%	61%	56%	53%
White	68,168	71,945	80,112	77,311	63,306	39%	38%	36%	31%	28%
Joint	1,145	1,322	1,609	1,762	1,686	46%	44%	43%	35%	35%
Race NA	6,309	7,624	8,691	10,272	9,253	37%	36%	36%	33%	31%
Other Minority	368	403	474	533	475	54%	53%	47%	47%	45%
ALL BORROWERS	*84,275*	*89,813*	*100,679*	*100,266*	*83,495*	*41%*	*39%*	*37%*	*33%*	*30%*
Hispanic-Latino	3,721	4,378	5,570	6,261	5,773	50%	47%	45%	38%	36%

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 2022 depending on loan type.[xxv] Every year between 2018 and 2022, on average, nonconventional loans were costlier 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 borrowers who used FSA/RHS insured loans had the average total loan cost similar to the conventional loan borrowers**.** 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.[xxvi]

Table 15: Average Loan Cost Paid by Borrower by Loan Type, 2018-2022

Year	Average Loan Cost by Loan Type: Conventional	FHA	VA	FSA/RHS	ALL LOANS	Average Loan Cost % of Conventional: FHA	VA	FSA/RHS
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
2022	$5,851	$10,340	$9,045	$6,349	$6,943	1.77	1.55	1.09

G. Denial Rates and Denial Reasons

In 2022, the denial rate for home purchase loans increased across all race categories.[xxvii] The overall denial rate for all home purchase loan applicants was 8.9 percent in 2022, higher than 8 percent in 2021. For Black applicants, the denial rate increased from 13.5 percent in 2021 to 16 percent in 2022, more in line with the denial rates in the last several years before 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 increased from 6.4 percent in 2021 to 7.1 percent in 2022, which was 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, and the denial rate for Hispanic applicants in 2022 was also higher than the previous year.

Table 16: Denial Rates, Home Purchase Loans, Conventional and Nonconventional, Race and Ethnicity, 2018-2022

	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%
2022	8.9%	11.9%	16.0%	7.1%	11.2%	14.1%	7.7%	10.7%	8.4%	11.0%

In 2022, the odds that Black applicants were denied a home purchase mortgage was 2.18 times that of White applicants. Even after controlling for debt-to-income ratio (DTI), the odds that Black Tennesseans were denied a mortgage slightly declined to 1.86 times that of White Tennesseans. These odds were higher than in 2021, in which the denial odds for Black applicants was 1.94 times higher than for White applicants and declined to only 1.62 percent after controlling for DTI and income. In addition to worsening denial odds, the black applicants' likelihood of denials was still disproportionally higher than for White applicants worsened in 2022 compared to 2021. 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 17: Denial Rates, Home Purchase Loans, Nonconventional, Race and Ethnicity, 2018-2022

	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%
2022	12.3%	15.9%	17.0%	9.2%	14.6%	13.6%	11.0%	12.8%	11.9%	14.5%

Until the 2018 HMDA data release, financial institutions *could* report up to three denial reasons for denied applicants,[xxviii] 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,[xxix] financial institutions provided at least one denial reason for all denied applicants.

Every year between 2018 and 2022, 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 18 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. Credit history was reported as a denial reason more often for Black applicants than for all other applicants.

Table 18: Denial Reason, Home Purchase Loans, 2022

ALL DENIAL REASONS COMBINED	Asian	Black	Joint	NA	Other Minority	White	Total
Debt-to-Income Ratio	48.4%	41.0%	41.4%	34.8%	42.5%	34.3%	36.1%
Employment History	7.6%	5.4%	8.3%	5.7%	5.0%	7.5%	6.9%
Credit History	6.2%	23.0%	24.1%	14.6%	25.0%	17.5%	17.6%
Collateral	5.9%	10.5%	9.8%	15.7%	8.8%	13.9%	13.2%
Insufficient Cash (downpayment, closing costs)	9.2%	10.9%	9.8%	11.7%	16.3%	10.3%	10.6%
Unverifiable Information	12.7%	7.2%	9.0%	8.8%	15.0%	8.9%	8.8%
Credit Application Incomplete	14.9%	10.4%	14.3%	15.5%	8.8%	13.2%	13.2%
Mortgage Insurance Denied	0.3%	0.1%	0.8%	0.1%	0.0%	0.1%	0.1%
Other	16.2%	12.7%	9.0%	11.8%	10.0%	13.0%	12.9%

G. Higher-Priced Loans

Before 2018, Regulation C required financial institutions to report rate spread data on higher-priced mortgage loans only.[xxx] 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.[xxxi] 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 2022 data to data from earlier years, we emulate the methodology of the Consumer Financial Protection Bureau.[xxxii] We use a post-2009 classification, which defines higher-priced loans as first-lien loans with an APR[xxxiii] 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 19: Percent of Borrowers with Higher-Priced Loans by Race, Ethnicity and Loan Type, 2018-2022

	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
	ALL					Nonconventional Only				
All Borrowers	**8.3%**	**10.1%**	**6.9%**	**5.8%**	**6.1%**	**14.4%**	**18.5%**	**12.5%**	**11.1%**	**11.4%**
Race										
Asian	4.1%	3.7%	2.4%	2.5%	3.6%	16.4%	14.4%	8.4%	8.0%	10.2%
Black	15.7%	19.3%	14.8%	13.5%	10.3%	18.6%	25.4%	18.9%	18.7%	14.5%
Joint	6.0%	9.3%	7.0%	5.3%	6.3%	9.1%	16.5%	11.7%	9.5%	11.7%
Race NA	7.7%	8.3%	5.1%	4.3%	5.3%	15.5%	17.4%	10.2%	8.5%	9.4%
Other-Minority	10.1%	11.2%	6.5%	4.1%	6.1%	13.1%	15.9%	10.2%	3.2%	7.5%
White	7.8%	9.6%	6.5%	5.3%	5.9%	13.7%	17.6%	11.8%	10.3%	11.2%
Ethnicity										
Hispanic	12.6%	15.4%	9.7%	9.0%	11.0%	15.7%	18.1%	11.6%	11.4%	12.1%
Not Hispanic	8.1%	9.9%	6.9%	5.7%	5.8%	14.2%	18.6%	12.7%	11.4%	11.6%

Although Black borrowers still received the highest percentage of higher-priced loans in all five years, the proportion of them receiving higher-priced loans declined against the increasing trend for all other races in 2022. The proportion of all higher-priced home purchase loans (conventional and nonconventional with interest rates above the threshold) increased from the previous year for all race groups except for Black borrowers. Six percent of *all* borrowers received higher-priced loans in 2022 compared to 5.8 percent in 2021. In 2019, there was an increased prevalence of higher-priced home purchase loans for all racial groups, except for Asian borrowers.

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 2022, nearly four percent of all borrowers with conventional loans had higher-priced loans, while this ratio was six percent for the borrowers with nonconventional loans.

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) [xxxiv] 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 Covid19 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-family 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. [xxxv] 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 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. [xxxvi] 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 between 2018 and 2022; 22 to 26 percent of applicants were missing race each year. Although there was an uptick in percent of applicants without race in 2021 and 2022, it might be too early to call this as an upward trend. The average and median incomes for those without race information are consistently higher than for White applicants and Black applicants, and lower than Asian applicants, except 2022 when the income of the applicant with missing race was less than White 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.

In some instances, financial institutions reporting HMDA data may mark the "applicant's income" field as "not applicable (NA)." There are several reasons for why this may be the case. The institution may not consider the applicant's income when making underwriting decisions; the loan or application might be for a multifamily dwelling; the transaction may be a loan purchase and the institution chose not to collect the information; the transaction may be a loan to an employee of the institution and the institution sought to protect the employee's privacy, even though institution relied on his or her income to make a determination of approval; or the borrower or applicant is a corporation, partnership, or other entity that is not a natural person.[xxxvii] 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. The incidence of observations without income information declined to one percent among first-lien, site-built, owner occupied, 1-4 family home purchase loans originated.

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

2022			Income		Loan Amount		Lon-to-value Ratio	
RACE	Count	%	Average	Median	Average	Median	Average	Median
2 or more minority	376	0%	$101,212	$72,500	$247,527	$225,000	90.71	80.00
American Indian Alaska Native	1075	0%	$94,463	$70,000	$254,098	$225,000	74.77	80.00
Asian	8,078	3%	$160,624	$116,000	$374,870	$325,000	78.31	80.00
Black	24,571	8%	$91,862	$69,000	$241,311	$215,000	77.95	80.00
Joint	4,151	1%	$143,259	$109,000	$344,429	$305,000	79.68	80.00
Race NA	***77,165***	***26%***	***$126,355***	***$86,000***	***$313,600***	***$265,000***	***76.36***	***77.85***
Native Hawaiian or Pacific Islander	309	0%	$111,881	$78,000	$292,282	$235,000	78.32	80.00
Text-Only	15	0%	$103,643	$98,000	$225,667	$215,000	69.55	65.64
White	184,783	61%	$138,512	$84,000	$297,565	$245,000	74.41	80.00
Total	300,523	100%	$132,767	$84,000	$299,581	$255,000	75.26	80.00

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[i] For more information about what HMDA data is and what are the new and revised data elements in 2019 HMDA data, please reference the Methodology Section.

[ii] 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.

[iii] 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.

[iv] For more information about the national trends, please see Summary of 2022 Data on Mortgage Lending from Consumer Financial Protection Bureau (CFPB)

[v] A multifamily property consists of five or more units.

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

[vii] 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.

[viii] 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.

[ix] 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.

[x] 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.

[xi] 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

[xii] 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.

[xiii] For purchased loans, 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. For more information about how these derived variables are determined, please see https://github.com/cfpb/hmda-platform/wiki/Derived-Fields-Categorization-2018-Onward

[xv] We compared the characteristics (income, loan amounts, and loan-to-value ratios) 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.

[xvi] The National Community Reinvestment Coalition (NCRC) did an exploratory analysis to determine if there are any identifiable trends. They conclude "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/

[xvii] 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.

[xviii] American Community Survey (ACS), 5-year estimates, 2017-2021.

[xix] First-lien, owner-occupied, home purchase loans for one- to four-family site-built homes.

[xx] 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.

[xxi] 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.

[xxii] 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.

[xxiii] 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%).

[xxiv] Nonconventional loans are the ones insured by FHA, VA or FSA/RHS.

[xxv] 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.

[xxvi] 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.

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

[xxviii] 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.

[xxix] 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.

[xxx] 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.

[xxxi] 12 CFR Part 1026 - Truth in Lending (Regulation Z)

[xxxii] 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/

[xxxiii] 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.

[xxxiv] Open-end lines of credit secured by a dwelling (excluding reverse mortgages) are called home equity lines of credit (HELOCs).

[xxxv] See 2018 Guide to HMDA Reporting (page 58) for more detail.

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

[xxxvii] 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.