HOUSING FINANCE POLICY CENTER

HOUSING FINANCE AT A GLANCE

A MONTHLY CHARTBOOK

July 2023

URBAN INSTITUTE · ELEVATE · THE · DEBATE

ABOUT THE CHARTBOOK

The Housing Finance Policy Center's (HFPC) mission is to produce analyses and ideas that promote sound public policy, efficient markets, and access to economic opportunity in the area of housing finance. *At A Glance*, a monthly chartbook and data source for policymakers, academics, journalists, and others interested in the government's role in mortgage markets, is at the heart of this mission.

We welcome feedback from our readers on how we can make *At A Glance* a more useful publication. Please email any comments or questions to ataglance@urban.org.

To receive regular updates from the Housing Finance Policy Center, please visit here to sign up for our bi-weekly newsletter.

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INTRODUCTION

HMDA 2022: Key Findings

Amid supply chain disruptions and demand-side shocks, consumer prices persistently grew at a pace exceeding the Fed's threshold of price stability, 2.0 percent. In response to faster inflation, and low unemployment, the Fed began to tighten monetary policy by raising the federal funds rate and allowing its agency MBS holdings to run-off, contributing to higher mortgage rates.

Higher rates reduced the pace of mortgage lending, particularly among refinances (page 20). Recently, mortgage lending data collected under the Home Mortgage Disclosure Act (HMDA) were released for 2022. This new data gives mortgage industry stakeholders additional information on how activity evolved as rates were rising. And it can be compared to the 2019-2021 period when rates were significantly lower, as well as to 2018, the last monetary policy tightening cycle.

The July version of the At A Glance Chartbook includes four pages describing several key trends.

Denial Rates: Across all owner-occupied properties, denial rates rose from 15.6 percent in 2021 to 22.2 percent in 2022 (page 39). In 2018, the denial rate was 24.0 percent. The 2021-2022 change in denial rates was greatest among refinance applications. Over this period, the denial rate among refinance applications increased from 14.7 percent in 2021 to 24.7 percent in 2022. In contrast, the denial rate among purchase loans increased from 11.0 percent to 12.9 percent. But, while the denial rate among refinance applications rose more, its 2022 level remained below its 2018 rate. However, the purchase denial rate in 2022, 12.9 percent, exceeded its 2018 rate of 12.1 percent.

By property type, denial rates are persistently higher among 2-4 unit properties and manufactured homes as compared to one-unit properties (page 39). The denial rate rose across each property type between 2021 and 2022. Most notably, more than half of applications, 52.2 percent, to purchase a manufactured home were denied in 2022.

By race and ethnicity, denial rates overall were persistently higher among applicants of color relative to white applicants (page 40). In addition, applicants of color experienced a greater increase in denial rates between 2021 and 2022 compared to white applicants. Significantly, more than one-third, 35.5 percent of Black applicants for a refinance application were denied.

Originations: Purchase activity dominated the market in 2022, accounting for 60 percent of all mortgage originations. The share of loans originated as adjustable rate mortgages (ARM share) rose amid higher rates (page 10). The ARM share of the purchase market increased from 4 to 10 percent. The ARM share among rate-term refinance loans rose from 3 percent in 2021 to 9 percent in 2022 and from 2 percent to 5 percent among cash-out refinance loans (page 38).

The share of high-income home purchasers using a mortgage continues to expand, rising from 39.5 percent in 2021 to 50.3 percent in 2022 (page 41). In contrast, the share of low-to-moderate income homebuyers has been declining and in 2022, its share lagged its average proportion of homeowners. The share of younger mortgage home purchases, those under 35, rose within the conventional channel and decreased in the government channel in 2022. This youngest cohort of mortgage home purchasers is a larger share of government loans than conventional ones. And, combined with mortgage home buyers aged between 35 and 44, the flow of purchase loans among this younger cohort exceeds their share of all homeowners.

The data indicate that the mortgage industry experienced a significant contraction in 2022. To-date in 2023, monetary policy remains "hawkish" continuing to drag on the industry. Industry forecasts expect full-year 2023 activity to be lower than even 2022. In 2024, the At A Glance Chartbook will provide additional insights on originations and denials from the 2023 HMDA.

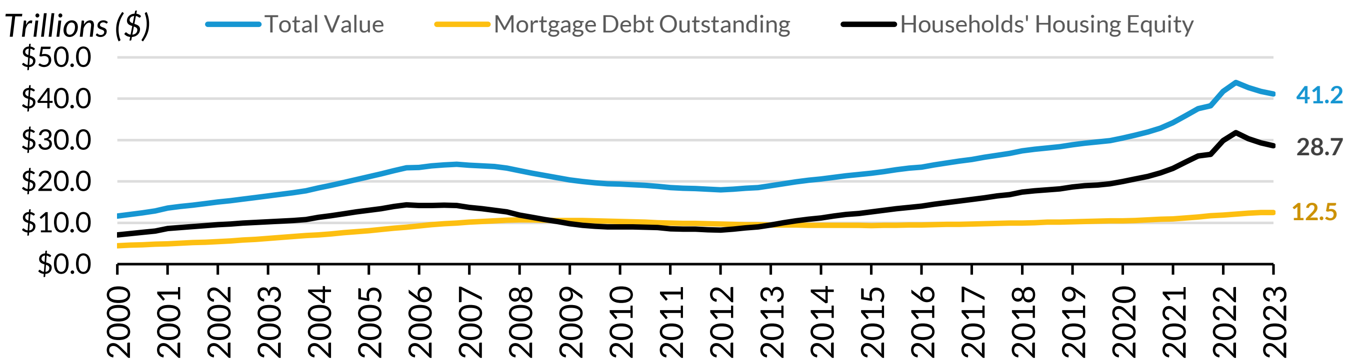
Inside this Issue:

- Households' housing equity contracted by 2.2 percent over the first quarter of 2023 (Page 6).
- The share of single-family loans that are 90 days or more delinquent or in foreclosure decreased by 8 basis points, from 1.89 percent in Q4 2022 to 1.81 percent in Q1 2023 (Page 28).
- Fannie and Freddie multifamily delinquencies have increased noticeably but remain low (Page 33).
- Year over Year House Price Appreciation has started to recover (Page 24).

MARKET SIZE OVERVIEW

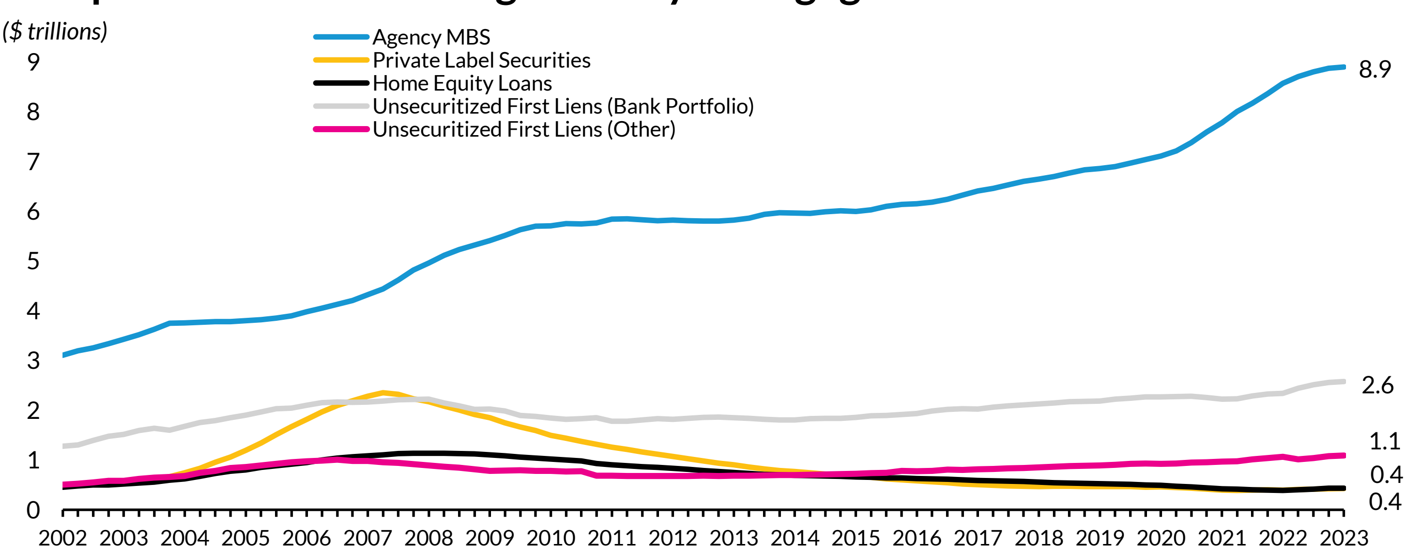
In the first quarter of 2023, the total value of the housing market owned by households declined by 1.5 percent to $41.2 trillion, driven by a 2.2 percent decrease in households' housing equity to $28.7 trillion. Outstanding mortgage debt owed by households rose by 0.4 percent over the quarter to $12.5 trillion. Despite the quarterly decline, the total housing market value owned by households remains 70.6 percent above its fourth quarter of 2006 peak. The strong growth in market value of homes owned by households largely reflects households' housing equity, which doubled over this time period, rising by 101.9 percent. Outstanding mortgage debt owed by households expanded by 25.9 percent during the same time. By the end of 2022, agency MBS accounted for 66.2 percent ($8.9 trillion) of the total mortgage debt outstanding while private-label securities and home equity loans make up 3.2 percent each ($0.43 trillion and $0.44 trillion, respectively). Unsecuritized first liens, both Bank Portfolio and Other, comprise the remaining 27.3 percent ($3.7 trillion) with banks making up 19.2 percent ($2.6 trillion), credit unions 4.1 percent ($0.56 trillion), and other non-depositories accounting for 4.0 percent ($0.54 trillion) of the total (not shown).

Value of the US Single Family Housing Market



Sources: Financial Accounts of the United States, Table B.101 and Urban Institute. Last updated March 2023.
Note: Single family includes 1-4 family mortgages. The home equity number is grossed up from Fed totals to include the value of households.

Composition of the US Single Family Mortgage Market

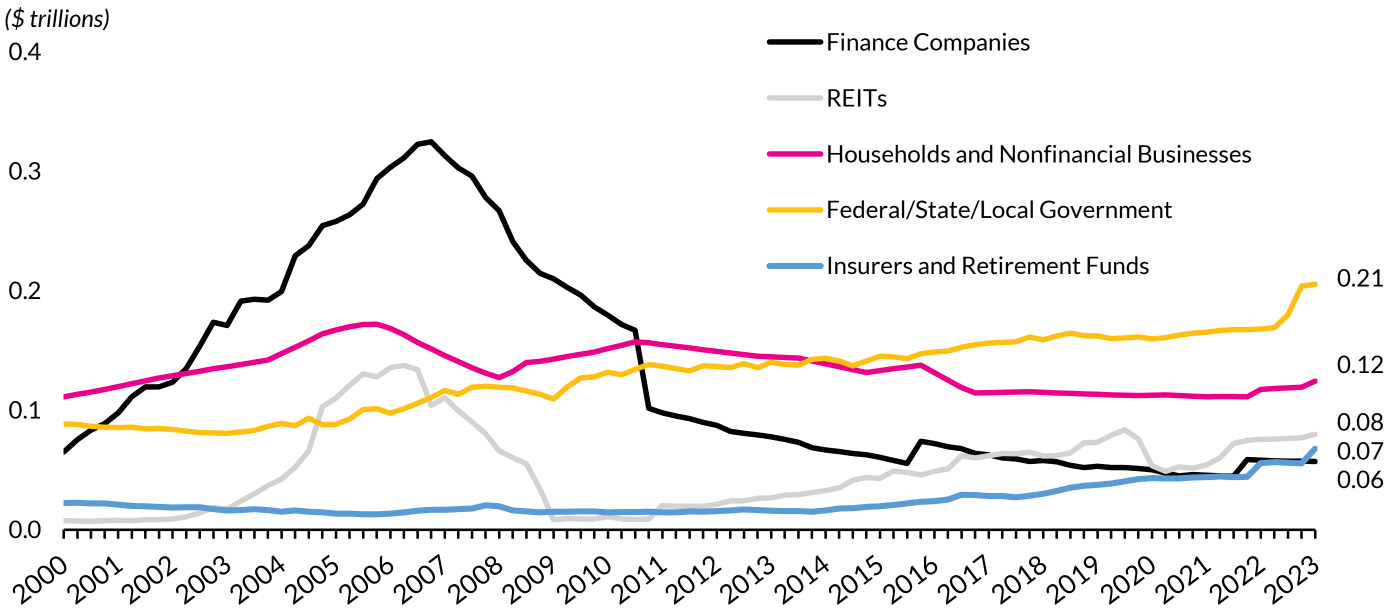


Sources: Financial Accounts of the United States and Urban Institute. Last updated March 2023.
Notes: Unsecuritized First Liens (Other) includes mortgages not held on bank balance sheets.

MARKET SIZE OVERVIEW

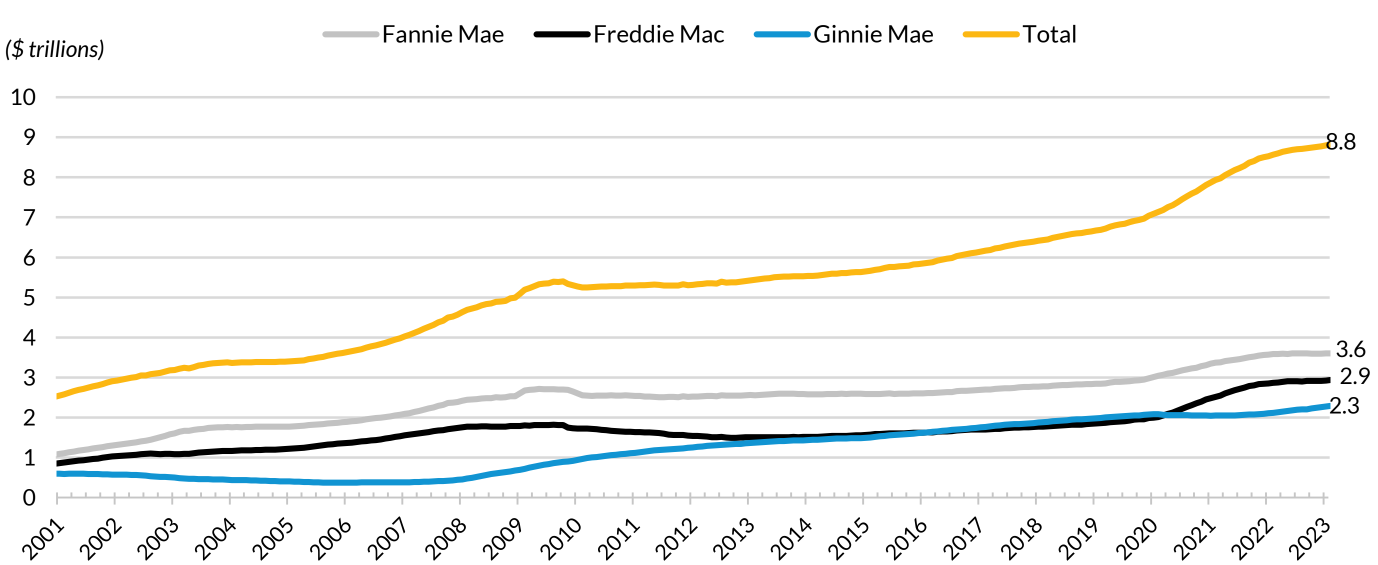
As of Q1 2023, unsecuritized first liens held outside banks and credit unions totaled $ 0.54 trillion, an increase of about 12.6 percent relative to Q1 2022. Amid higher interest rates, holdings by federal/state/local governments, the largest holders of these unsecuritized first liens, grew by 22.4 percent over the year. By the end of Q2 2023, outstanding securities in the agency market totaled $8.8 trillion according to loan-level data, 40.9 percent ($3.6 trillion) of which was Fannie Mae, 33.3 percent ($2.9 trillion) Freddie Mac, and 25.8 percent ($2.3 trillion) Ginnie Mae. After closing the gap in securitized volume with Freddie Mac in the aftermath of the Great Recession, Ginnie securitized volumes have lagged over the past few years.

Unsecuritized 1st Liens Held by Non-Depositories



Sources: Financial Accounts of the United States and Urban Institute. Last updated March 2023.

Agency Mortgage-Backed Securities

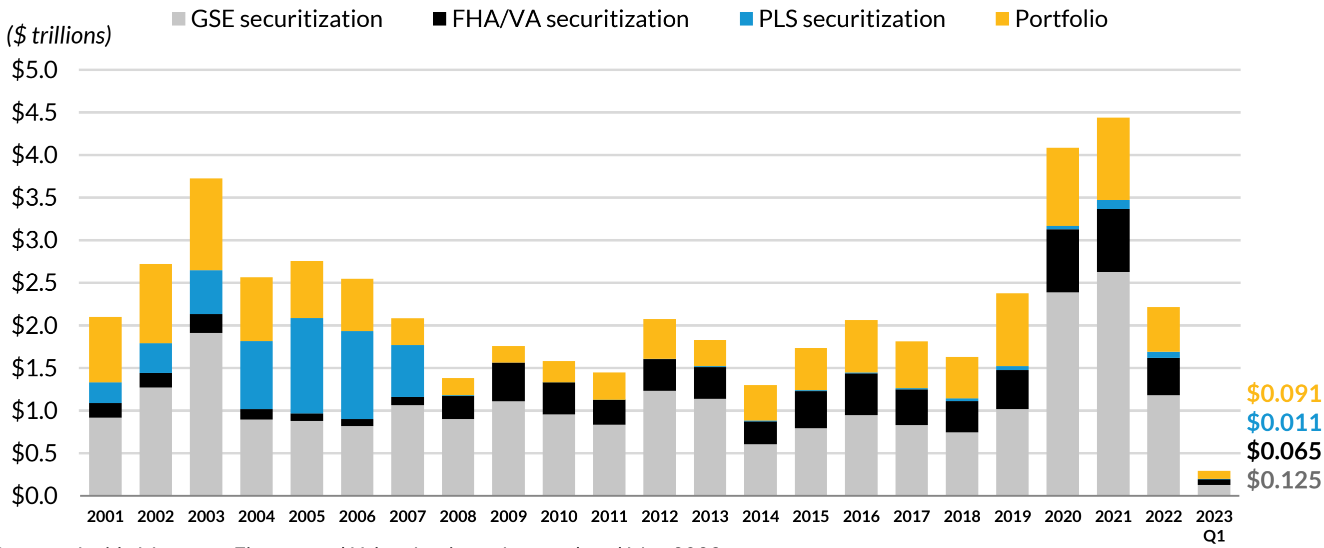


Sources: eMBS and Urban Institute.

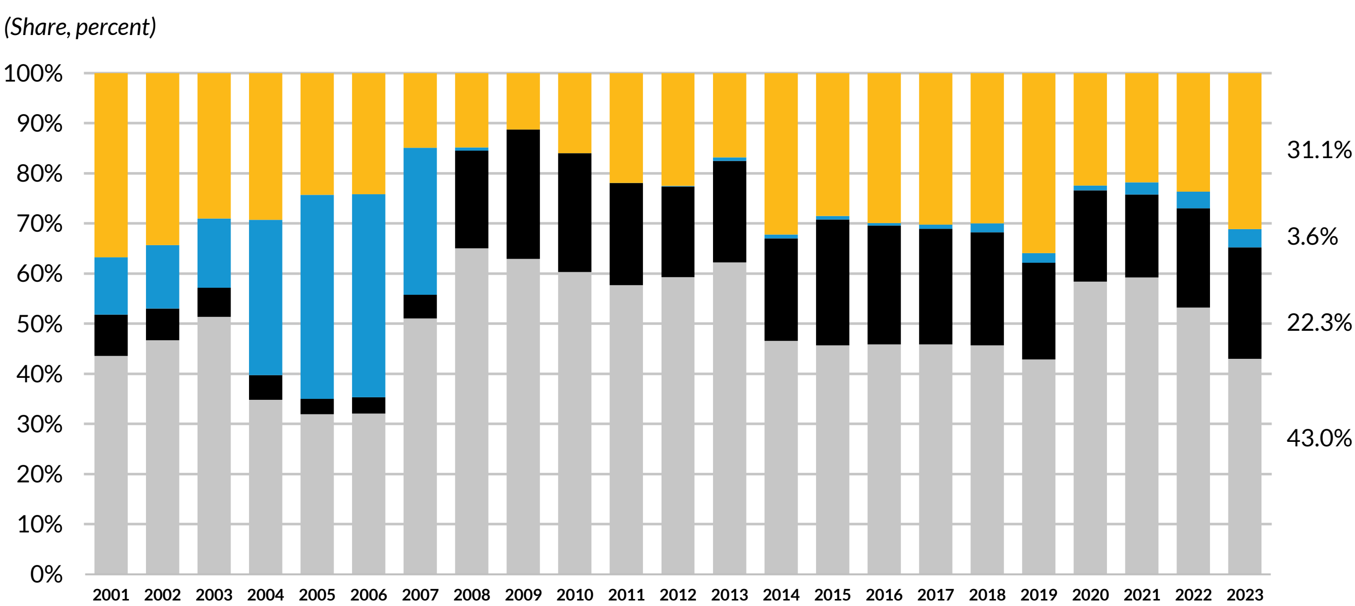
ORIGINATION VOLUME AND COMPOSITION

First Lien Origination Volume

Amid rising interest rates, mortgage origination volume totaled $291 billion in the first quarter of 2023, versus $725 billion trillion for Q1 2022. The decline in originations largely reflects fewer refinance loans. The GSE share was lower in Q1 2023 at 43.0 percent, compared to 63.0 percent in Q1 2022. The PLS share was 3.6 percent in Q1 2023, down from 4.8 percent in Q1 2022.The decline in the share of GSE and PLS originations was offset by portfolio loan share which reached 31.1 percent in Q1 2023, an increase compared to the 14.8 percent share in Q1 2022. The FHA/VA share in Q1 2023 stood at 22.3 percent, up from 17.5 percent in Q1 2022. However, while the shares of portfolio and FHA/VA originations rose year-over-year, origination volume in each of these segments fell over the same period.



Sources: Inside Mortgage Finance and Urban Institute. Last updated May 2023.

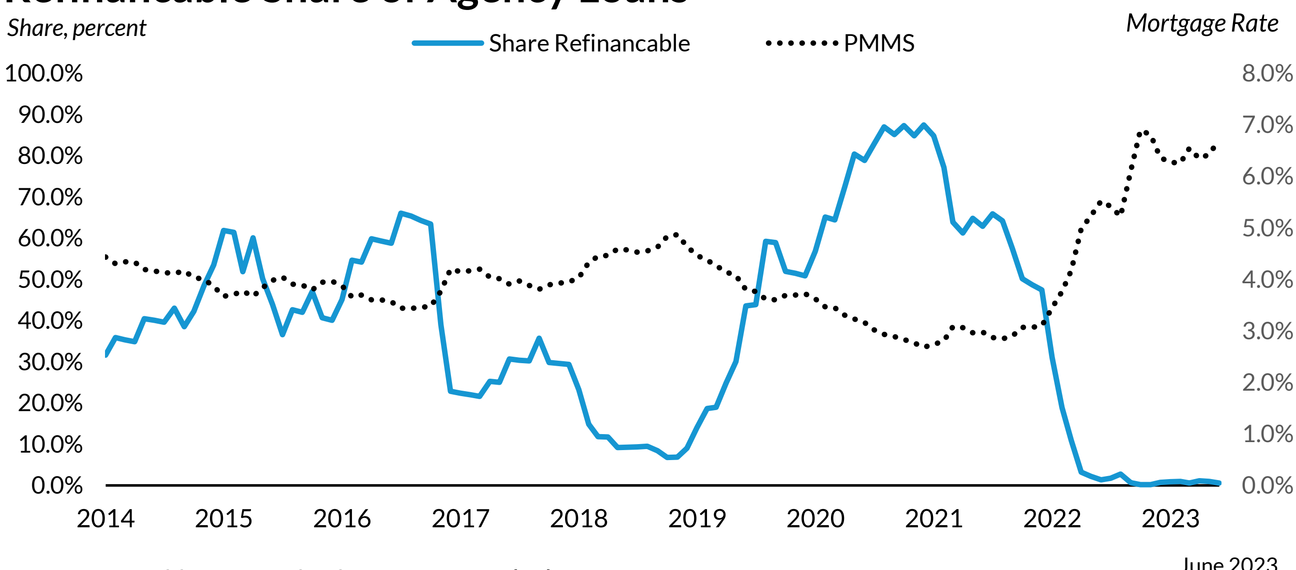


Sources: Inside Mortgage Finance and Urban Institute. Last updated May 2023.

REFINANCABLE MORTGAGES

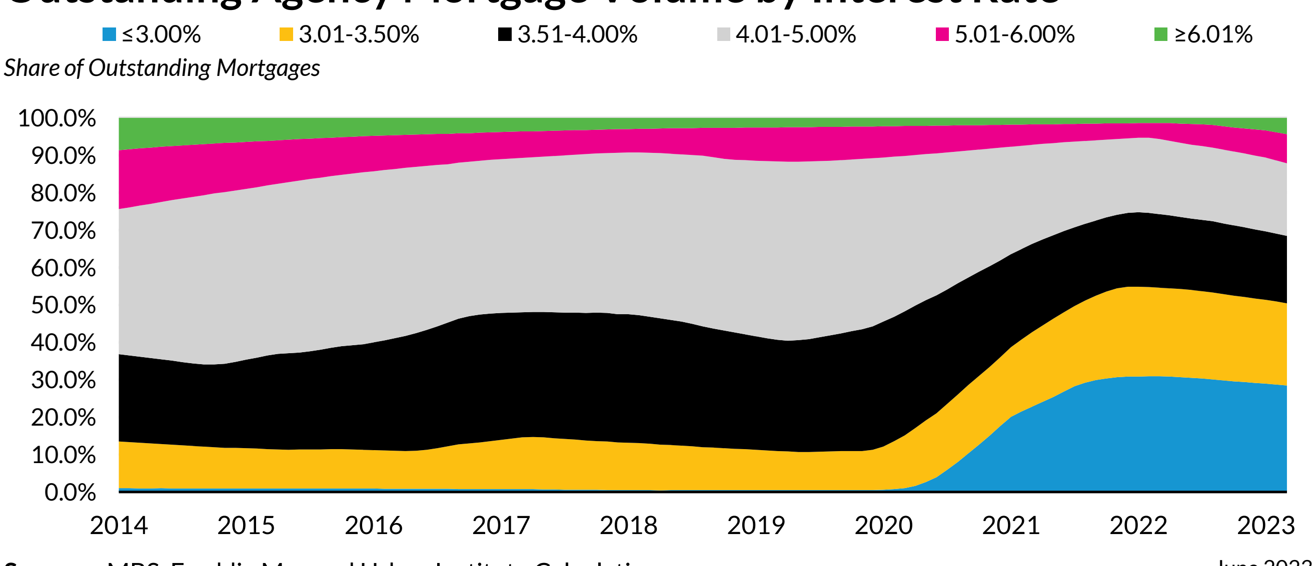
After peaking at 4.87 percent in November 2018, mortgage rates began to decline, falling to 2.68 percent in December 2020. Amid falling mortgage rates, the share of agency loans considered refinancable rose from 6.8 percent in October 2018 to 87.4 percent in December 2020. Lower mortgage rates contributed to a burst in refinancings over 2020, 2021 and the first four months of 2022. The share of agency mortgages with a rate less than 3.5 percent expanded significantly, from 11.0 percent in December 2019 to 54.9 percent in April 2022. As mortgage rates rose over 2022, remaining elevated through 2023 to-date, the share of agency mortgages considered refinancable has plummeted to 0.6 percent in June 2023. Higher mortgages helped reduce both refinancability, with many current borrowers having already refinanced into lower rates, and homebuyer affordability, as inventory of affordable remains low. Amid higher rates, the share of outstanding mortgage volume with a rate of 3.5 percent or less has declined by only 4.5 percentage points from a high of 54.9 percent in April 2022 to 50.5 percent in June 2023.

Refinancable Share of Agency Loans



Source: eMBS, Freddie Mac and Urban Institute Calculations
Note: Loans are counted as refinancable if the note rate is at least 50 basis points over the mortgage rate reported by Freddie Mac's Primary Mortgage Market Survey.

Outstanding Agency Mortgage Volume by Interest Rate

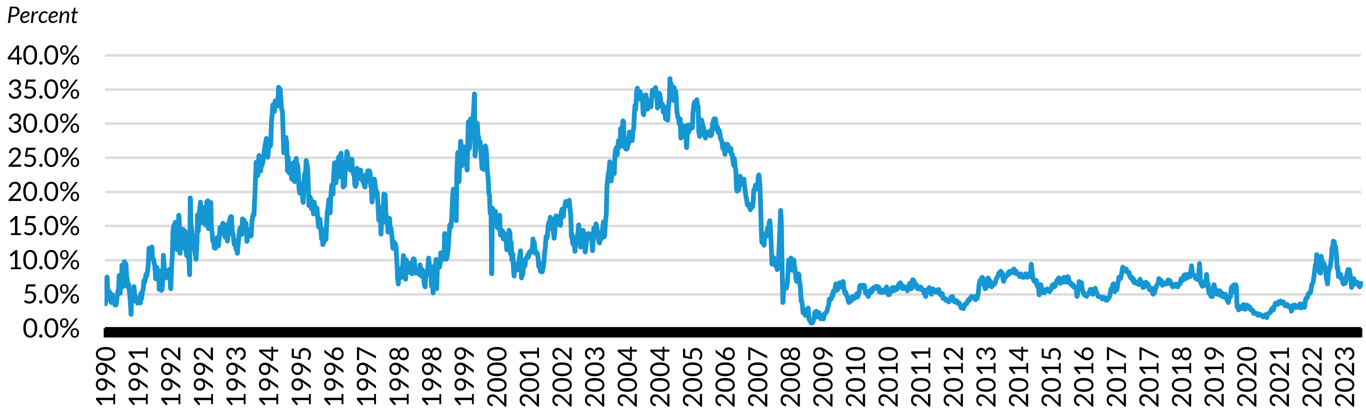


Source: eMBS, Freddie Mac and Urban Institute Calculations.

PRODUCT COMPOSITION AND REFINANCE SHARE

The adjustable-rate share of weekly mortgage applications varied widely in the 1990s and the early to mid-2000s, ranging from a low of 5 percent to a high of over 35 percent. From 2009 to early 2022, the ARM share remained very low, generally between 5 to 8 percent, as ultra-low rates persisted, and product risk was wrung out of the market following the housing bust. However, with rates rising substantially in 2022 and affordability worsening, the ARM share increased from 3.1 percent in the week ending January 7, 2022 to 12.8 percent as of the week ending October 14, 2022. As rates have stabilized just above six percent , the adjustable-rate share broadly decreased to 6.6 percent by the week ending July 7, 2023.

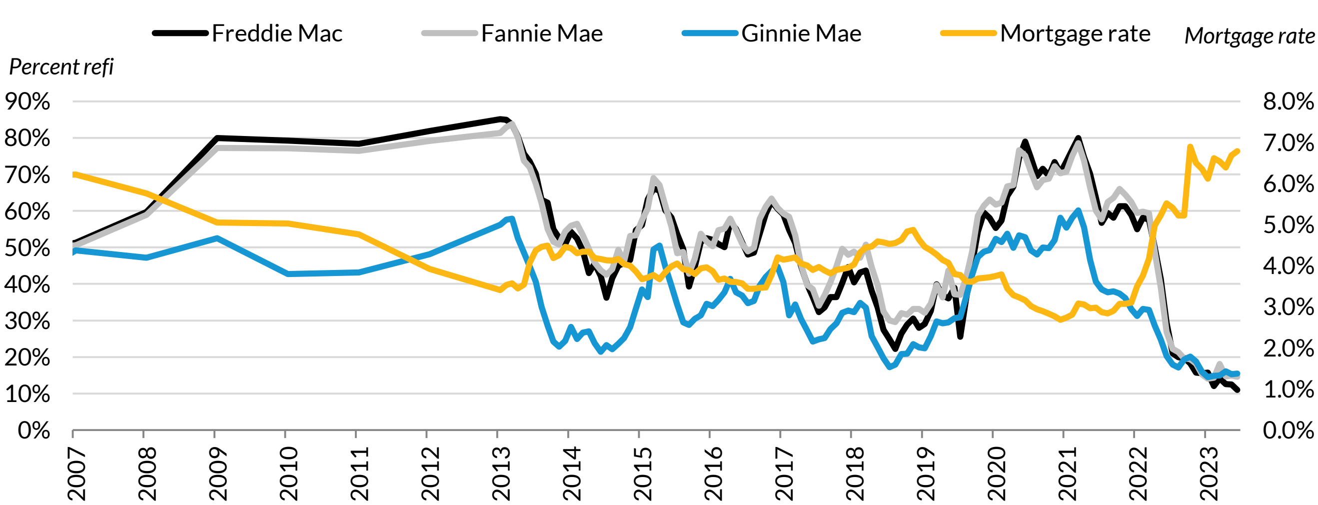
Adjustable-Rate Mortgage Share of Applications



Source: Mortgage Bankers Association (MBA) Weekly Mortgage Applications Survey.
Note: Includes purchase and refinance applications. Data updated through July 7, 2023.

Despite some monthly variation, from late 2018-though March 2021 the percent refi at issuance (refi share) generally increased for both the GSEs and for Ginnie Mae as interest rates dropped. Refinance originations reflect mortgage rates from 6-8 weeks earlier. Since April 2021, and in reaction to higher interest rates, the refi share has declined significantly. In May 2023, the Fannie Mae refi share is 15.0 percent, and the Ginnie Mae refi share is 15.3 percent. Meanwhile, the Freddie Mac refi share is 12.5 percent, down near a series low of 12.1 percent from February 2023. The refi share across the GSEs has declined much more than Ginnie Mae's as rates increased in 2022. This has led to a rare convergence in refi share for GSE and Ginnie Mae channels.

Percent Refi at Issuance

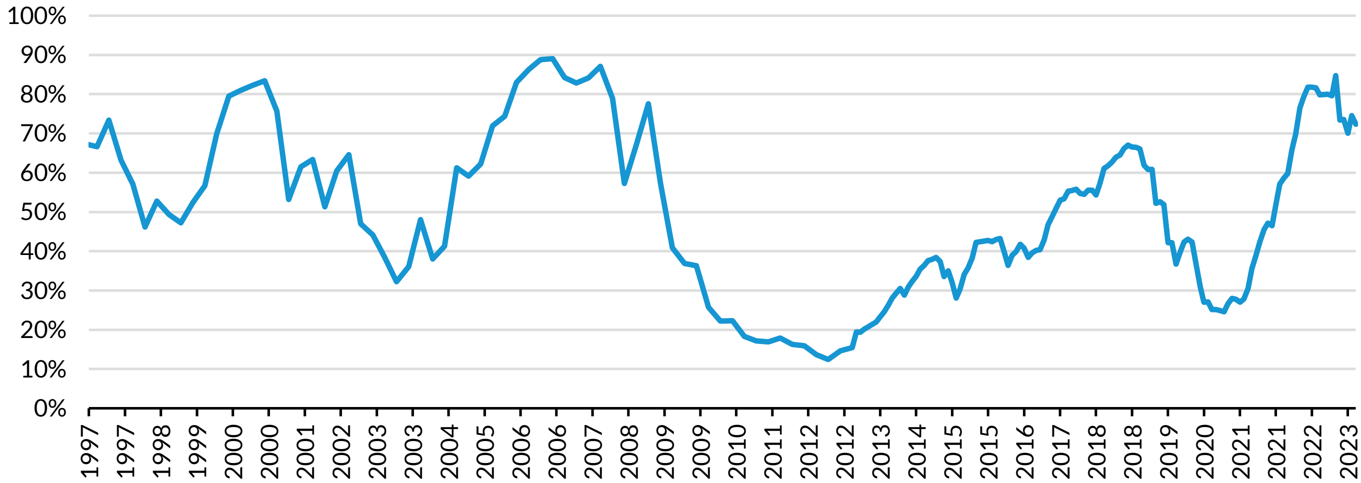


Sources: eMBS and Urban Institute.
Note: Based on at-issuance balance. Figure based on data from June 2023.

OVERVIEW
CASH-OUT REFINANCES

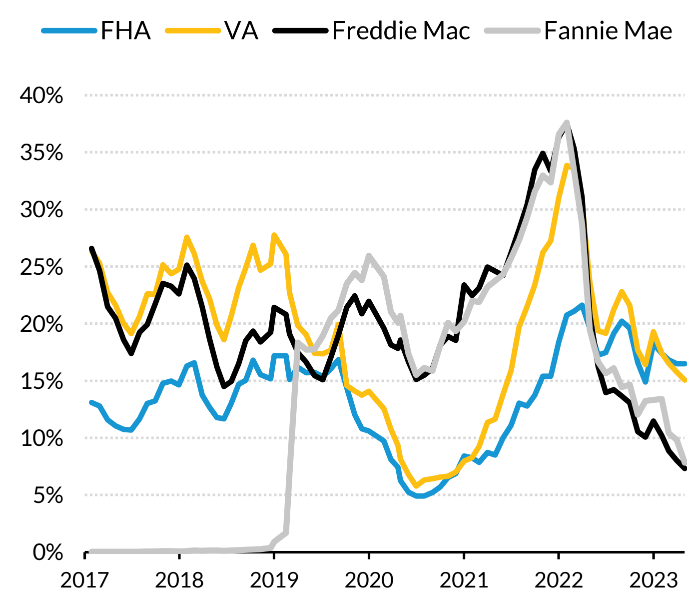
When mortgage rates are low, the share of cash-out refinances tends to be relatively smaller, as rate/term refinancing allows borrowers to save money by taking advantage of lower rates. But when rates are high, the cash-out refinance share is higher since the rate reduction incentive is gone and the only reason to refinance is to take out equity. The cash-out share of refinances generally declined in 2020, reaching 25 percent in September 2020 due to increased rate refinances amidst historically low rates. With rates rising dramatically and the bulk of rate-refinance activity behind us, the cash-out share increased to 84.8 percent as of January 2023 but has modestly declined to 72.3 percent in June as rates have settle modestly below their recent peak. The cash-out share remains elevated, but the absolute volume of cash-out refinances is low. The cash-out refi share of total originations continues to decline, but the cash-out refi share is lower in Fannie and Freddie than FHA or VA. While FHA may not be the optimal vehicle for home equity extraction, it may be the only way for lower credit borrowers to extract cash from their homes.

Cash-out Share of Conventional Refinances



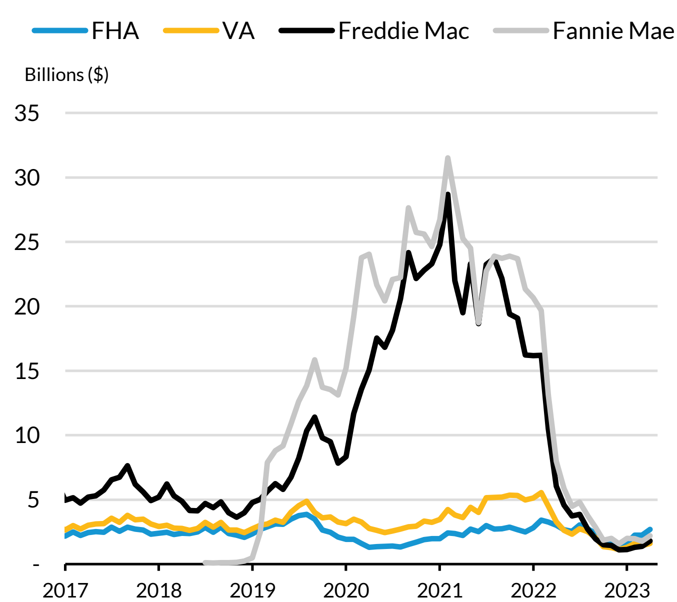
Sources: Freddie Mac, eMBS and Urban Institute.
Note: The cash-out share for conventional market is calculated using Freddie Mac's quarterly refinance statistics from 1995 to 2013. Post 2013 it is calculated monthly using eMBS. Data as of June 2023.

Cash-out Refi Share of All Originations



Sources: eMBS and Urban Institute.
Note: Data as of May 2023.

Cash-out Refinance Volume by Agency



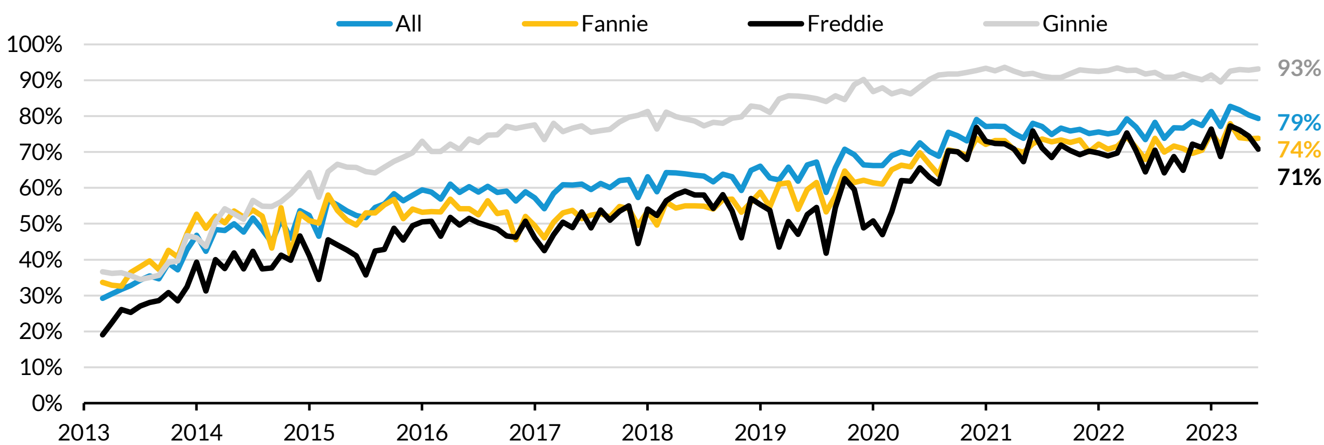
Sources: eMBS and Urban Institute
Note: Data as of May 2023.

OVERVIEW

AGENCY NONBANK ORIGINATION SHARE

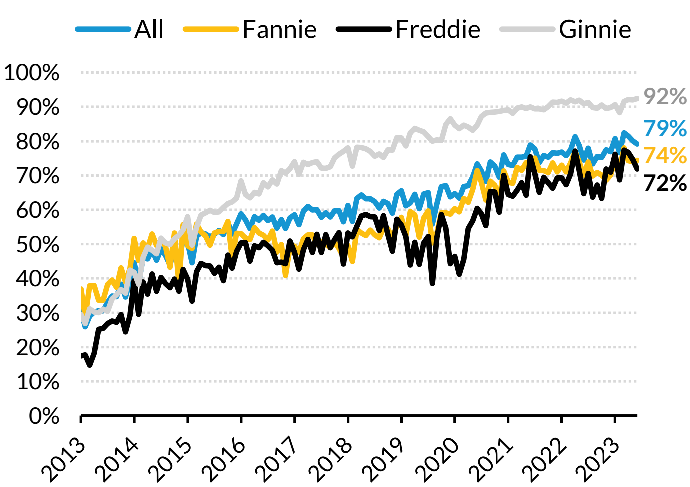
The nonbank share for agency originations has been rising steadily since 2013, standing at 79 percent in June 2023. The Ginnie Mae nonbank share has been consistently higher than the GSEs, standing at 93 percent in June 2023. Fannie and Freddie had nonbank shares of 74 and 71 percent, respectively, in June 2023. Overall, nonbanks accounted for a larger share of refis than purchase loans. However, this reflected the greater nonbank share across Ginnie Mae refi loans. The nonbank purchase share was higher among both Fannie and Freddie purchase loans relative to refi loans in June 2023.

Nonbank Origination Share: All Loans



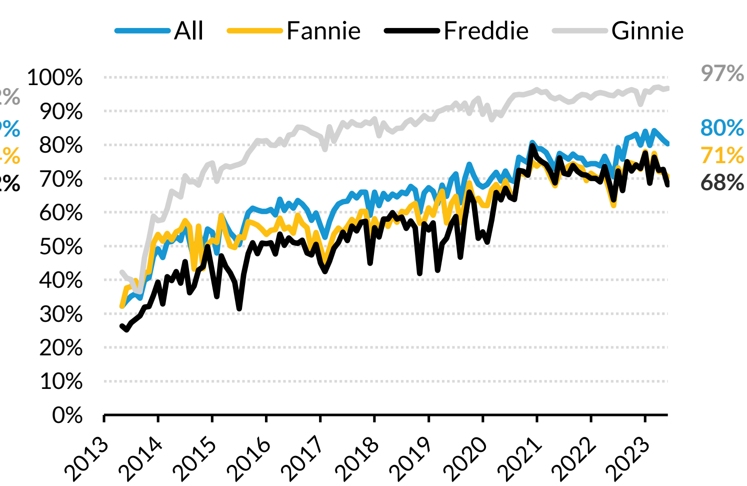
Sources: eMBS and Urban Institute.

Nonbank Origination Share: Purchase Loans



Sources: eMBS and Urban Institute.

Nonbank Origination Share: Refi Loans

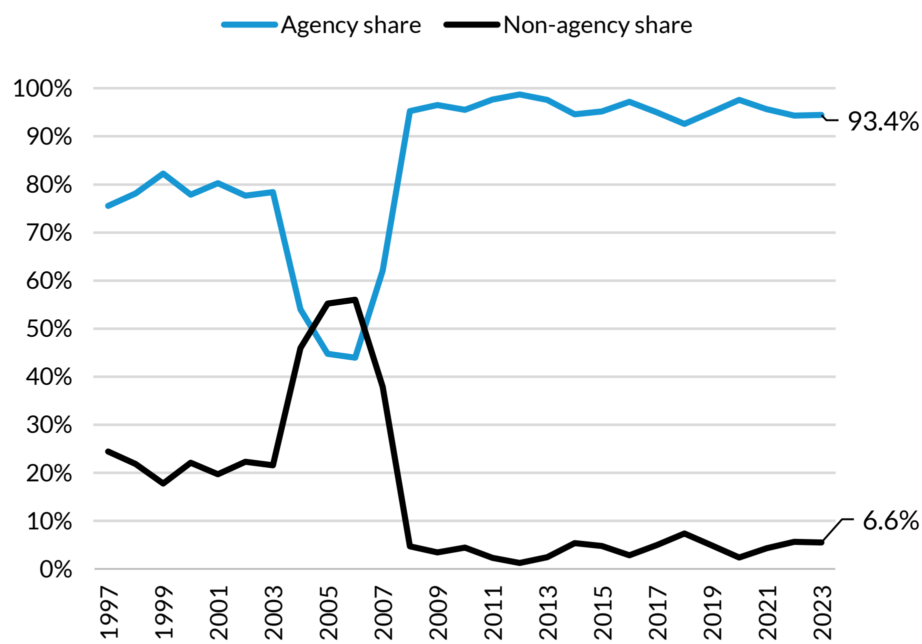


Sources: eMBS and Urban Institute.

SECURITIZATION VOLUME AND COMPOSITION

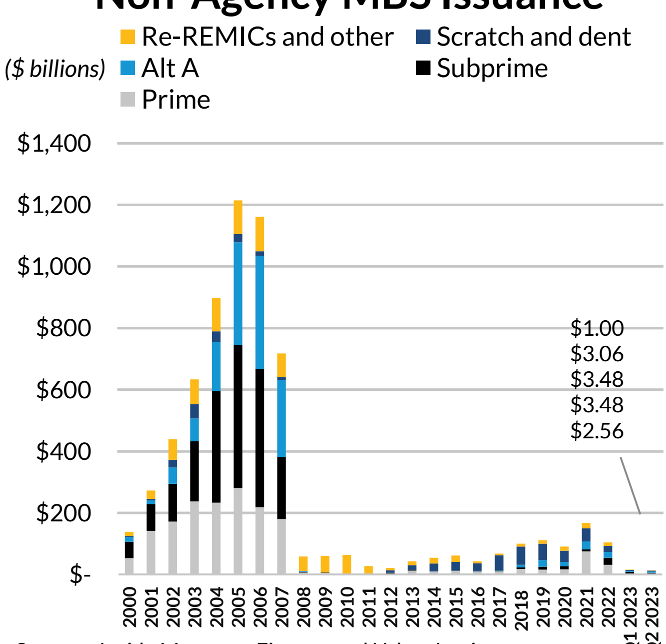
Agency/Non-Agency Share of Residential MBS Issuance

The non-agency share of mortgage securitizations increased gradually from 1.2 percent in 2012 to 7.4 percent in 2018. In 2020, the non-agency share dropped to 2.41 percent, reflecting increased agency refinances and less non-agency production due to COVID-19. The non-agency share has risen modestly since 2020, rising to 6.6 percent by April 2023, nearer its 2018 level. In dollar terms, non-agency issuance reached $15.9 billion in Q1 2023, a decrease relative to the $42.5 billion in Q1 2022 and $28.6 billion in Q1 2021. Non-agency securitization totaled $4.4 billion in April 2023, its second consecutive increase since February 2023. These numbers remain small compared to 2021 and the first half of 2022 levels.



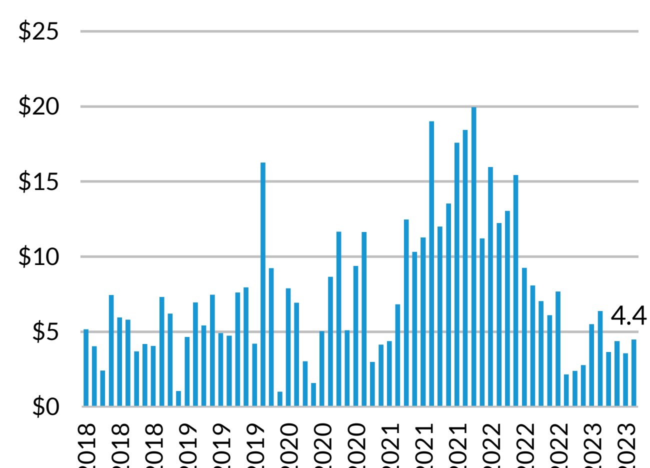
Sources: Inside Mortgage Finance and Urban Institute.
Note: Based on data from April 2023. Monthly non-agency volume is subject to revision.

Non-Agency MBS Issuance



Sources: Inside Mortgage Finance and Urban Institute.
Note: Data through July 2023.

Monthly Non-Agency Securitization

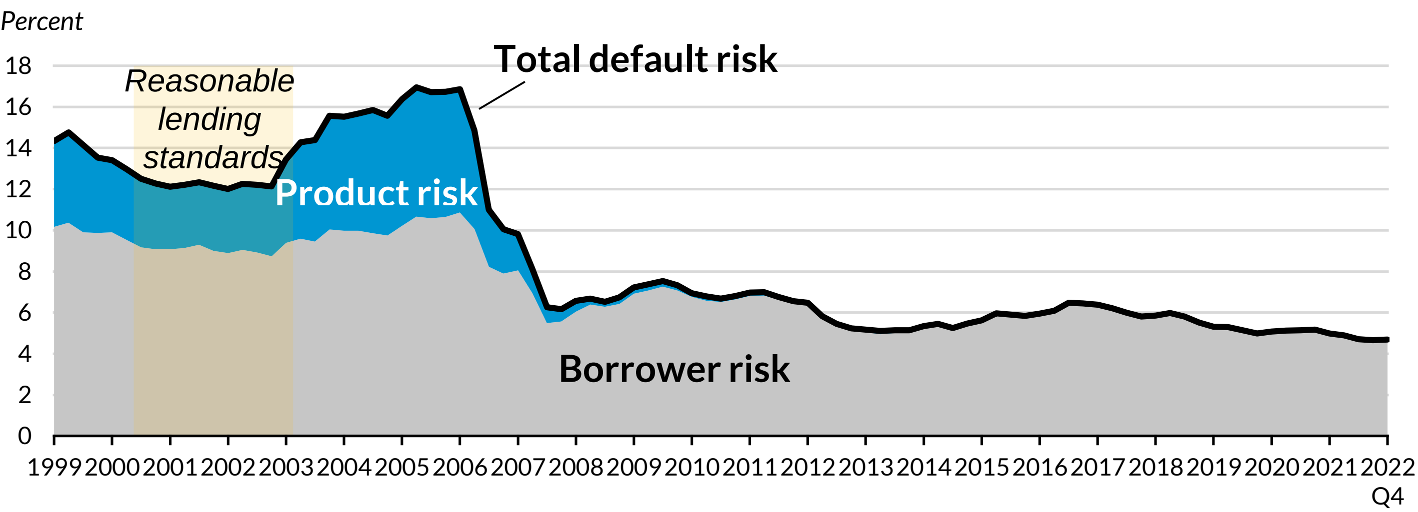


Sources: Inside Mortgage Finance and Urban Institute.

CREDIT BOX
HOUSING CREDIT AVAILABILITY INDEX

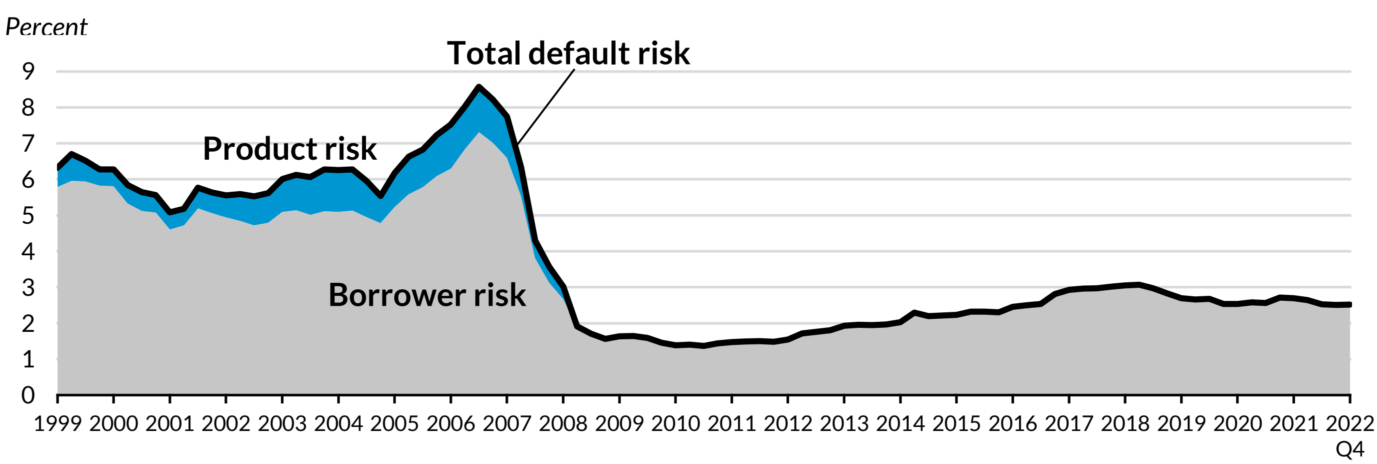
The Urban Institute's Housing Credit Availability Index (HCAI) assesses lenders' tolerance for both borrower risk and product risk, calculating the share of owner-occupied purchase loans that are likely to go 90+ days delinquent over the life of the loan. The HCAI stood at 4.7 percent in Q4 2022, remaining flat from Q3 2022 and lower from Q4 2021. The tightening from Q4 2021 to Q4 2022 reflects a decrease in default risk taken across all channels but was led by a seven percent decline among the GSEs, followed by a six percent decrease among portfolio and private label securities and three percent decline in the government channel. Note that we updated the methodology as of Q2 2020, see new methodology here. More information about the HCAI is available here.

All Channels



GSE Channel

The trend toward greater credit availability in the GSE channel began in Q2 2011. From Q2 2011 to Q1 2019, the total risk taken by the GSE channel more than doubled, from 1.4 percent to 3.1 percent. This is still very modest by pre-crisis standards. However, accelerated tightening throughout 2020 induced by market conditions due to COVID-19 drove down credit risk to 2.5 percent in Q4 2020. The increase in Q1 2021, to 2.58 percent, marked the first expansion of credit availability in the GSE channel since Q1 2019. In Q4 2022, credit availability stood at 2.52 percent, slightly up from 2.51 percent in Q3 2022 and down from 2.69 percent in Q4 2021.

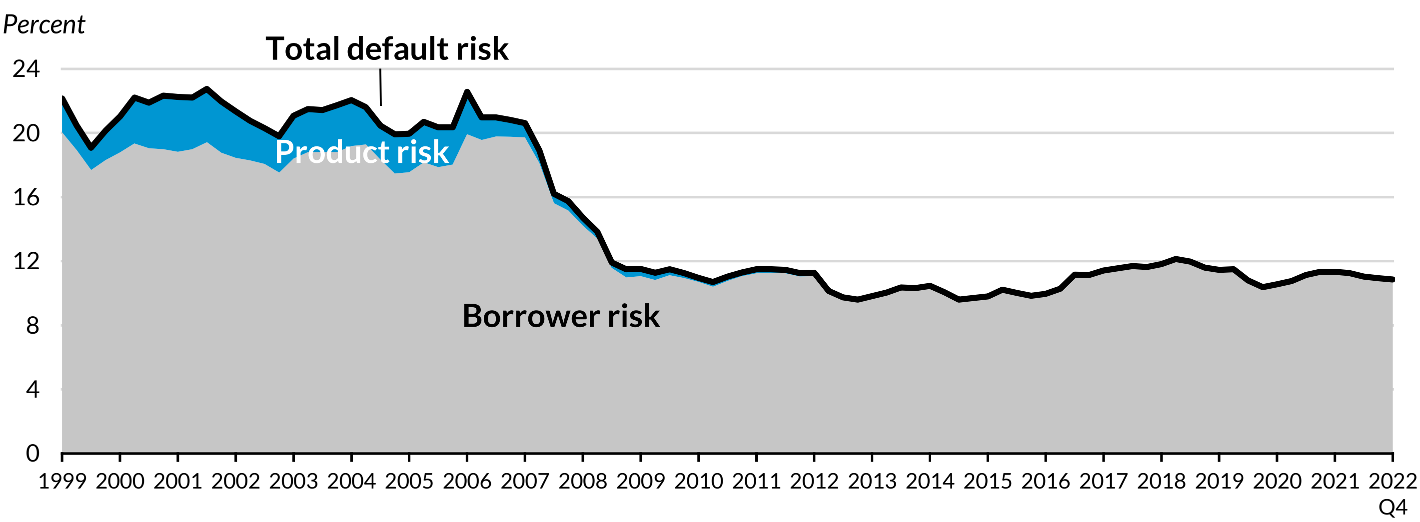


Sources: eMBS, CoreLogic, HMDA, IMF, and Urban Institute.
Note: Default is defined as 90 days or more delinquent at any point. Last updated April 2023.

HOUSING CREDIT AVAILABILITY INDEX

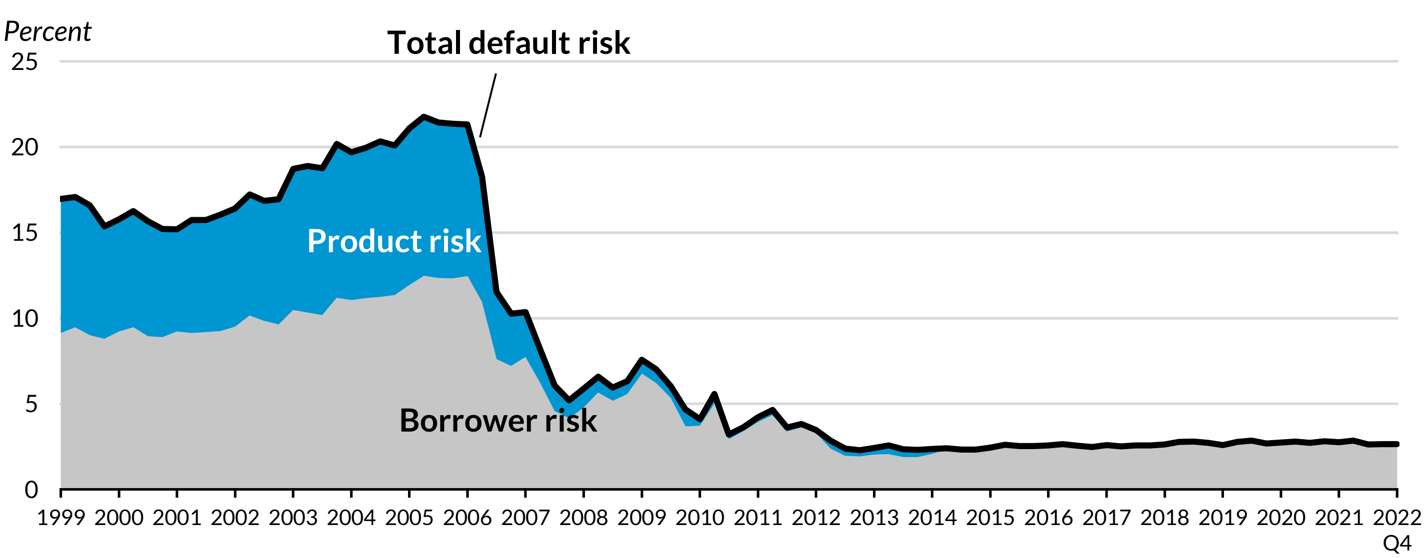
Government Channel

The total default risk the government loan channel is willing to take bottomed out at 9.6 percent in Q3 2013. It fluctuated in a narrow range at or above that number for three years. In the eleven quarters from Q4 2016 to Q1 2019, the risk in the government channel increased from 9.9 to 12.1 percent but has since receded. After declining to 10.4 percent in Q3 of 2020, the government channel had begun to increase risk to 11.3 percent up until Q1 2022 before dropping to 10.9 percent in Q4 2022; far below the pre-bubble range of 19 to 23 percent.



Portfolio and Private Label Securities Channels

The portfolio and private-label securities (PP) channel took on more product risk than the government and GSE channels during the bubble. After the crisis, the channel's product and borrower risks dropped sharply. The numbers have stabilized since 2013, with product risk well below 0.5 percent and total risk largely in the range of 2.3-3.0 percent; it was 2.6 percent in Q4 2022. This is a shadow of the default risk taken prior to the Great Financial Crisis.



Sources: eMBS, CoreLogic, HMDA, IMF, and Urban Institute.
Note: Default is defined as 90 days or more delinquent at any point. Last updated April 2023.

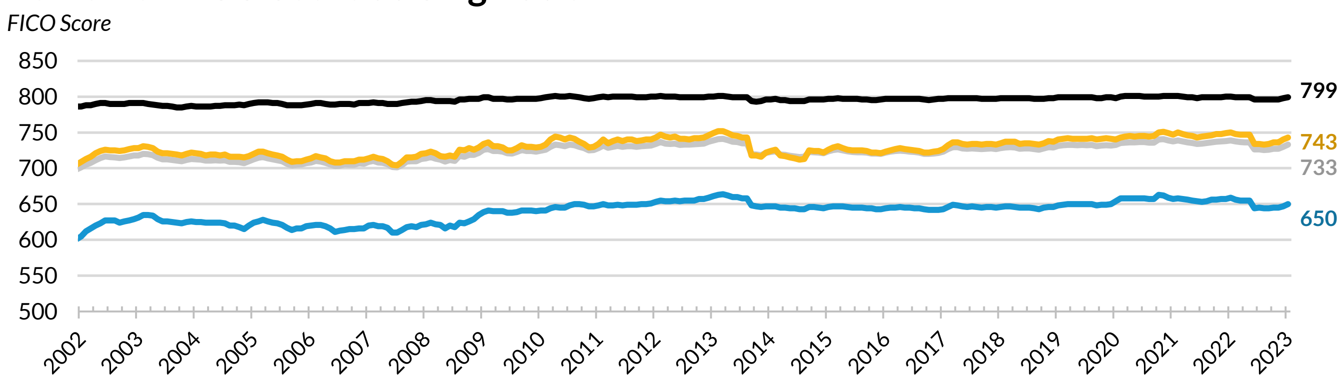
CREDIT BOX

CREDIT AVAILABILITY FOR PURCHASE LOANS

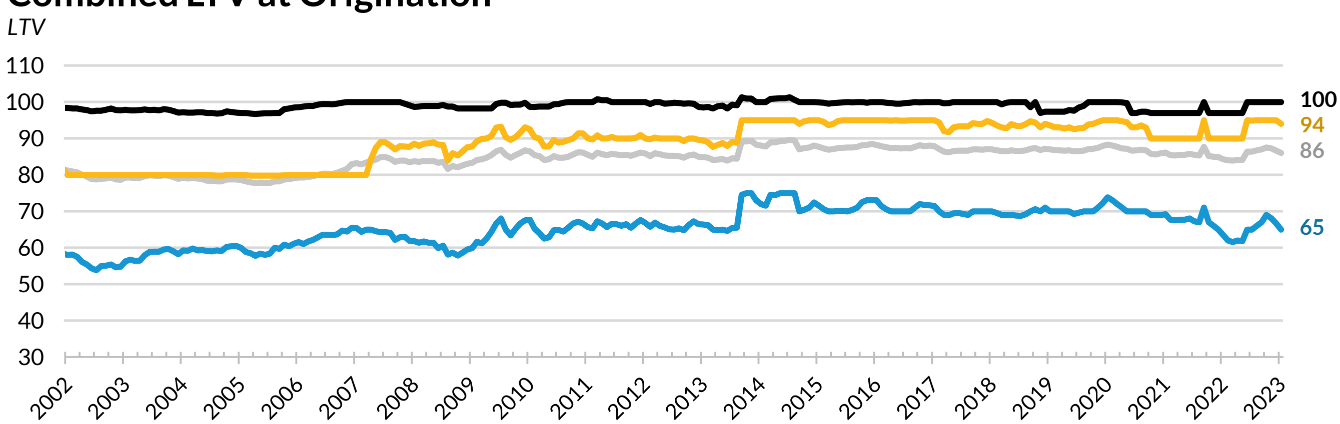
Access to credit remains tight by historical standards, but it has loosened marginally in recent months for lower FICO borrowers. The median FICO for current purchase loans is about 21 points higher than the pre-housing crisis level of around 722. The 10th percentile, which represents the lower bound of creditworthiness to qualify for a mortgage, was 650 in May 2023, which is still high compared to low-600s pre-bubble. The higher rate environment has coincided with a rise in DTIs. However, DTIs largely stabilized since January 2023 with the 10th percentile DTI declining modestly. Since the fourth quarter of 2022, the median LTV at origination has held steady at 94 percent, the higher end of its historical range.

Mean | 90th percentile | 10th percentile | Median

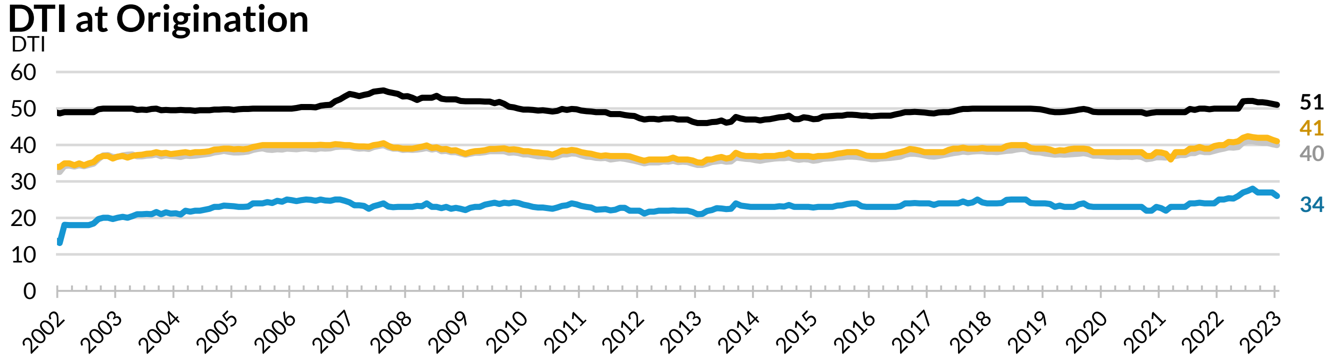
Borrower FICO Score at Origination



Combined LTV at Origination



DTI at Origination



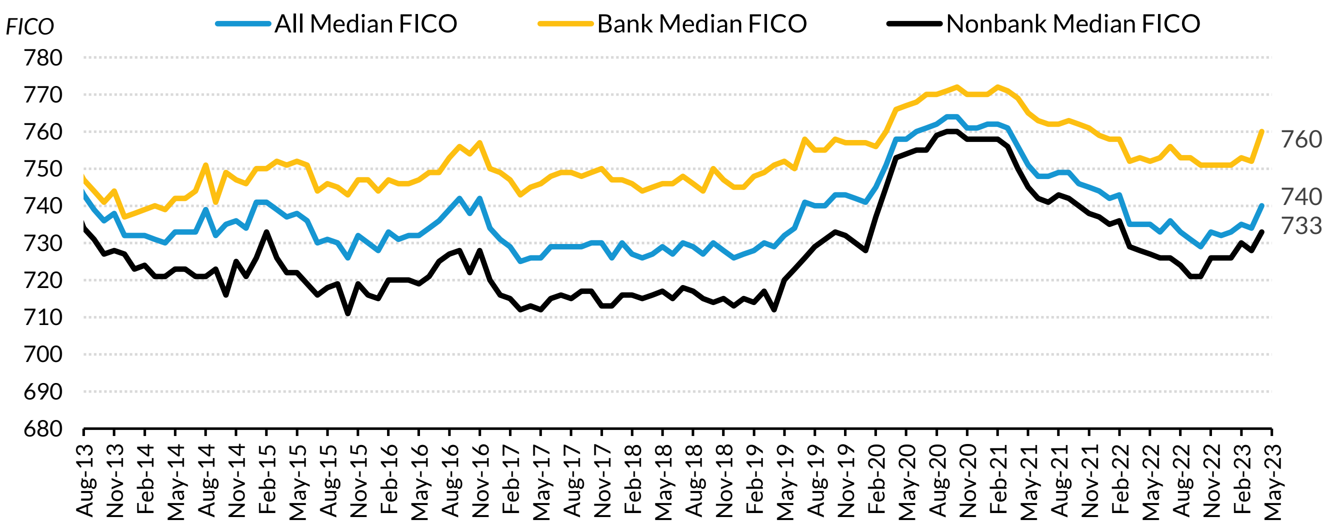
Sources: Black Knight, eMBS, HMDA, SIFMA, CoreLogic and Urban Institute.

Note: Includes owner-occupied purchase loans only. DTI data prior to April 2018 is from CoreLogic; after that date, it is from Black Knight. A back-update to the Black Knight historical series was made in September 2021 for data starting from 2001 onward. Data as of May 2023.

AGENCY NONBANK CREDIT BOX

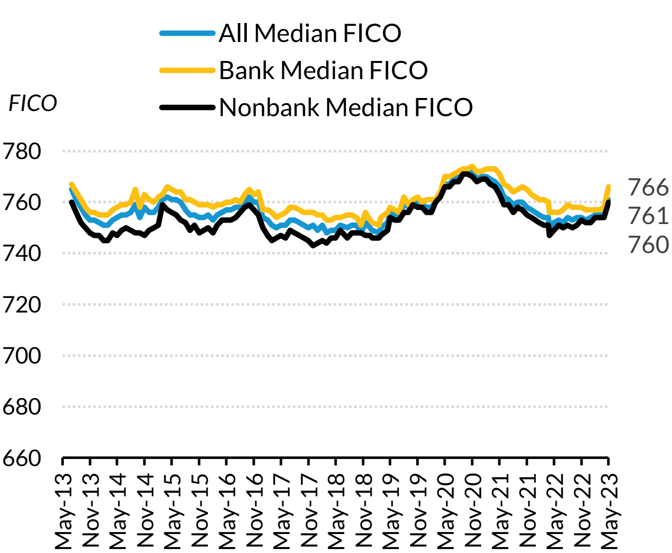
After falling in 2021 and most of 2022, median FICO scores have risen modestly in 2023, from 726 to 740, as interest rates have settled slightly off their recent peak. FICO scores for banks and nonbanks in both GSE and Ginnie Mae segments increased during the Q1 2019 to Q1 2021 period due to increased refi activity in response to lower rates; as refi activity tapered, FICO scores fell. Borrowers of refi loans typically have higher FICO scores than borrowers of purchase loans which boosted median scores amid the most recent refi wave and reduced scores as rates rose. There has also been a sharp cut-back in FHA lending by banks post-2008. As pointed out on page 11, banks now comprise only about 7 percent of Ginnie Mae originations. The gap between agency bank and nonbank FICOs reached 27 points in May 2023. The difference between the median FICO on bank and non-bank GSE loans stood at 6 points in May 2023. But across Ginnie Mae loans, the gap currently sits at 15 points.

Agency FICO: Bank vs. Nonbank



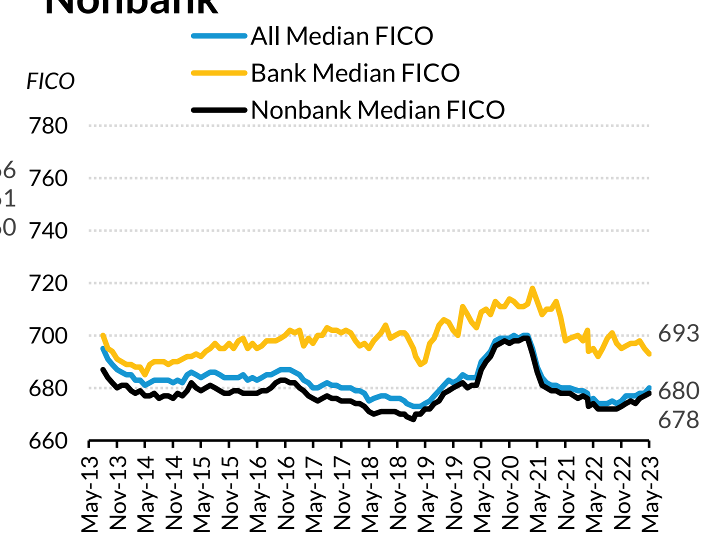
Sources: eMBS and Urban Institute.

GSE FICO: Bank vs. Nonbank



Sources: eMBS and Urban Institute.

Ginnie Mae FICO: Bank vs. Nonbank



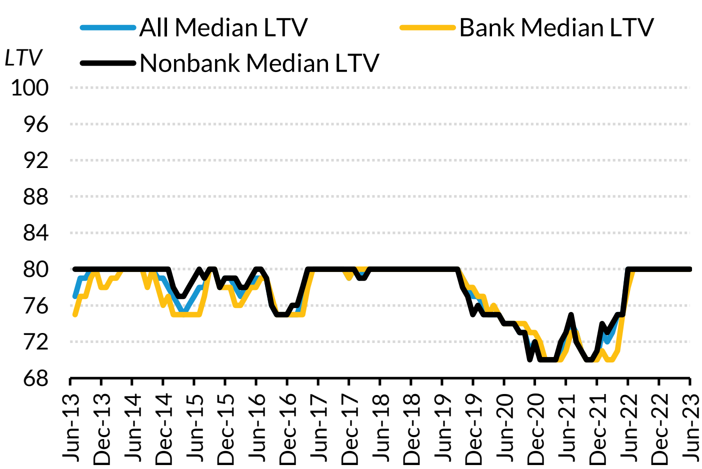
Sources: eMBS and Urban Institute.

CREDIT BOX

AGENCY NONBANK CREDIT BOX

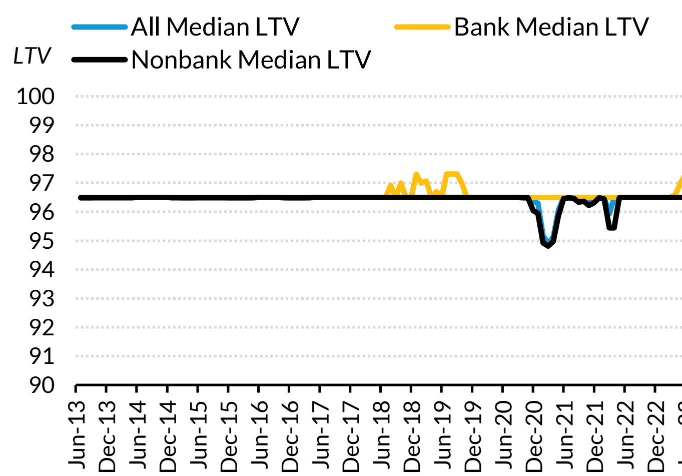
Nonbanks are more expansive in their lending than their bank counterparts, as indicated by higher back-end DTIs in both GSE and Ginnie Mae markets. From early 2017 to early 2019, there was a sustained increase in DTIs, which has reversed beginning in the spring of 2019. This is true for both Ginnie Mae and the GSEs, for banks and nonbanks. As interest rates in 2018 increased, DTIs rose, because borrower payments were driven up relative to incomes. As rates fell during most of 2019 and 2020, DTIs fell as borrower payments declined relative to incomes. Since March 2021, DTIs have increased, reflecting the rise in rates and steep house price increases, both of which force households to borrow more in relation to income. In recent months, median DTIs have declined marginally for banks and non-banks as rates have retreated from peak levels.

GSE LTV: Bank vs. Nonbank



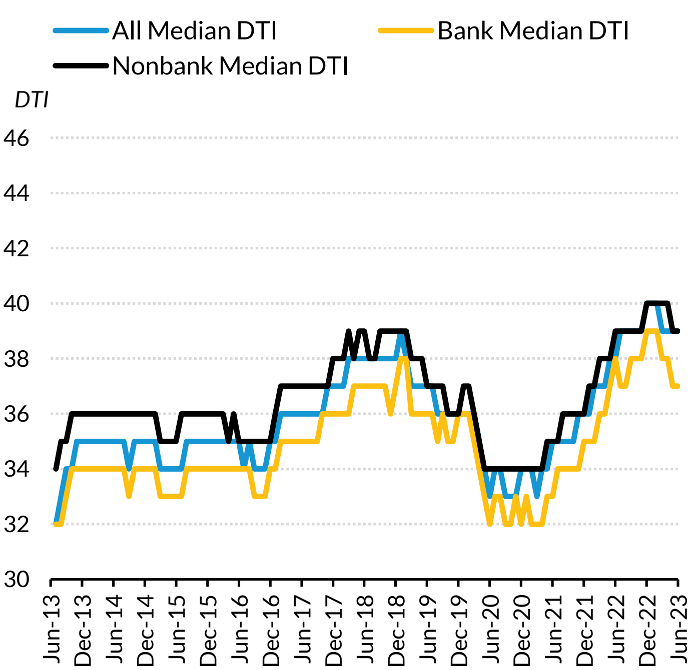
Sources: eMBS and Urban Institute.

Ginnie Mae LTV: Bank vs. Nonbank



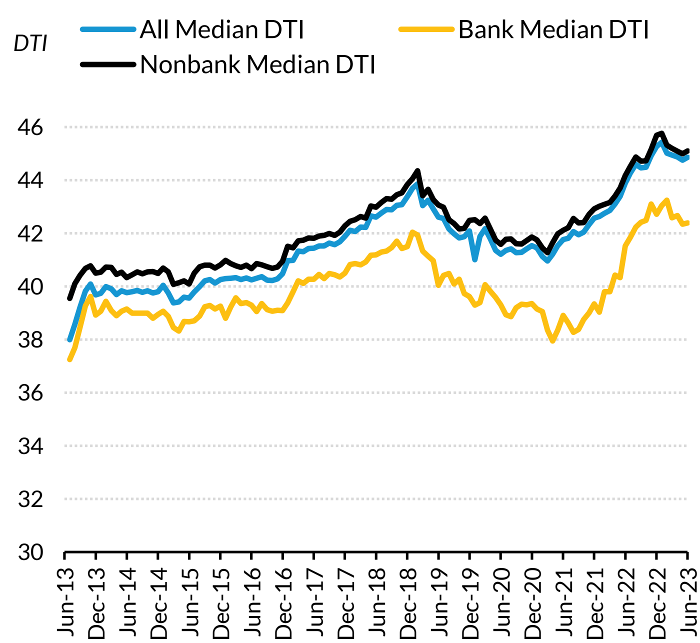
Sources: eMBS and Urban Institute.

GSE DTI: Bank vs. Nonbank



Sources: eMBS and Urban Institute.

Ginnie Mae DTI: Bank vs. Nonbank

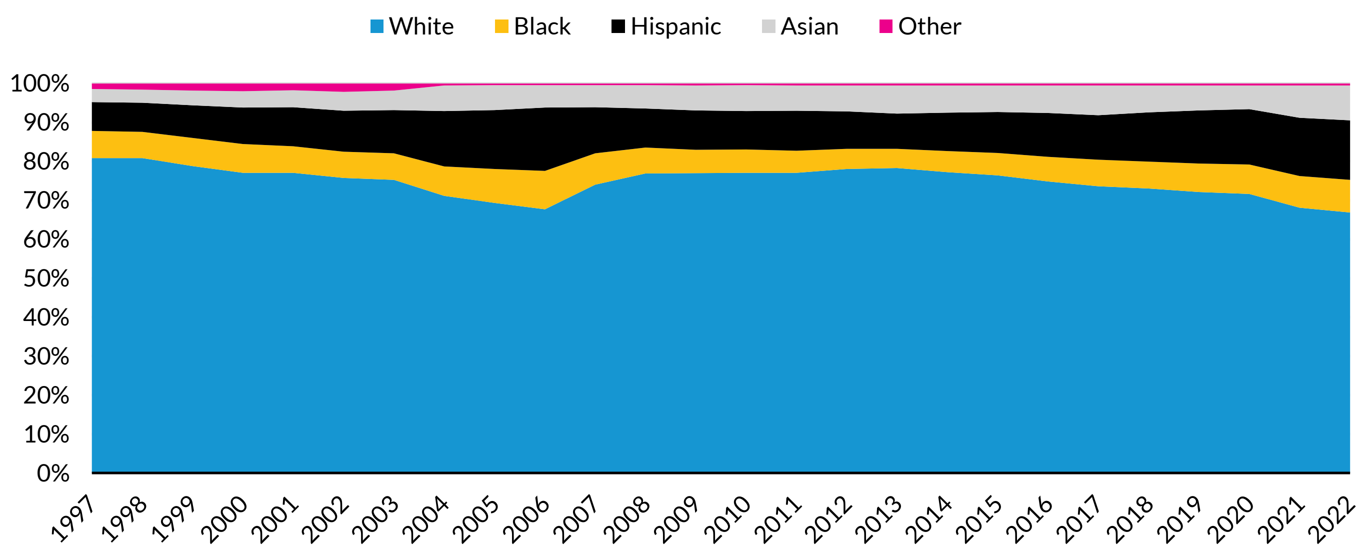


Sources: eMBS and Urban Institute.

STATE OF THE MARKET
RACIAL & ETHNIC COMPOSITION

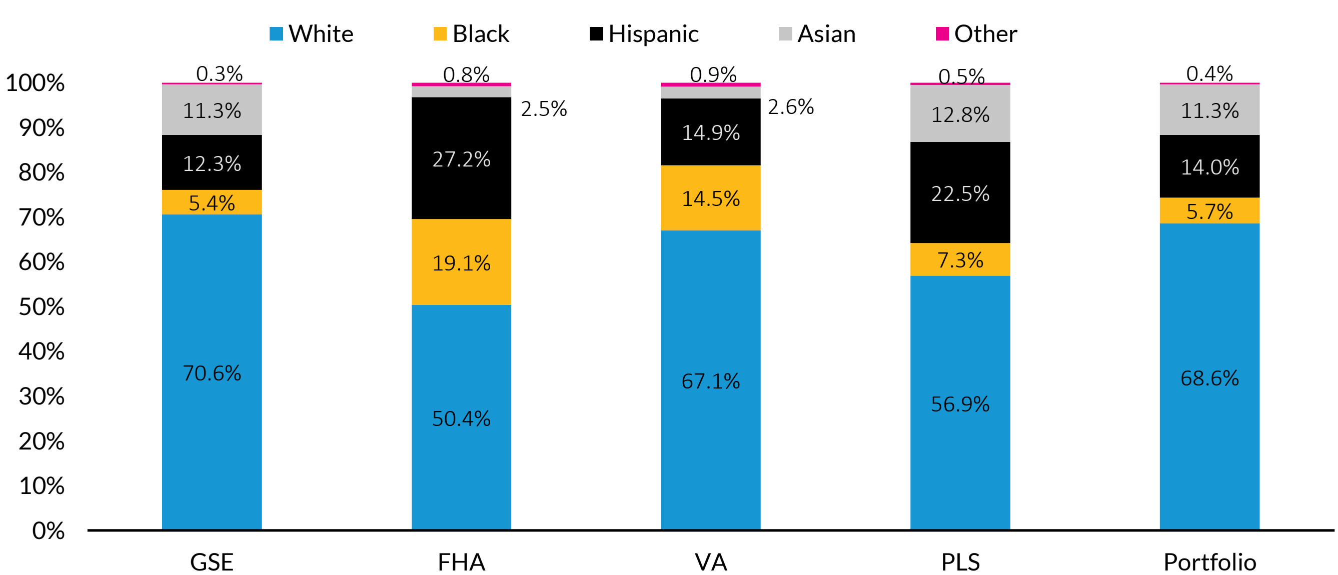
Across all channels, the share of purchase lending to applicants of color reached a peak of 32.3% in 2006. Following the Great Recession and amidst a period of very tight credit, the share of purchase loans extended to borrowers of color declined to a low of 21.7% in 2013. Since then, it has slowly recovered. In 2022, the borrower of color share stood at 33.1% in 2022, up from 31.8% in 2021. But, the share of purchase lending to borrowers of color varied widely by channel in 2022. At 49.6 percent and 43.1 percent, respectively, borrowers of color accounted for a larger share of FHA and PLS purchase lending. Borrowers of color represented a smaller loans share in the GSE, Portfolio and VA channels, 29.4 percent, 31.4 percent and 32.9 percent, respectively.

2022 Purchase Loan Shares by Race



Source: 1997 to 2022 Home Mortgage Disclosure Act (HMDA).
Note: Includes purchase loans only. Shares based on loan counts

2022 Purchase Loan Channel Shares by Race



Source: 2022 Home Mortgage Disclosure Act (HMDA).
Note: Includes purchase loans only. Shares based on loan counts

MORTGAGE ORIGINATION PROJECTIONS

Fannie Mae estimates the 2023 origination volume will be $1.62 trillion, lower than the MBA's $1.76 trillion estimate. For the full year of 2023, each organization expects total origination volume to be below its level in 2022 continuing the decrease from the recent peak established in 2021. The lower full year projections of mortgage originations in 2023 is primarily due to the expectation that the refi share will also be lower. Another contributing factor, as illustrated on page 21, is an expectation of fewer home sales in 2023 relative to 2022. However, expectations for originations over full year 2024 are expected to exceed their 2023 level, but not return to 2022 levels, primarily due to an anticipation that the refi share in 2024 is expected to be higher compared to 2023 but is expected to remain below 2022 rates.

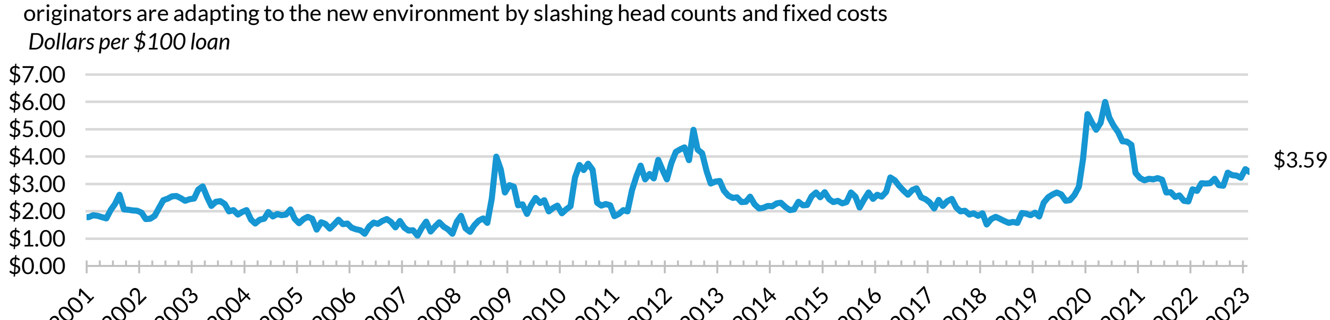
Total Originations and Refinance Shares

	Originations ($ billions)		Refi Share (percent)	
Period	Total, FNMA estimate	Total, MBA estimate	FNMA estimate	MBA estimate
2022 Q1	774	689	50	48
2022 Q2	683	678	27	33
2022 Q3	534	480	20	22
2022 Q4	396	398	17	19
2023 Q1	324	333	18	22
2023 Q2	443	463	16	22
2023 Q3	435	468	14	22
2023 Q4	416	495	28	26
2018	1766	1677	30	28
2019	2462	2253	46	44
2020	4374	4108	64	64
2021	4570	4436	58	62
2022	2386	2245	32	33
2023	1617	1759	17	23
2024	1902	2186	26	30

Sources: Fannie Mae, Mortgage Bankers Association and Urban Institute. Fannie as of July 2023, MBA as of June 2023
Note: Shaded boxes indicate forecasted figures. All figures are estimates for total single-family (1-4 unit) market. Regarding interest rates, the yearly averages for 2017, 2018, 2019, 2020, and 2021 were 4.0, 4.6, 3.9, 3.0, and 3.0 percent. For 2022, the annual averages for Fannie, Freddie, and MBA are 5.3, 4.6, and 6.6 percent.

Originator Profitability and Unmeasured Costs

In June 2023, Originator Profitability and Unmeasured Costs (OPUC) stood at $3.59 per $100 loan, up from $3.43 per $100 loan in May 2023. Higher profitability seen in 2020 and early 2021 reflected lender capacity constraints amidst strong refi demand. Reduced profitability in 2022 reflected slower refinance activity, forcing originators to compete more aggressively on price. OPUC, formulated and calculated by the Federal Reserve Bank of New York, is a good relative measure of originator profitability. OPUC uses the sales price of a mortgage in the secondary market (less par) and adds two sources of profitability; retained servicing (both base and excess servicing, net of g-fees), and points paid by the borrower. As volumes decline, fixed costs are spread out over fewer loans, overstating the relative profitability. OPUC is generally high when interest rates are low, as originators are capacity constrained due to refinance demand and have no incentive to reduce rates. Conversely, when interest rates are higher and refi activity low, competition forces originators to lower rates, driving profitability down. While higher rates are limiting volume, originators are adapting to the new environment by slashing head counts and fixed costs

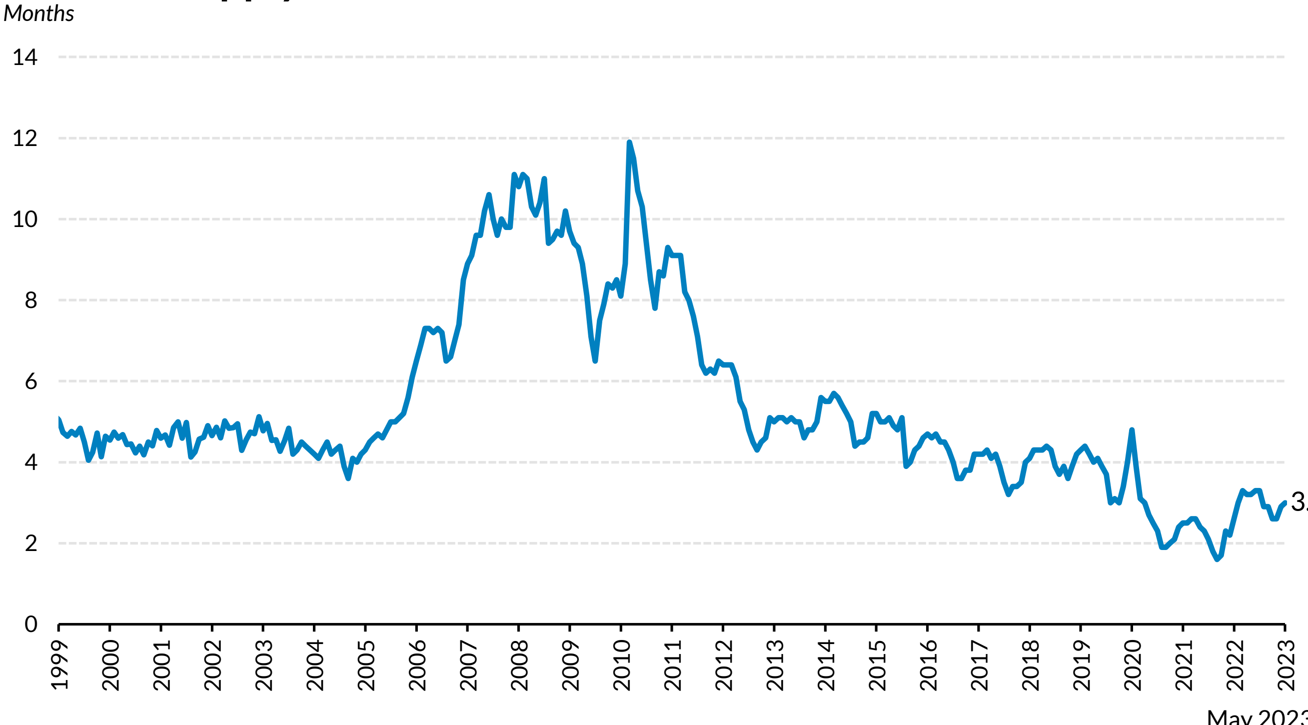


Sources: Federal Reserve Bank of New York, updated monthly and available at this link: http://www.ny.frb.org/research/epr/2013/1113fust.html and Urban Institute. Last updated June 2023.
Note: OPUC is a is a monthly (4-week moving) average as discussed in Fuster et al. (2013).

STATE OF THE MARKET
HOUSING SUPPLY

Months' supply of existing homes, single-family and condos/co-ops, remains low, although higher than the very low levels seen in 2021. Months' supply increased over much of 2022, reflecting some seasonality and coinciding with rising interest rates over most of the year, but it declined from the end of 2022 through the first quarter of 2023. Entering the Spring buying season, months' supply of existing homes, single-family and condos/co-ops, was 3.0 in May 2023, up from 2.9 in April. As would be expected from low existing inventory, Fannie Mae, the MBA, and the NAHB forecast full year 2023 housing starts to be below 2022 levels. And Fannie Mae, the MBA, and the NAHB all predict total home sales in 2023 to also be below 2022 home sales activity.

Months' Supply



Source: National Association of Realtors and Urban Institute. Data as of May 2023.

Housing Starts and Home Sales

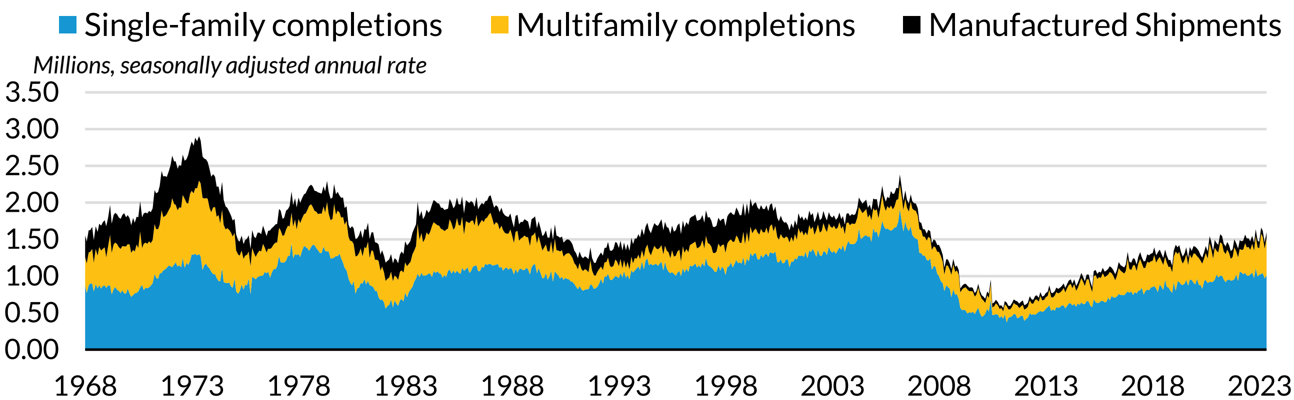
Year	Housing Starts, thousands			Home Sales. thousands		
	Total, FNMA estimate	Total, MBA estimate	Total, NAHB estimate	Total, FNMA estimate	Total, MBA estimate	Total, NAHB estimate*
2017	1203	1208	1205	6123	6158	5520
2018	1250	1250	1247	5957	5956	5350
2019	1290	1295	1292	6023	6016	5431
2020	1380	1397	1397	6462	6506	5889
2021	1601	1605	1606	6891	6896	6189
2022	1553	1551	1551	5671	5099	5167
2023	1308	1430	1324	4861	4298	4601
2024	1233	1474	1327	4971	4580	5038

Sources: Mortgage Bankers Association, Fannie Mae, National Association of Home Builders and Urban Institute.
Note: Shaded boxes indicate forecasted figures; column labels indicate source of estimate. The NAHB home sales also excludes existing condos and co-ops reported by NAR.

New Residential Production

New residential production, including single-family and multifamily completions as well as manufactured housing shipments, reached 1.60 million units in May 2023, 2.2 percent higher than its level in May 2022, 1.57 million. Since reaching a low of 565,000 units in January 2011, new production has risen by 183 percent. However, current production is 67.2 percent of its March 2006 level of 2.38 million units. While single-family completions and manufactured housing shipments in May 2023 remain 52.8 percent and 26.7 percent of their respective 2000s peaks of 1.91 million units and 307,000 units respectively, multifamily unit completions in May 2023 are 29.8 percent above their 2000s peak of 392,000. However, only 4.1 percent of multifamily units completed in 2023 Q1 were for-sale, down significantly from its 2007 Q2 peak of 43.9 percent. Among single-family completions, 73.6 percent were built for-sale in 2023 Q1. In 2009 Q2, the share fell to as low as 59.8 percent. The owner-occupied share of mobile homes fell from 2006 to 2014, but partially recovered in the ensuing years.

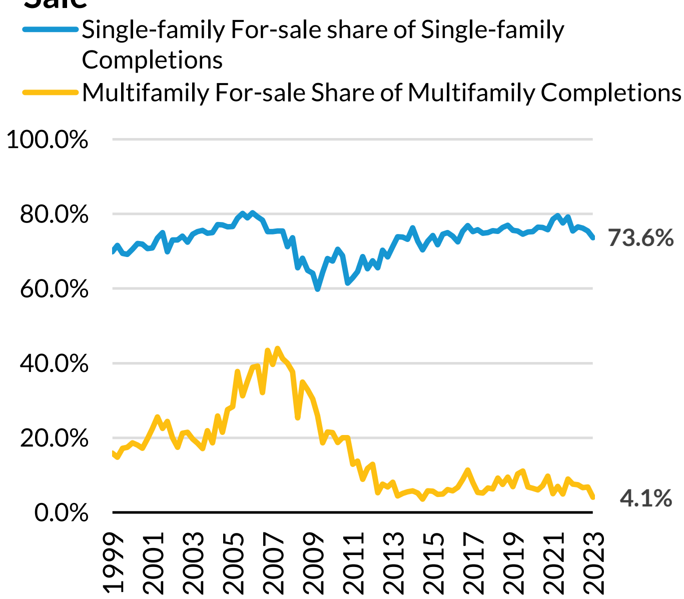
Completions and Shipments



Source: U.S. Census Bureau (BOC) and Urban Institute Calculations.

May 2023

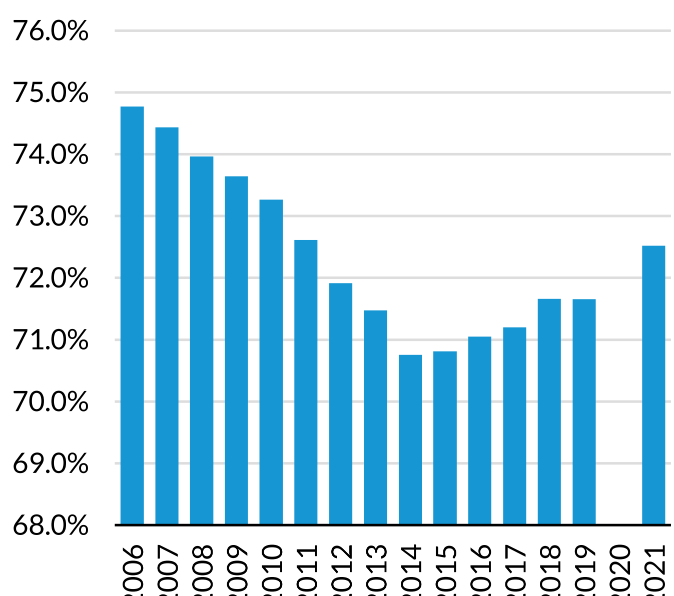
Share of Residential Completions Built For Sale



Source: U.S. Census Bureau (BOC) and Urban Institute Calculations.

May 2023

Owner-Occupied Share of Occupied Mobile Homes



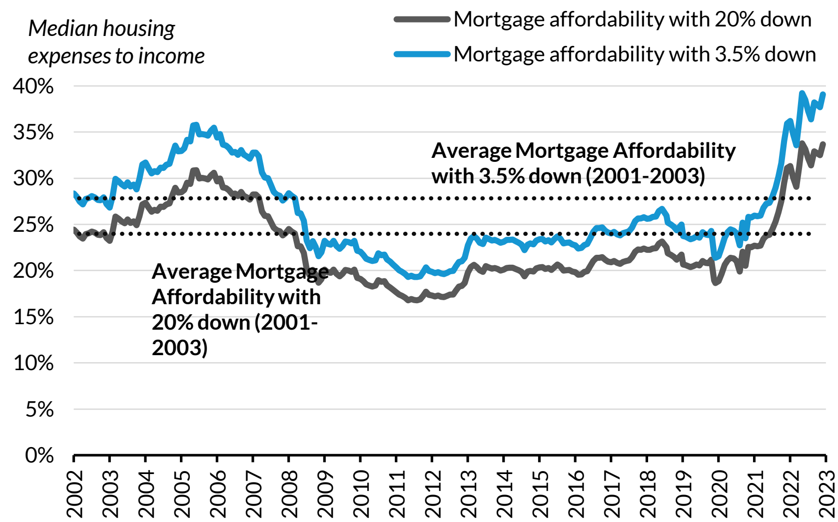
Source: 1-year American Community Survey.
Note: This data for 2021 is not available due to the pandemic.

STATE OF THE MARKET

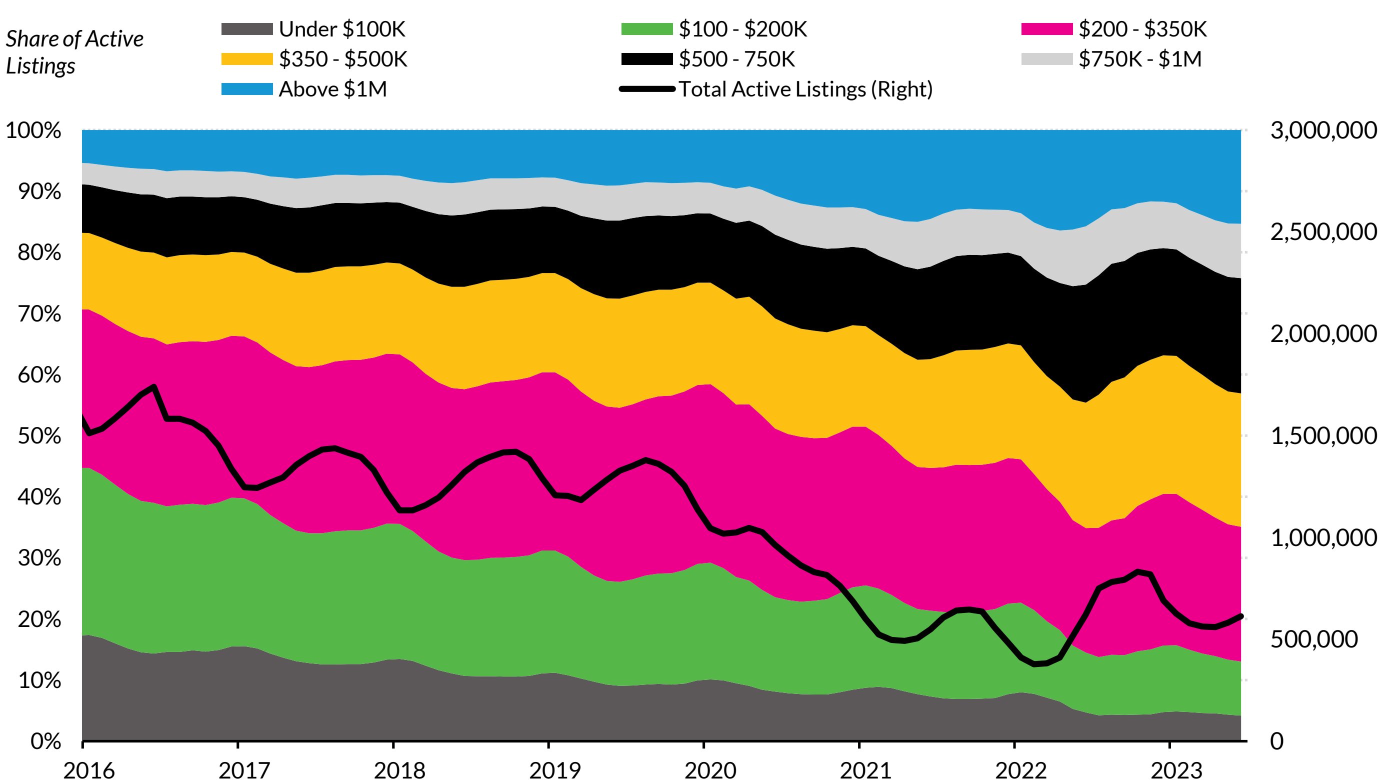
HOUSING AFFORDABILITY

National Mortgage Affordability Over Time

Mortgage affordability worsened in April, nearing levels last seen in December 2022. As of June 2023, with a 20 percent down payment, the share of median income needed for the monthly mortgage payment stood at 33.9 percent, slightly higher than the 30.9 percent at the peak of the housing bubble in November 2005; and with 3.5 percent down it is 39.4 percent, also slightly above the 35.8 percent prior peak in November 2005. As shown in the bottom picture, even amid seasonality, active listings have largely declined over time and the distribution has shifted markedly towards higher priced homes.



Active Listings by Price Tier Over Time

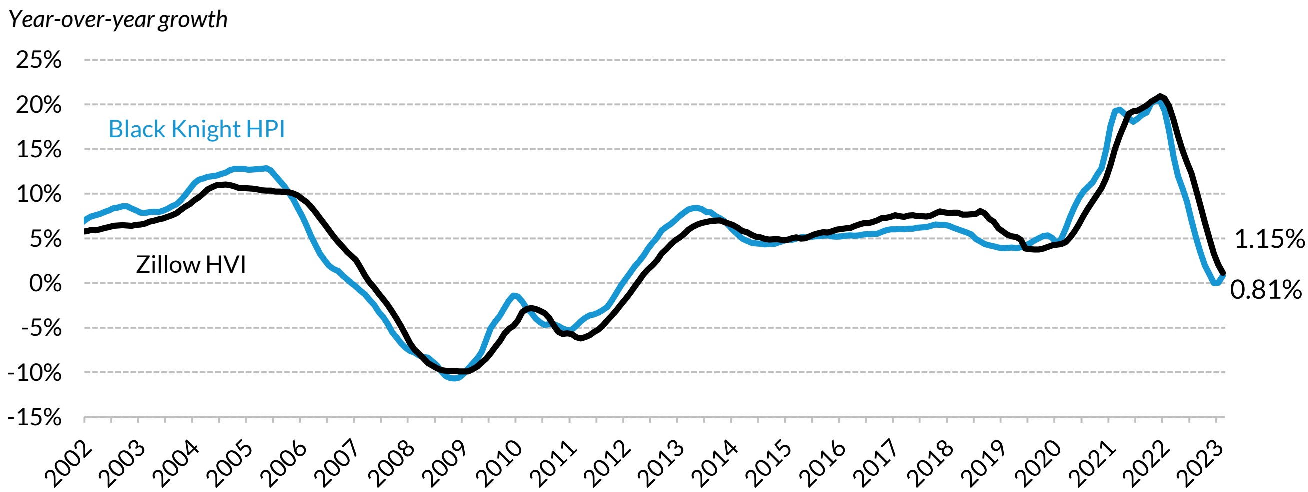


Sources: National Association of Realtors, US Census Bureau, Current Population Survey, American Community Survey, Moody's Analytics, Freddie Mac Primary Mortgage Market Survey, Realtor.com, and the Urban Institute.
Note: Mortgage affordability is the share of median family income devoted to the monthly principal, interest, taxes, and insurance payment required to buy the median home at the Freddie Mac prevailing rate for a 30-year fixed-rate mortgage and property tax and insurance at 1.75 percent of the housing value. Data for the bottom chart provided by Realtor.com as of June 2023.

HOME PRICE INDICES

National Year-Over-Year HPI Growth

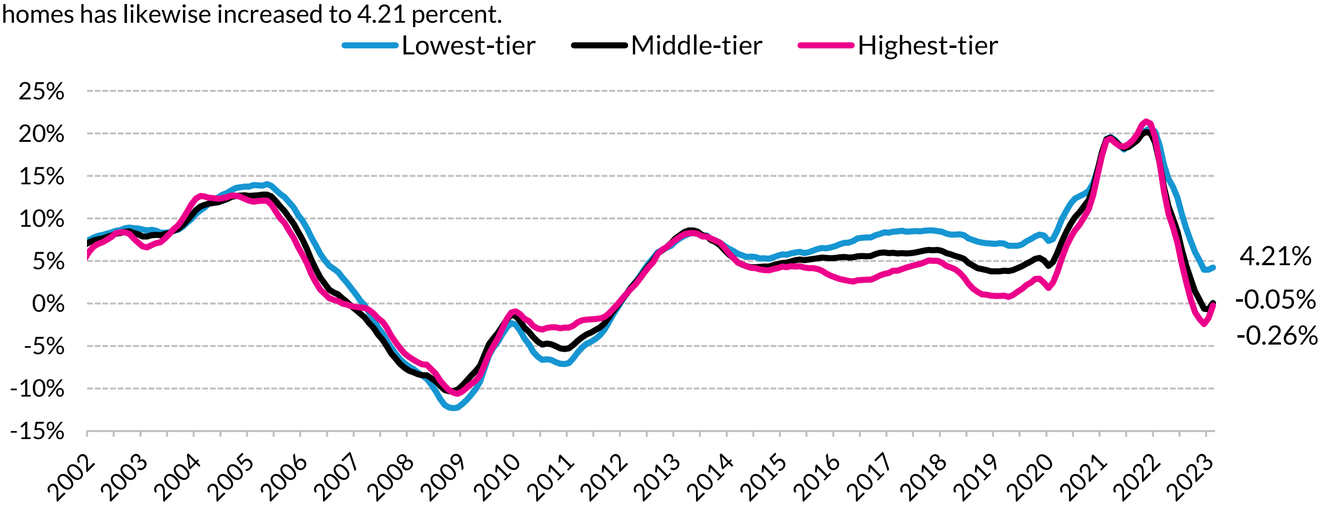
According to Black Knight's updated repeat sales index, year-over-year home price appreciation was 0.81 percent in June 2023, up from the previous month's 0.04 percent, indicating that home prices may have bottomed. Year-over-year home price appreciation as measured by Zillow's hedonic home value index was 1.15 percent in June 2023, down from 2.02 percent in May 2023. Home price appreciation has continued to slow since March 2022; that may have modestly improved affordability. However, affordability remains low amid the broader increase in home prices combined with a sharp rise in interest rates over 2022.



Sources: Black Knight, Zillow, and Urban Institute.
Note: Black Knight modified the methodology behind their HPI in February 2021, resulting in changes to historic price estimates.Data as of June 2023.

National Year-Over-Year HPI Growth by Price Tier

House price growth accelerated in the second half of 2020 into 2022 across all price tiers. With higher-priced homes experiencing steeper appreciation in 2020 and 2021, year-over-year growth in the highest-tier had surpassed the middle and lowest tiers by Feb 2022. With rates rising sharply in 2022, the rate of appreciation has slowed for all price tiers. From May to June 2023, year-over-year house price appreciation increased at each price tier. Annual appreciation for the highest-tier and middle-tier homes remains negative at -0.26 percent and -0.05 percent, respectively, but the month-over month fall has reversed. The year-over-year appreciation of the most affordable homes has likewise increased to 4.21 percent.



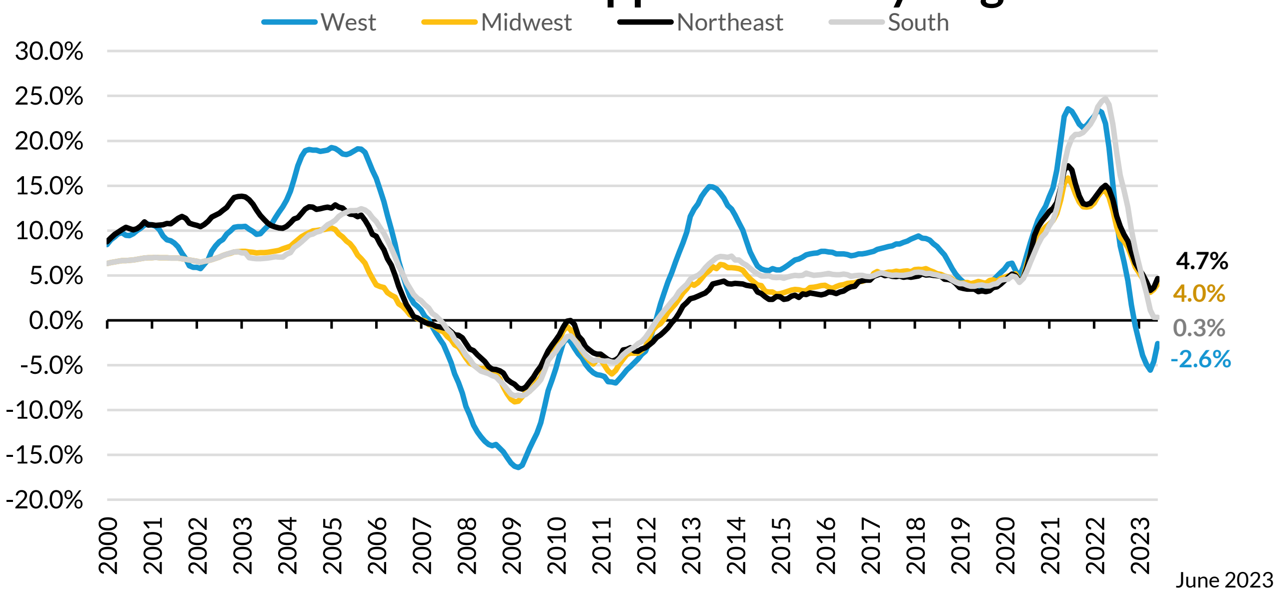
Sources: Black Knight and Urban Institute. **Note:** Black Knight modified the methodology behind their HPI in February 2021, resulting in changes to historic price estimates. Data as of June 2023.

OVERVIEW

REGIONAL HOME PRICE INDICES

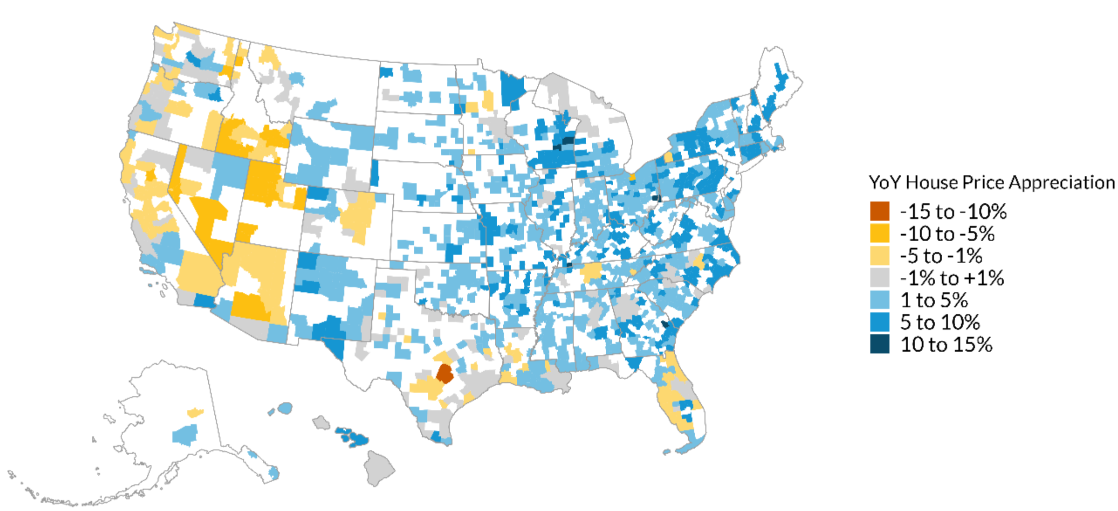
In June 2023, house prices in the West region were 2.6 percent lower than their level 12 months ago, decelerating from the 4.6 percent year-over-year decline in May. In contrast, house prices rose in the Northeast, Midwest, and South regions of the country by 4.7, 4.0 and 0.3 percent respectively. This house price softening reverses nationwide acceleration over most of 2020 and 2021. The acceleration in house price growth over this period was led by the South and by the West. While house price performance across the South is traditionally not an outlier region compared to the other three regions of the country, house prices across the West are historically more volatile.

Year over Year House Price Appreciation by Region



Source: Black Knight and Urban Institute Calculations.

Year over Year House Price Appreciation by Metro and Micropolitan Areas

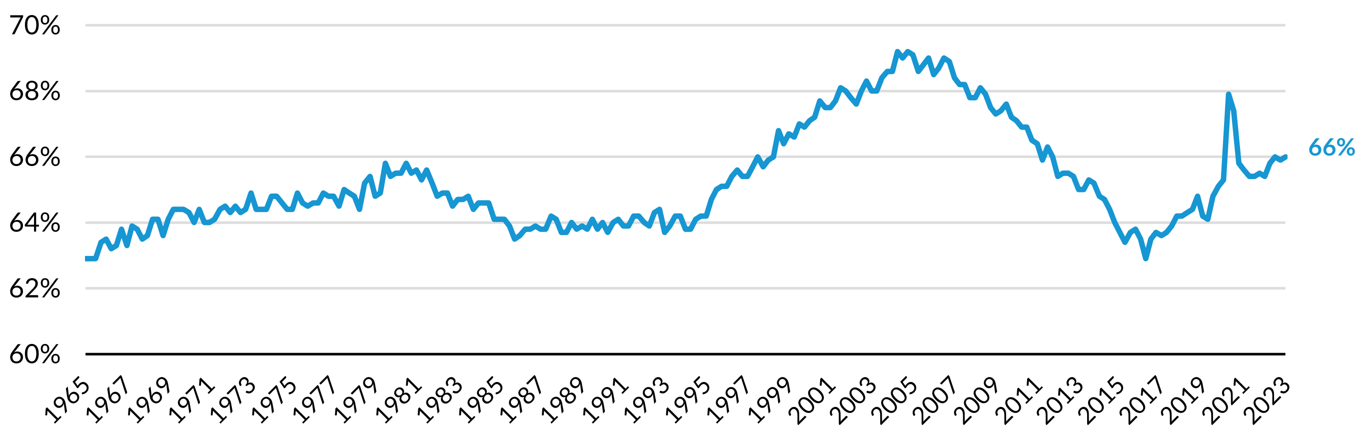


Source: Black Knight and Urban Institute Calculations.

OVERVIEW
HOMEOWNERSHIP RATES

After falling to 62.9 percent in the second quarter of 2016, the homeownership rate has begun to recover. In the first quarter of 2023, the homeownership rate was at 66.0 percent, 0.1 percentage point higher than its fourth quarter of 2022 rate, 65.9 percent, and 0.6 percentage point higher than its rate in the first quarter of 2022, 65.4 percent. However, the homeownership rate remains three percentage points below its first quarter of 2005 peak of 69.0 percent. By age groups, senior households are more likely to be homeowners relative to younger households. In addition, the homeownership rate for households 65 years old and above is closest to its 2000s peak levels. By race and ethnicity, white households are more likely to be homeowners relative to households of color. However, the homeownership rate among Hispanic households is closest to returning to its 2000s peak.

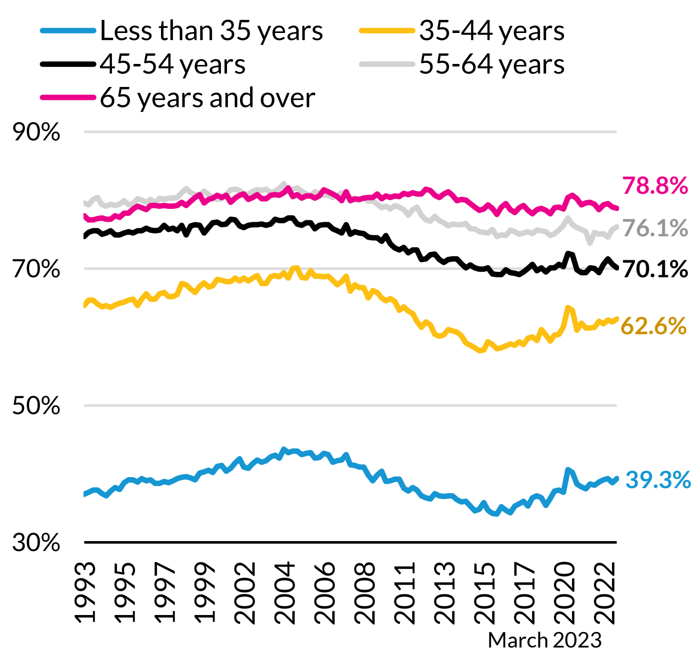
Overall Homeownership Rate



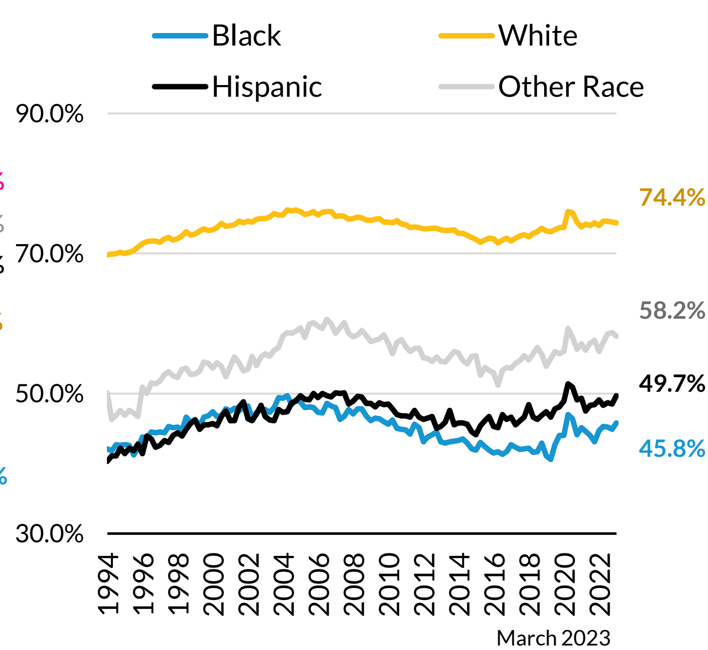
Source: Moody's Analytics, U.S. Census Bureau (BOC) and Urban Institute Calculations.
Note: Data from 2020 and 2021 is poor due to low response rates during the pandemic.

March 2023

Homeownership by Owner Age



Homeownership Rate by Race/Ethnicity

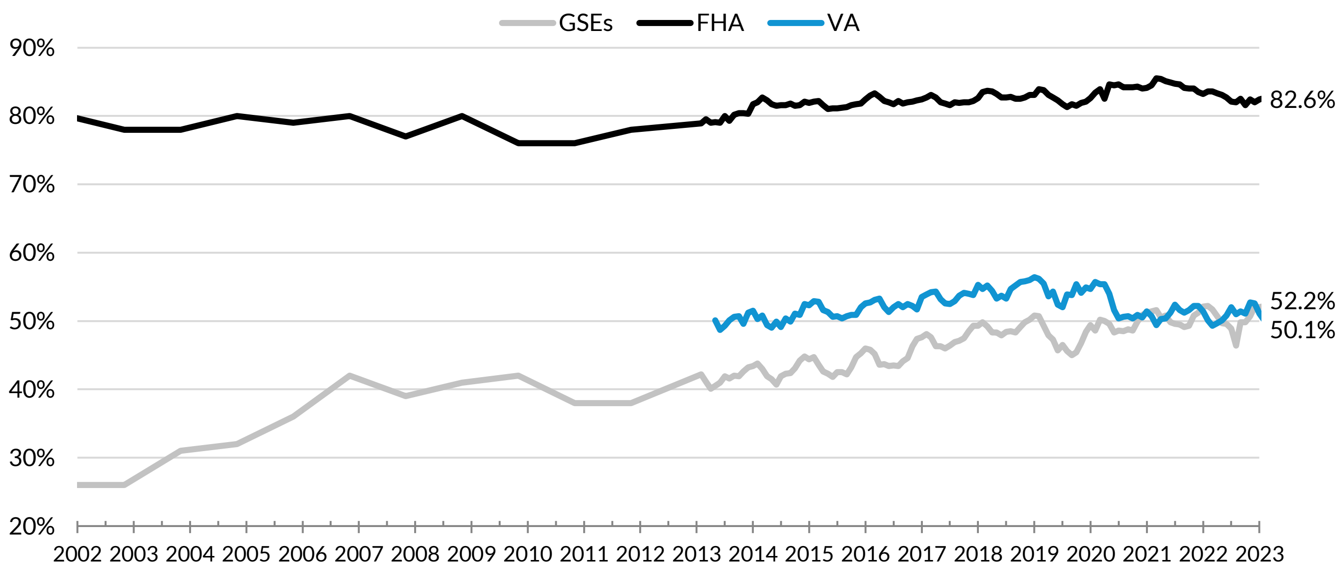


Source: U.S. Census Bureau (BOC) and Urban Institute Calculations.

FIRST-TIME HOMEBUYERS

First-Time Homebuyer Share

In May 2023, the FTHB share for FHA, which has always been more focused on first time homebuyers, was 82.6 percent. The FTHB share of GSE lending in April was 51.7 percent; the VA share was 50.2 percent. The bottom table shows that based on mortgages originated in May 2023, the average FTHB was more likely than an average repeat buyer to take out a smaller loan, have a lower credit score, and have a higher LTV, thus paying a slightly higher interest rate.



Sources: eMBS, Federal Housing Administration (FHA), and Urban Institute. May 2023
Note: All series measure the first-time homebuyer share of purchase loans for principal residences.

Comparison of First-Time and Repeat Homebuyers, GSE and FHA Originations

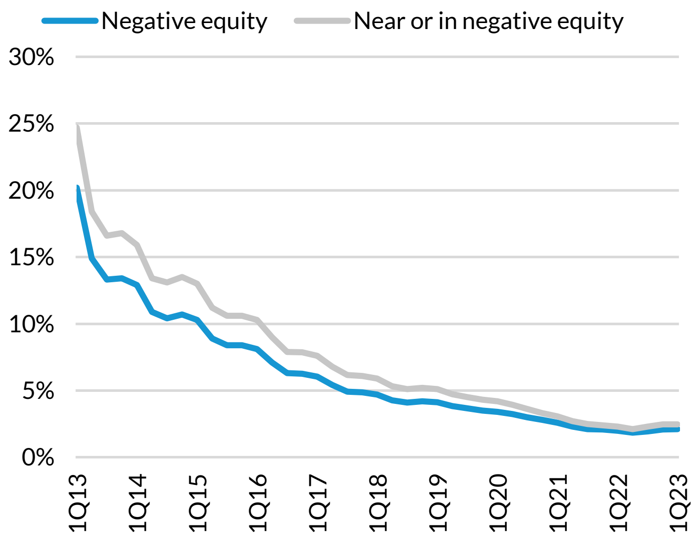
	GSEs		FHA		GSEs and FHA	
Characteristics	First-time	Repeat	First-time	Repeat	First-time	Repeat
Loan Amount ($)	339,554	367,297	312,291	326,784	333,254	369,186
Credit Score	750	761	682	682	727	748
LTV (%)	85	75	95	93	89	80
DTI (%)	37	38	45	46	40	40
Loan Rate (%)	6.31	6.30	6.16	6.15	6.25	6.24

Sources: eMBS and Urban Institute.
Note: Based on owner-occupied purchase mortgages originated in May 2023.

DELINQUENCIES AND LOSS MITIGATION ACTIVITY

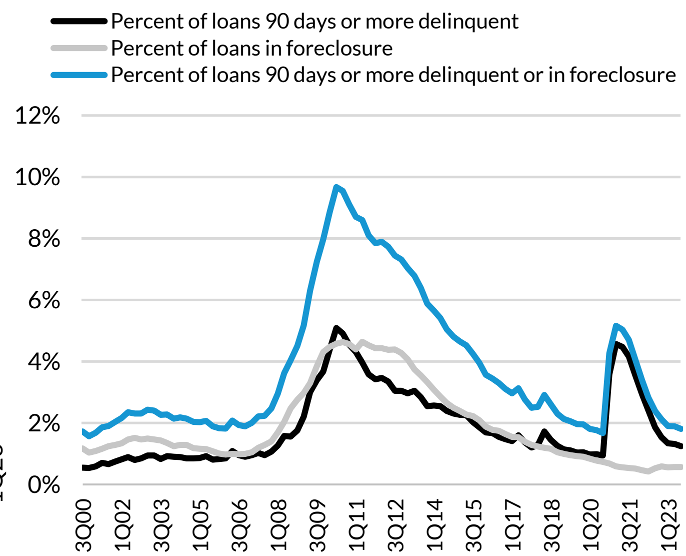
Loans in and near negative stayed steady at 2.5 percent from Q4 2022 to Q1 2023. The share of loans in or near negative equity in Q1 2023 consists of approximately 2.1 percent with negative equity, and 0.4 percent with between zero and 5 percent equity. The share of loans that are 90 days or more delinquent or in foreclosure decreased by 8 basis points, from 1.89 percent in Q4 2022 to 1.81 percent in Q1 2023. This number includes loans where borrowers have missed their payments, including loans in COVID-19 forbearance. The bottom chart shows the share of loans in forbearance according to the MBA Weekly Forbearance and Call Volume Survey, launched in March 2020. After peaking at 8.55 percent in early June 2020, the total forbearance rate declined to 2.06 percent as of October 31st, 2021, the final week of the call survey. The MBA has since moved to conducting a monthly survey with the most recent forbearance rate decreased 5 basis points to 0.44 percent as of June 30, 2023. GSE loans have consistently had the lowest forbearance rates, standing at 0.21 percent at the end of June. The most recent forbearance rate for Other (e.g., portfolio and PLS) loans was 0.52 percent; Ginnie Mae loans had the highest forbearance rate at 0.93 percent.

Negative Equity Share



Sources: CoreLogic and Urban Institute.
Note: Loans with negative equity refer to loans above 100 percent LTV. Loans near negative equity refer to loans above 95 percent LTV. *Last updated June 2023.*

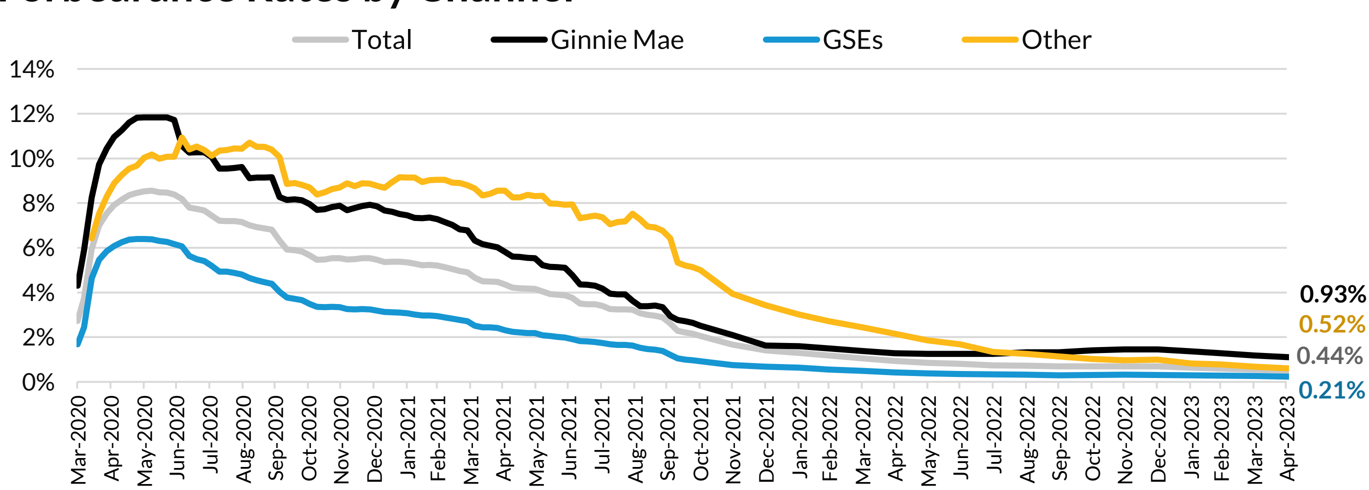
Loans in Serious Delinquency/Foreclosure



Sources: Mortgage Bankers Association and Urban Institute. *Last updated May 2023.*

Q1 2023

Forbearance Rates by Channel

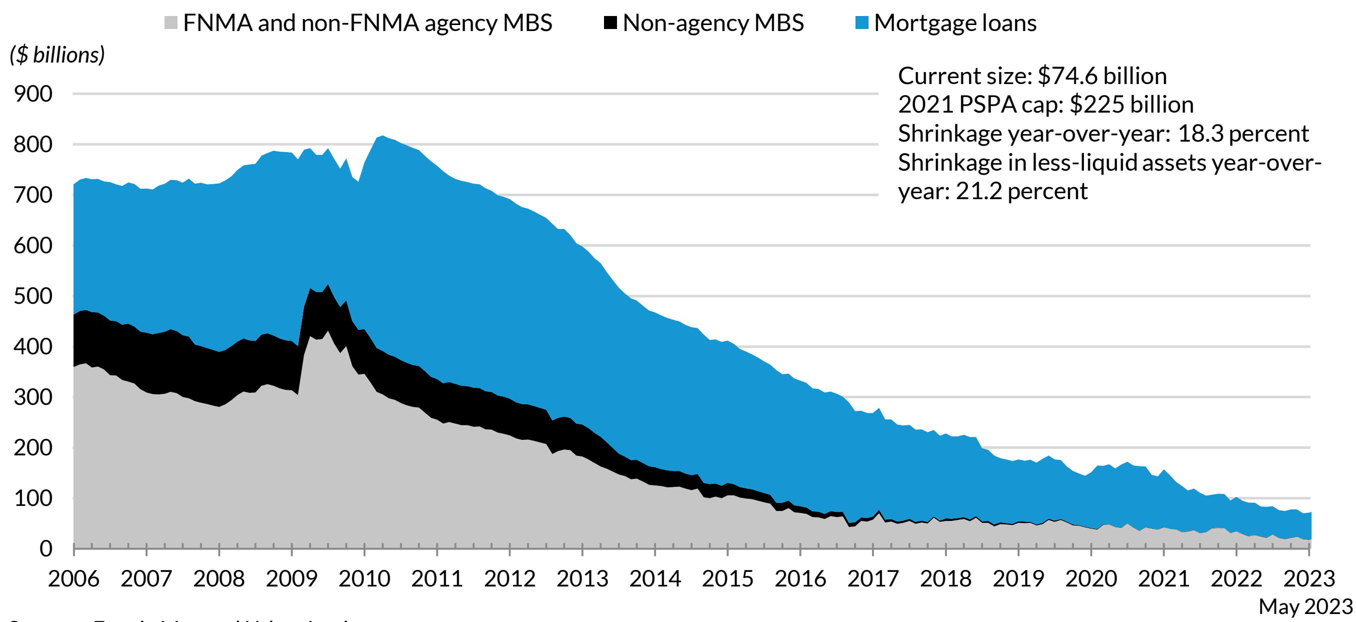


Source: MBA Weekly Forbearance and Call Volume Survey. *Forbearance rates as of June 30th, 2023*

GSE PORTFOLIO WIND-DOWN

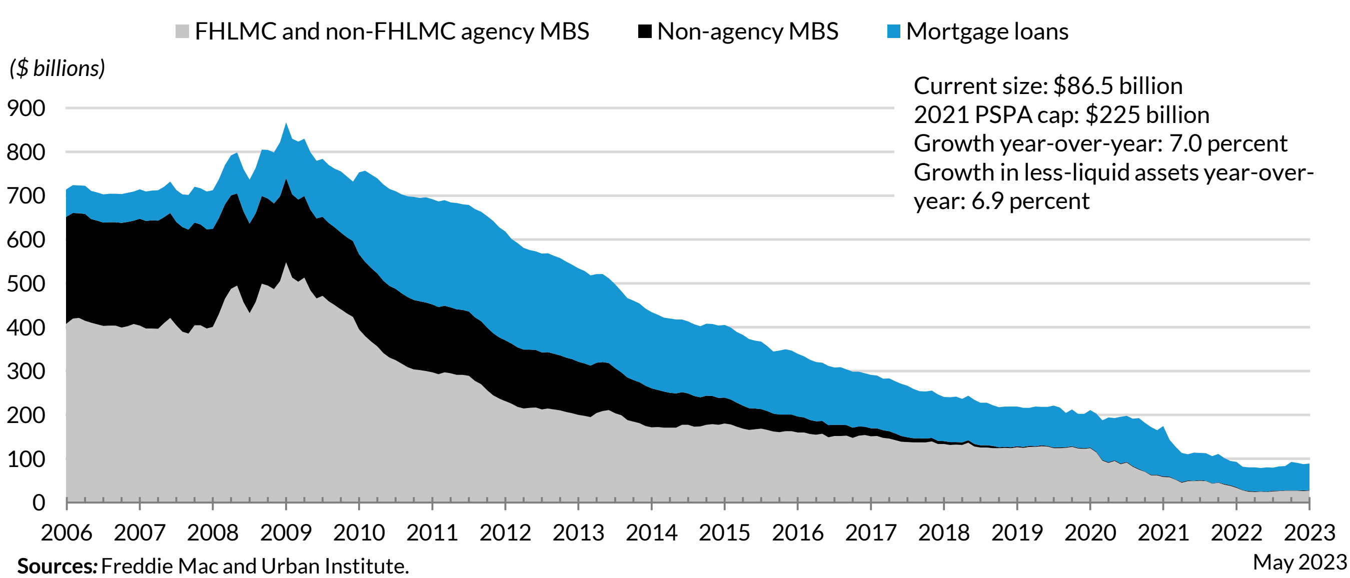
The Fannie Mae and Freddie Mac portfolios remain well below the $225 billion cap mandated in January 2021 by the new Preferred Stock Purchase Agreements (PSPAs). From May 2022 to May 2023, the Fannie portfolio contracted year-over-year by 18.3 percent, and the Freddie portfolio grew by 7.0 percent. Within the portfolio, Fannie Mae contracted their less-liquid assets (mortgage loans, non-agency MBS), by 21.2 percent and Freddie Mac increased their less-liquid assets by 6.9 percent, over the same 12-month period.

Fannie Mae Mortgage-Related Investment Portfolio Composition



Sources: Fannie Mae and Urban Institute.

Freddie Mac Mortgage-Related Investment Portfolio Composition



Sources: Freddie Mac and Urban Institute.

Note: Effective March 2021, Freddie Mac doesn't provide FHLMC/non-FHLMC breakout of agency MBS. The above charts were updated in May 2021 to reflect this.

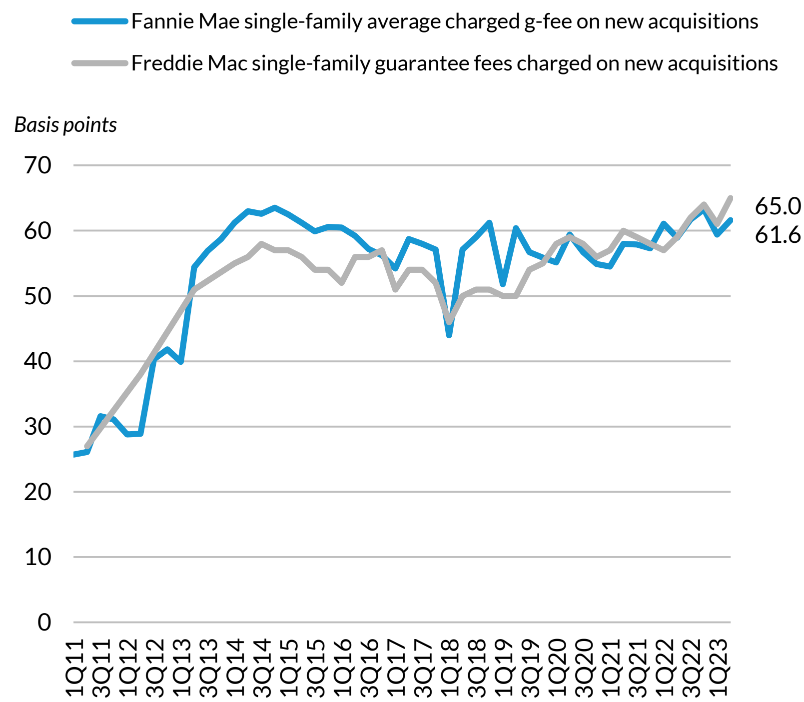
GSES UNDER CONSERVATORSHIP

EFFECTIVE GUARANTEE FEES

Guarantee Fees Charged on New Acquisitions

Fannie Mae's average g-fees charged on new acquisitions increased from 59.4 bps in Q4 2022 to 61.6 basis points in Q1 2023 . Freddie's increased from 61.0 basis points in Q4 2022 to 65.0 basis points in Q1 2023. Fannie Mae and Freddie Mac's average g-fees charged have largely converged since the first quarter of 2020, but the current gap of 3.4 is the widest it has been since Q1 2022. Today's g-fees are markedly higher than g-fee levels in 2011 and 2012, and have contributed to the GSEs' earnings amid sharp drops in acquisition volume. The bottom table shows Fannie Mae LLPAs, which are expressed as upfront charges. In October 2022, the GSEs announced the elimination of LLPAs for loans to FTHB's earning up to the AMI, affordable mortgage products such as Home Possible and Home Ready, and for loans supporting the Duty to Serve program. In January 2023, the GSEs released an updated LLPA Adjustment Matrix, effective May 1, 2023.

Sources: Fannie Mae, Freddie Mae and Urban Institute.
Last updated May 2023.



Fannie Mae Upfront Loan-Level Price Adjustments (LLPAs)

	LTV (%)								
Credit Score	≤60	30.01 – 60	60.01 – 70	70.01 – 75	75.01 – 80	80.01 – 85	85.01 – 90	90.01 – 95	>95
> 779	0.000	0.000	0.000	0.500	0.375	0.375	0.250	0.250	0.125
760 – 779	0.000	0.000	0.000	0.250	0.625	0.625	0.500	0.500	0.250
740 – 759	0.000	0.000	0.125	0.375	0.875	1.000	0.750	0.625	0.500
720 – 739	0.000	0.000	0.250	0.750	1.250	1.250	1.000	0.875	0.750
700 – 719	0.000	0.000	0.375	0.875	1.375	1.500	1.250	1.125	0.875
680 – 699	0.000	0.000	0.625	1.125	1.750	1.875	1.500	1.375	1.125
660 – 679	0.000	0.000	0.750	1.375	1.875	2.125	1.750	1.625	1.250
640 – 679	0.000	0.000	1.125	1.500	2.250	2.500	2.000	1.875	1.500
< 640	0.000	0.125	1.500	2.125	2.750	2.875	2.625	2.250	1.750

Effective 5/1/2023

Sources: Fannie Mae and Urban Institute.
Last updated January of 2023.

GSE RISK-SHARING TRANSACTIONS

Fannie Mae and Freddie Mac have been laying off back-end credit risk through CAS/STACR and reinsurance transactions and front-end risk via originators, reinsurers and mortgage insurers. Since 2014, the GSEs have transferred majority of their credit risk to private markets. Fannie Mae's CAS issuances since inception total $2.20 trillion; Freddie's STACR totals $2.71 trillion. After the COVID-19 spread widening in March 2020, and the re-proposed capital rules released by FHFA shortly thereafter, Fannie Mae did not issue any deals from Mar 2020 to Sep 2021, while Freddie Mac continued to issue. With the changes in the final Capital Rule more CRT friendly, and more positive attitude toward CRT at FHFA, Fannie resumed CAS issuance in October 2021.

Fannie Mae – Connecticut Avenue Securities (CAS)

Date	*Transaction*	*Reference Pool Size ($ m)*	*Amount Issued ($m)*	*% of Reference Pool Covered*
2013	CAS 2013 deals	$26,756	$675	2.5
2014	CAS 2014 deals	$227,234	$5,849	2.6
2015	CAS 2015 deals	$187,126	$5,463	2.9
2016	CAS 2016 deals	$236,459	$7,392	3.1
2017	CAS 2017 deals	$264,697	$8,707	3.3
2018	CAS 2018 deals	$205,900	$7,314	3.6
2019	CAS 2019 deals	$291,400	$8,071	2.8
2020	CAS 2020 deals	$210,000	$3,130	1.5
2021	CAS 2021 deals	$142,202	$3,095	2.2
2022	CAS 2022 deals	$227,576	$6,173	2.7
January 2023	CAS 2023 – R01	$23,101	$731	3.2
February 2023	CAS 2023 – R02	$20,647	$709	3.4
April 2023	CAS 2023 – R03	$38,969	$622	1.6
May 2023	CAS 2023 – R04	$21,404	$765	3.6
June 2023	CAS 2023 – R05	$20,734	$738	3.6
July 2023	CAS 2023 – R06	$20,781	$766	3.7
Total		**$2,200,638**	**$58,853**	**2.7**

Freddie Mac – Structured Agency Credit Risk (STACR)

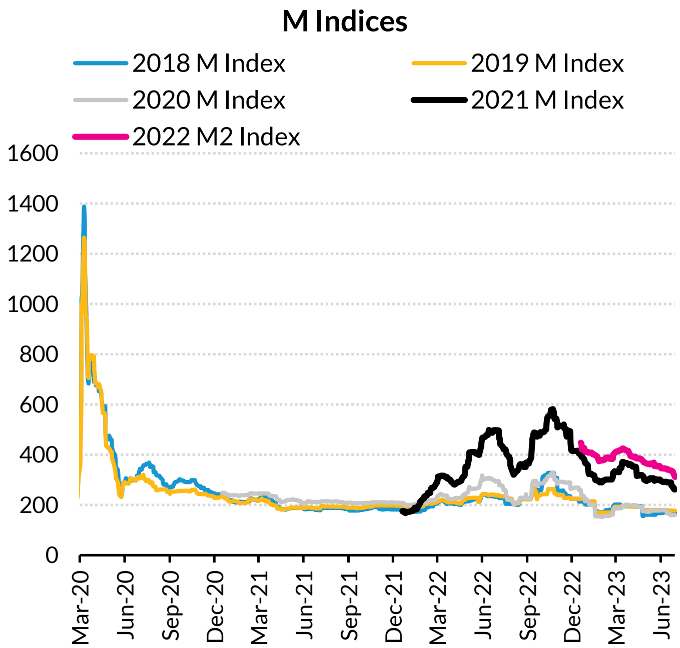
Date	*Transaction*	*Reference Pool Size ($ m)*	*Amount Issued ($m)*	*% of Reference Pool Covered*
2013	STACR 2013 deals	$57,912	$1,130	2.0
2014	STACR 2014 deals	$147,120	$4,916	3.3
2015	STACR 2015 deals	$209,521	$6,658	3.2
2016	STACR 2016 deals	$183,421	$5,541	2.8
2017	STACR 2017 deals	$248,821	$5,663	2.3
2018	STACR 2018 deals	$216,581	$6,055	2.8
2019	STACR 2019 deals	$271,105	$5,947	2.2
2020	STACR 2020 deals	$403,591	$10,372	2.6
2021	STACR 2021 deals	$574,706	$11,024	1.9
2022	STACR 2022 deals	$327,773	$11,203	3.4
March 2023	STACR Series 2023 – DNA1	$15,167	$611	4.0
April 2023	STACR Series 2023– DNA2	$18,242	$762	4.2
May 2023	STACR Series 2023 – HQA1	$13,876	$317	2.3
June 2023	STACR Series 2023 – HQA2	$17,440	$512	2.9
Total		**$2,711,688**	**$71,911**	**2.7**

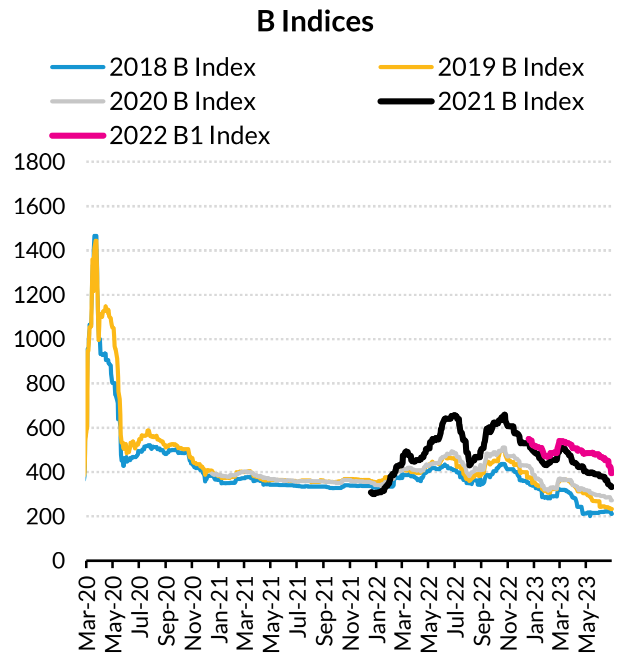
Sources: Fannie Mae, Freddie Mac and Urban Institute. **Note**: Classes A-H, M-1H, M-2H, and B-H are reference tranches only. These classes are not issued or sold. The risk is retained by Fannie Mae and Freddie Mac. “CE” = credit enhancement.

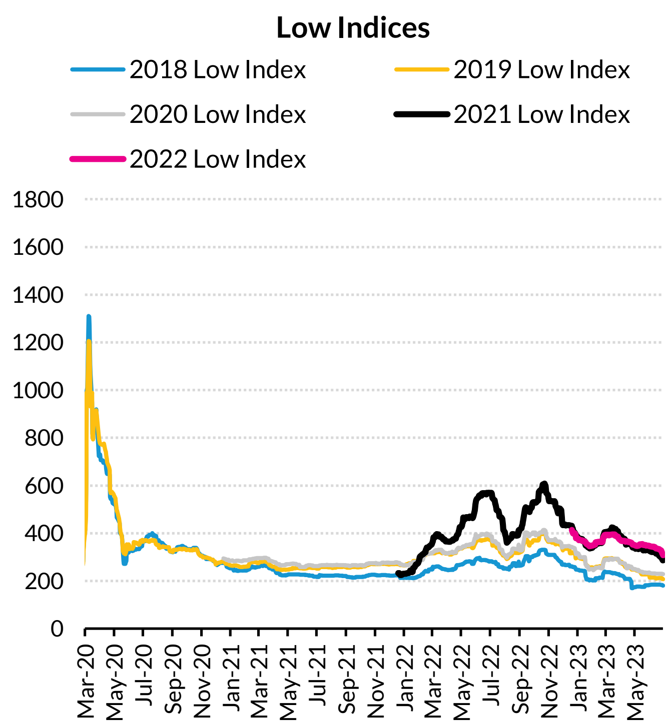
GSES UNDER CONSERVATORSHIP

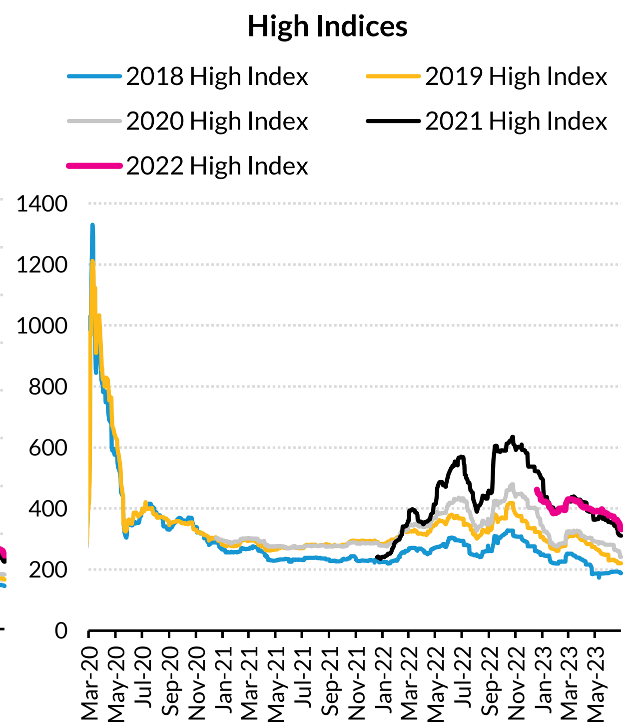
GSE RISK-SHARING INDICES

The figures below show the spreads on 2018, 2019, 2020, 2021 and 2022 indices, as priced by dealers. Note the substantial spread widening in March 2020. This reflected expectations of higher defaults and potential credit losses owing to COVID-19, as well as forced selling. Since then, spreads have narrowed significantly. Spreads, while volatile, were generally widening from February through November of 2022. This reflects slower prepayment expectations and longer exposure to default risk in the face of higher rates. The widening is more pronounced for 2021 and 2022 indices due to less embedded home price appreciation including recent price declines in some market and a growing risk of a recession. Spreads have largely declined over the last 5 months as mortgage non-performance and the unemployment rate remain low and consumer inflation appears to be receding. Note that the 2020 and 2021 indices are heavily Freddie Mac as Fannie did not issue any new deals from Q2 2020 to Q4 2021.







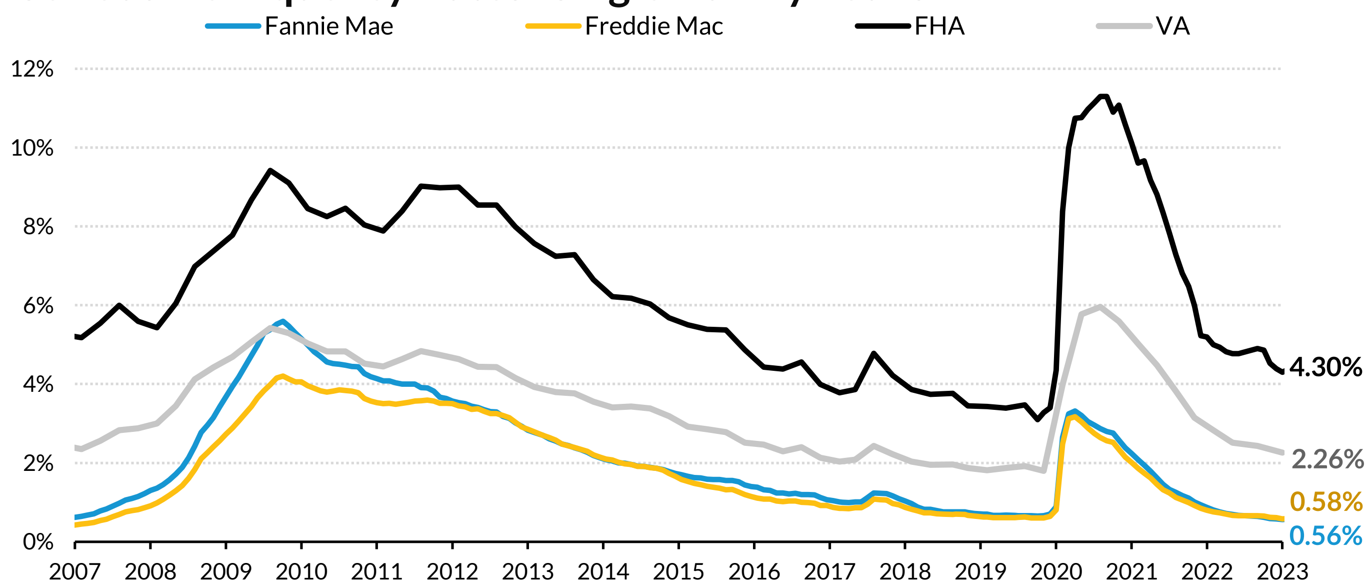


Sources: Vista Data Services and Urban Institute.
Note: Data as of July 14, 2023.

SERIOUS DELINQUENCY RATES

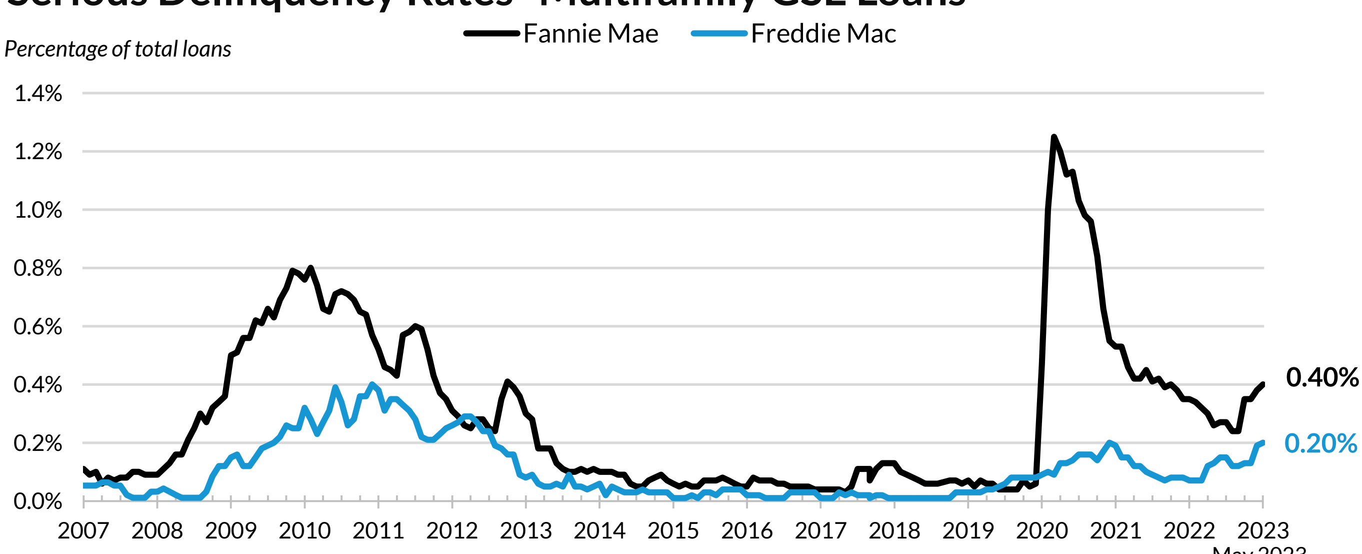
Serious delinquency rates for single family loans have continued their decline. Fannie Mae single-family loans decreased slightly from 0.58 percent in April 2023 to 0.56 percent in May 2023, the serious delinquency rate among Freddie Mac loans likewise decreased slightly from 0.61 percent in April to 0.58 percent in May. Serious delinquency rates for FHA loans, which are higher than those on GSE or VA loans, decreased from 4.39 percent in April to 4.30 percent in May. In Q1 2023, VA serious delinquency rates declined to 2.26 percent from 2.43 percent in Q4 2022. Note that loans that are in forbearance are counted as delinquent for the purpose of measuring delinquency rates. Fannie and Freddie multifamily delinquencies increased noticeably from 0.38 percent and 0.19 percent respectively in April 2023 to 0.40 percent and 0.20 percent in May 2023, but remain relatively low.

Serious Delinquency Rates–Single-Family Loans



Sources: Fannie Mae, Freddie Mac, Federal Housing Administration, MBA Delinquency Survey and Urban Institute.
Note: Serious delinquency is defined as 90 days or more past due or in the foreclosure process. Not seasonally adjusted. VA delinquencies are reported on a quarterly basis, last updated for Q4 2022. GSE and FHA delinquencies are reported monthly, last updated for May 2023.

Serious Delinquency Rates–Multifamily GSE Loans



Sources: Fannie Mae, Freddie Mac and Urban Institute.
Note: Multifamily serious delinquency rate is the unpaid balance of loans 60 days or more past due, divided by the total unpaid balance.

AGENCY ISSUANCE

AGENCY GROSS AND NET ISSUANCE

Agency gross issuance totaled $490.6 billion over the first six months of 2023, $309.2 billion by the GSEs and $181.4 billion by Ginnie Mae. These levels are considerably lower than early 2022 issuance activity. Total 2023 net issuance (new securities issued less the decline in outstanding securities due to principal pay-downs or prepayments) also lags 2022 levels. However, Ginnie Mae has been stronger to-date as the $85.0 billion issued through June exceeds the $52.8 billion issued over the same period in 2022.

Agency Gross Issuance

Issuance Year	GSEs	Ginnie Mae	Total
2002	$1,238.9	$169.0	$1,407.9
2003	$1,874.9	$213.1	$2,088.0
2004	$872.6	$119.2	$991.9
2005	$894.0	$81.4	$975.3
2006	$853.0	$76.7	$929.7
2007	$1,066.2	$94.9	$1,161.1
2008	$911.4	$267.6	$1,179.0
2009	$1,280.0	$451.3	$1,731.3
2010	$1,003.5	$390.7	$1,394.3
2011	$879.3	$315.3	$1,194.7
2012	$1,288.8	$405.0	$1,693.8
2013	$1,176.6	$393.6	$1,570.1
2014	$650.9	$296.3	$947.2
2015	$845.7	$436.3	$1,282.0
2016	$991.6	$508.2	$1,499.8
2017	$877.3	$455.6	$1,332.9
2018	$795.0	$400.6	$1,195.3
2019	$1,042.6	$508.6	$1,551.2
2020	$2,407.5	$775.4	$3,182.9
2021	$2,650.8	$855.3	$3,506.1
2022	$1,200	$527.4	$1.727.4
2023 YTD	$309.2	$181.4	$490.6
YTD 2023 % Change Over 2022	-60.5%	-39.7%	-54.7%
2023 Annualized	618.4	362.8	981.16

Agency Net Issuance

Issuance Year	GSEs	Ginnie Mae	Total
2002	$357.20	-$51.20	$306.10
2003	$334.90	-$77.60	$257.30
2004	$82.50	-$40.10	$42.40
2005	$174.20	-$42.20	$132.00
2006	$313.60	$0.20	$313.80
2007	$514.90	$30.90	$545.70
2008	$314.80	$196.40	$511.30
2009	$250.60	$257.40	$508.00
2010	-$303.20	$198.30	-$105.00
2011	-$128.40	$149.60	$21.20
2012	-$42.40	$119.10	$76.80
2013	$69.10	$87.90	$157.00
2014	$30.5	$61.6	$92.1
2015	$75.1	$97.3	$172.5
2016	$127.4	$125.8	$253.1
2017	$168.5	$131.3	$299.7
2018	$149.4	$112.0	$261.5
2019	$197.8	$95.7	$293.5
2020	$632.8	$19.9	$652.7
2021	$753.5	$5.6	$759.1
2022	$276.6	$133.3	$409.3
2023 YTD	$39.0	$85.0	$124.0
YTD 2023 % Change Over 2022	-82.5%	61.1%	-55.0%
2023 Annualized	$78.0	$170.0	$248.0

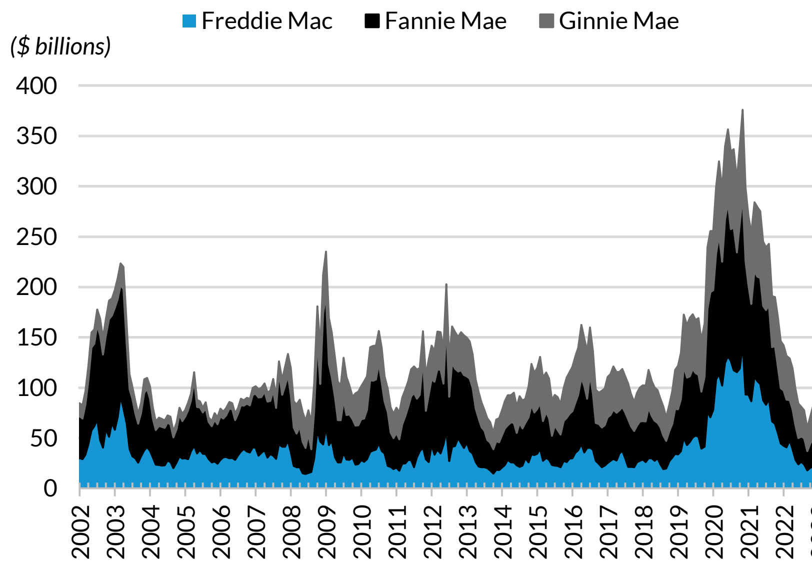
Sources: eMBS and Urban Institute.
Note: Dollar amounts are in billions. Data as of June 2023.

AGENCY GROSS ISSUANCE & FED PURCHASES

Monthly Gross Issuance

While FHA, VA and GSE lending have dominated the mortgage market since the 2008 housing crisis, there has been a change in the mix. The Ginnie Mae share of new issuances has risen from a pre-crisis level of 10-12 percent to 34.8 percent in February 2020, reflecting gains in both purchase and refinance shares. The Ginnie share then declined to a low of 20.4 percent in November 2020, reflecting the more robust ramp up in GSE refinances relative to Ginnie Mae refinances. The Ginnie share increased in recent months while refinances were low reaching a high of 40.8 percent in November 2022. The Ginnie share increased marginally from 35.4 percent in May 2023 to 36.2 percent in June and remains high by historical standards.

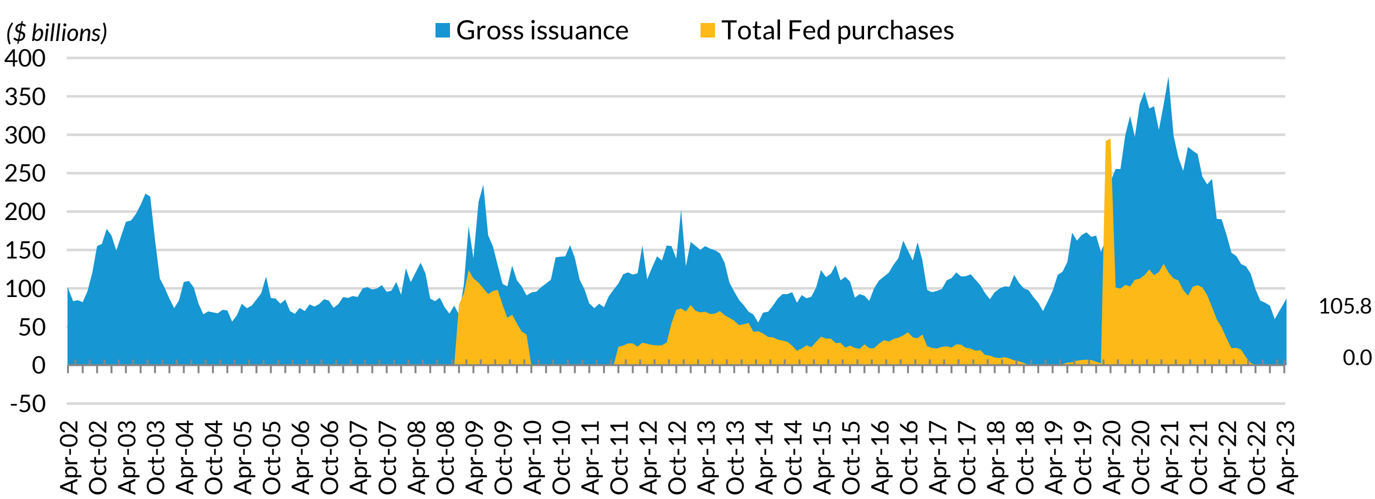
Source: eMBS and Urban Institute Calculations



June 2023

Fed Absorption of Agency Gross Issuance

As of June 2023, agency MBS on the Federal Reserve's balance sheet totals $2.54 trillion, down from $2.71 trillion in June 2022. The Fed's purchases of agency MBS dropped to $0 in November 2022 and has remained low since, reflecting their policy of allowing paydowns up to $35 billion to run off. Beginning in June 2022, the Fed allowed up to $17.5 billion to run off each month; the cap on runoffs increased to $35 billion per month in September 2022. The Federal Reserve's portfolio was a critical policy tool during the pandemic. In March of 2020, the Fed announced they would buy mortgages in an amount necessary to support smooth functioning markets; March and April of 2020 were the largest two months of mortgage purchases ever and exceeded total issuance. Once the market stabilized, the Fed began to purchase $40 billion net of MBS each month; this buying plus runoff replacements equated to purchases of $100 to $125 billion per month. In November 2021, the Fed began to reduce purchases, with these purchases ending in March 2022.



Sources: eMBS, Federal Reserve Bank of New York and Urban Institute.

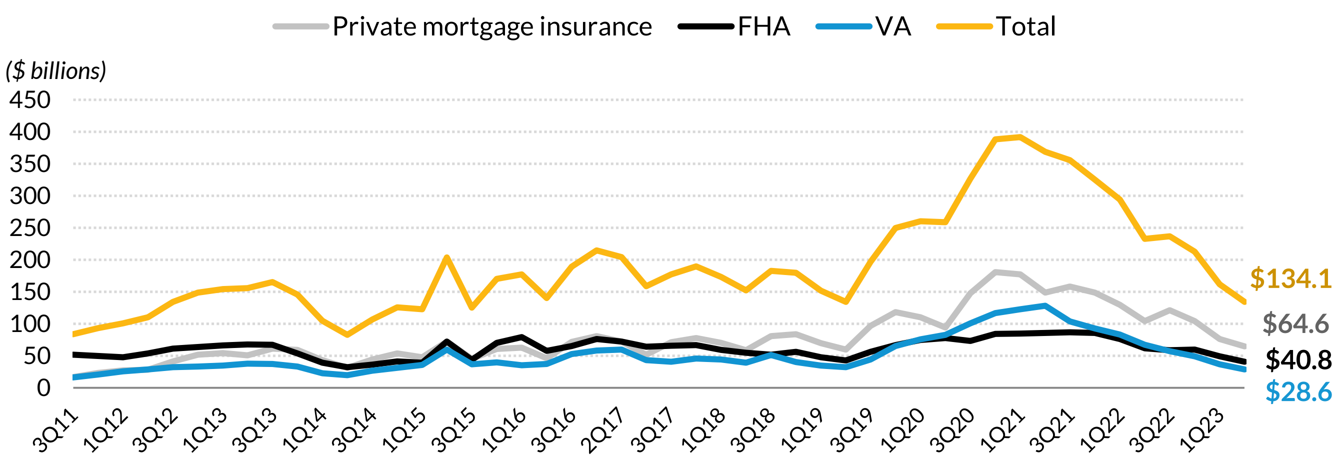
June 2023

AGENCY ISSUANCE

MORTGAGE INSURANCE ACTIVITY

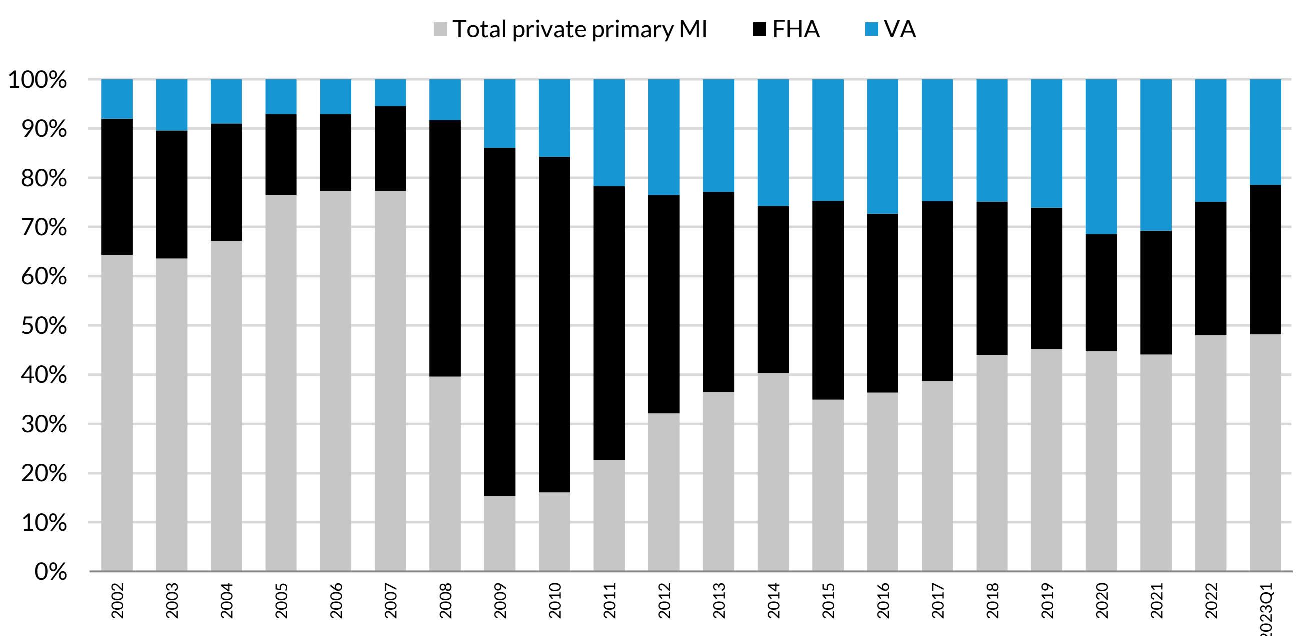
MI Activity

In the first quarter of 2023, private mortgage insurance written decreased by $39.5 billion, FHA decreased by $20.9 billion, and VA decreased by $38.2 billion relative to Q1 2022. Over the same period (i.e. from Q1 2022 to Q1 2023), the private mortgage insurers share increased from 44.7 to 48.2 percent, FHA's share increased from 26.5 to 30.4 percent, and VA's share decreased from 28.8 to 21.4 percent.



Sources: Inside Mortgage Finance and Urban Institute. *Last updated May 2023.*

MI Market Share



Sources: Inside Mortgage Finance and Urban Institute. *Last updated May 2023.*

MORTGAGE INSURANCE ACTIVITY

FHA premiums rose significantly in the years following the housing crash, with annual premiums rising from 50 to 135 basis points between 2008 to 2013 as FHA worked to shore up its finances. In January 2015, President Obama announced a 50 basis points cut in annual insurance premiums. In February 2023, Vice president Harris announced another 30 basis points cut to FHA insurance premiums, making FHA mortgages more attractive than GSE mortgages for the overwhelming majority of borrowers putting down less than 5%. As shown in the bottom table, a borrower putting 3.5 percent down with a FICO score less than 740 will currently find FHA financing to be more financially attractive, borrowers with FICOs of 740 and above will find GSE execution with PMI to be more attractive. This calculation reflects both the FHA MIP cut and the more favorable GSE LLPAs for LMI borrowers.

FHA MI Premiums for Typical Purchase Loan

Case number date	Upfront mortgage insurance premium (UFMIP) paid	Annual mortgage insurance premium (MIP)
1/1/2001 - 7/13/2008	150	50
7/14/2008 - 4/5/2010*	175	55
4/5/2010 - 10/3/2010	225	55
10/4/2010 - 4/17/2011	100	90
4/18/2011 - 4/8/2012	100	115
4/9/2012 - 6/10/2012	175	125
6/11/2012 - 3/31/2013[a]	175	125
4/1/2013 – 1/25/2015[b]	175	135
1/26/2015 – 3/19/2023[c]	175	85
Beginning 3/20/2023	175	55

Sources: Ginnie Mae and Urban Institute.
Note: A typical purchase loan has an LTV over 95 and a loan term longer than 15 years. Mortgage insurance premiums are listed in basis points.
* For a short period in 2008 the FHA used a risk based FICO/LTV matrix for MI.
[a] Applies to purchase loans less than or equal to $625,500. Those over that amount have an annual premium of 150 bps.
[b] Applies to purchase loans less than or equal to $625,500. Those over that amount have an annual premium of 155 bps.
[c] Applies to purchase loans less than or equal to $625,500. Those over that amount have an annual premium of 105 bps.

Initial Monthly Payment Comparison: FHA vs. GSE with PMI

Assumptions	
Property Value	$300,000
Loan Amount	$289,500
LTV	96.5
Base Rate	
Conforming Base Rate	7.16
FHA Base Rate	7.11

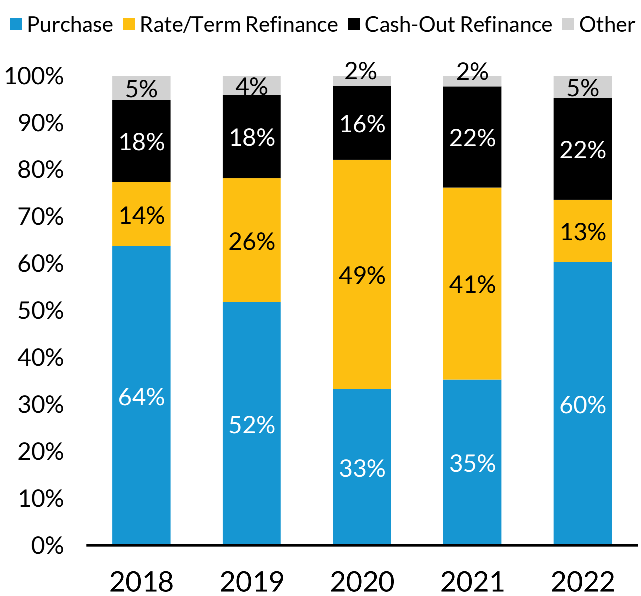
FICO	620 - 639	640 - 659	660 - 679	680 - 699	700 - 719	720 - 739	740 - 759	760 +
FHA MI Premiums								
FHA UFMIP	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
FHA MIP	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
PMI								
PMI Annual MIP	1.50%	1.31%	1.23%	0.98%	0.79%	0.70%	0.58%	0.46%
Monthly Payment								
FHA	$2,113	$2,113	$2,113	$2,113	$2,113	$2,113	$2,113	$2,113
GSE plus PMI	$2,319	$2,273	$2,254	$2,193	$2,147	$2,126	$2,097	$2,068
GSE plus PMI Advantage	-$205	-$159	-$140	-$80	-$34	-$12	$17	$46

Sources: Enact Mortgage Insurance, Ginnie Mae, and Urban Institute. FHA and 30-year conforming rates from MBA Weekly Applications Survey.
Note: Rates as of July 12, 2023.
Mortgage insurance premiums listed in percentage points. Grey shade indicates FHA monthly payment is more favorable, while blue indicates PMI is more favorable.
The PMI monthly payment calculation is based on the 25 percent coverage that applies to Fannie Mae's HomeReady and Freddie Mac's Home Possible (HP) programs.

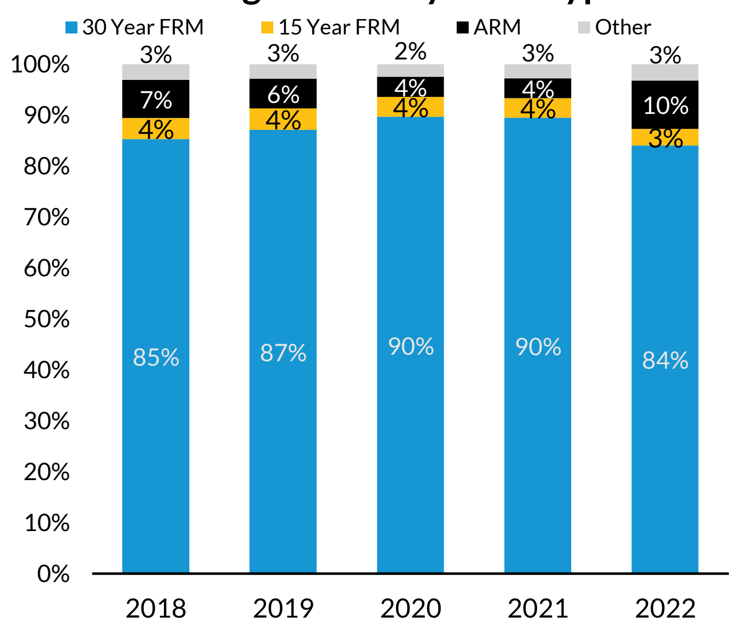
OCCUPANCY AND LOAN TYPE

Purchase loans dominated the mortgage market in 2022, accounting for 60% of origination activity. The ARM share of purchase loans rose to 10 percent in 2022, modestly exceeding its 7 percent share in 2018. Amid a decline in the share of rate-term refinance originations, the ARM share among these loans rose from three percent in 2021 to nine percent in 2022, still less than its 12 percent share in 2018. Among cash-out refinance loans, the ARM share rose from two percent to five percent, still less than its six percent share in 2018. However, among rate-term refinance loans, the 30-year fixed rate mortgage share fell from 66 percent in 2021 to 55 percent in 2022 as the share of Other rate-term refinance loans, largely 20-year loans, rose and the share of 15-year rate-term refinance loans stabilized at higher levels. In contrast, the 30-year fixed rate share among cash-out refinance loans rose between 2021 and 2022 as the shares of 15-year mortgage loans and other mortgage loans declined.

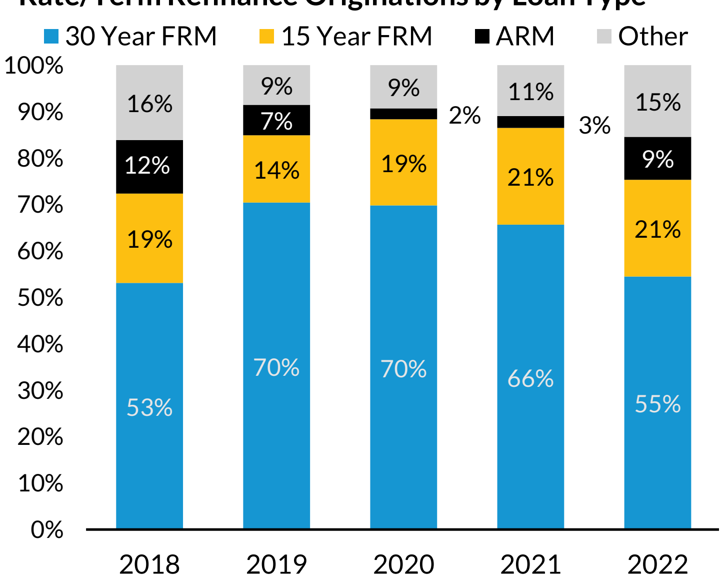
Originated Loans by Purpose



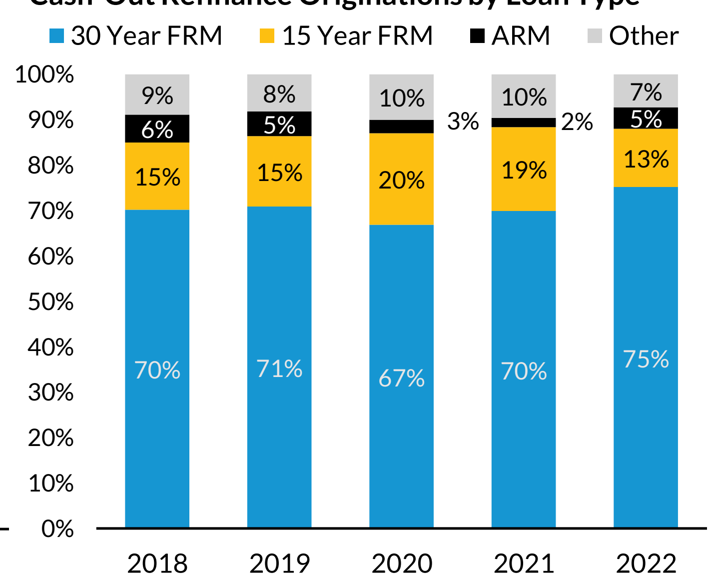
Purchase Originations by Loan Type



Rate/Term Refinance Originations by Loan Type



Cash-Out Refinance Originations by Loan Type



Source: HMDA 2018-2022.
Note: Includes first-lien and one-to-four unit loans only. Shares calculated by loan count. Other Loan Type = residual loans not 30-year, 15-year or ARM.

SPECIAL FEATURE: 2022 HMDA Data Update

DENIAL RATES: Property Type

Amid rising interest rates, denial rates overall rose, from 15.6 percent in 2021 to 22.2 percent in 2022. The denial rate in 2022 was near the 24.0 percent rate recorded during 2018, the year of the last monetary policy tightening cycle, with the increase in the denial rate between 2021 and 2022 greatest among refinance applications. They were also high among home improvement loans. The 2021-2022 change in purchase denial rates was smaller, but unlike refinances and home improvement loans, its 2022 rate of 12.9 percent exceeded its 2018 rate of 12.1 percent. By property type, higher denial rates in 2022 were reflected in both 2-4 unit and manufactured homes.

Denial rates by Property type

	2018	2019	2020	2021	2022
Overall	24.0%	20.4%	15.4%	15.6%	22.2%
One unit	20.5%	17.2%	13.3%	13.6%	18.5%
2-4 unit	33.9%	29.5%	24.5%	23.1%	29.6%
Manufactured Home	45.4%	43.7%	46.8%	44.4%	49.0%
Purchase	12.1%	11.0%	11.5%	11.0%	12.9%
One unit	9.9%	8.8%	8.7%	8.3%	9.4%
2-4 unit	19.4%	17.6%	17.6%	15.9%	18.8%
Manufactured Home	47.0%	46.3%	52.0%	50.6%	52.2%
Refinance	29.2%	20.4%	13.9%	14.7%	24.7%
One unit	28.9%	20.2%	13.7%	14.5%	24.4%
2-4 unit	39.2%	30.9%	24.5%	23.9%	34.0%
Manufactured Home	38.2%	31.0%	25.5%	24.1%	31.9%
Rate-term Refinance	28.5%	18.0%	13.1%	13.9%	23.0%
One unit	28.1%	17.7%	12.9%	13.7%	22.7%
2-4 unit	39.1%	28.7%	23.0%	22.7%	31.9%
Manufactured Home	35.6%	28.2%	23.9%	22.4%	28.4%
Cash-out Refinance	29.9%	23.9%	16.1%	16.3%	25.8%
One unit	29.5%	23.6%	15.9%	16.1%	25.5%
2-4 unit	39.3%	33.7%	27.7%	26.0%	35.6%
Manufactured Home	41.4%	35.1%	30.0%	28.2%	35.2%
Home Improvement	42.5%	42.9%	38.3%	36.2%	35.4%
One unit	41.9%	42.3%	37.8%	35.7%	34.9%
2-4 unit	64.2%	63.8%	60.4%	59.1%	55.5%
Manufactured Home	47.3%	50.4%	52.6%	48.3%	47.7%

Note: All owner-occupied properties. Denial rate excludes loans withdrawn by the applicant, closed for incompleteness or purchased by an institution.
Source: HMDA 2018-2022.

DENIAL RATES: Race and Ethnicity

Denial rates rose in 2022 compared to 2021 for all key racial and ethnic groups. However, applicants of color experienced a greater increase in denial rates compared to white applicants. Among all loans, the Black-white denial rate gap rose from 11.2 percentage points to 13.8 percentage points. The Hispanic-white gap expanded from 6.3 percentage points to 8.5 percentage points. The Asian-white gap, which was non-existent in 2021, rose to 0.7 percentage point in 2022. And the Other-white gap widened from 10.1 percentage points to 11.4 percentage points. This worsening racial disparity in denial rates occurred among both purchase and refinance loans.

Denial Rate					
	2018	2019	2020	2021	2022
Overall	24.0%	20.4%	15.4%	15.6%	22.2%
White	18.5%	15.6%	12.0%	12.2%	16.6%
Black	33.1%	28.7%	23.6%	23.4%	30.4%
Hispanic	27.3%	23.3%	19.0%	18.5%	25.1%
Asian	21.2%	17.3%	13.0%	12.2%	17.3%
Other	30.3%	26.2%	20.4%	20.8%	28.1%
Purchase	12.1%	11.0%	11.5%	11.0%	12.9%
White	9.8%	8.9%	9.1%	8.8%	9.9%
Black	19.5%	18.2%	19.9%	18.9%	21.3%
Hispanic	16.3%	14.6%	15.2%	14.1%	17.0%
Asian	10.9%	9.9%	10.0%	8.4%	10.4%
Other	17.1%	17.0%	17.8%	17.4%	20.7%
Refinance	29.2%	20.4%	13.9%	14.7%	24.7%
White	25.3%	17.7%	11.8%	12.3%	20.3%
Black	44.1%	33.2%	23.3%	23.6%	35.5%
Hispanic	35.7%	26.2%	19.1%	18.9%	30.0%
Asian	30.7%	18.4%	12.5%	12.4%	24.0%
Other	38.5%	28.2%	19.4%	20.5%	31.7%
Rate-term Refinance	28.5%	18.0%	13.1%	13.9%	23.0%
White	24.5%	15.8%	11.2%	11.7%	19.0%
Black	41.6%	27.4%	21.4%	21.5%	33.6%
Hispanic	37.0%	24.0%	18.5%	18.3%	30.6%
Asian	31.3%	16.1%	11.6%	11.7%	23.8%
Other	36.4%	22.6%	18.0%	18.8%	30.4%
Cash-out Refinance	29.9%	23.9%	16.1%	16.3%	25.8%
White	26.1%	20.5%	13.6%	13.4%	21.3%
Black	46.0%	40.5%	30.0%	27.8%	36.4%
Hispanic	34.7%	29.0%	21.2%	20.2%	29.7%
Asian	30.0%	24.6%	17.4%	15.0%	24.3%
Other	39.9%	34.6%	23.4%	23.2%	32.4%
Home Improvement	42.5%	42.9%	38.3%	36.2%	35.4%
White	35.8%	35.8%	32.7%	30.4%	29.1%
Black	65.7%	66.0%	62.5%	58.3%	55.6%
Hispanic	62.1%	62.8%	56.2%	53.4%	51.9%
Asian	52.1%	52.5%	47.8%	43.0%	42.4%
Other	54.1%	55.2%	51.4%	46.3%	44.2%

Note: All owner-occupied properties. Denial rate excludes loans withdrawn by the applicant, closed for incompleteness or purchased by an institution.
Source: HMDA 2018-2022.

Composition of Purchase Loans

The share of high-income home purchasers using a mortgage continues to expand, rising from 39.5 percent in 2021 to 50.3 percent in 2022. In contrast, the share low-to-moderate income homebuyers has been declining and in 2022, its share lagged its average proportion of homeowners. In 2022, high-income borrowers increased to over half, 55.5 percent, of all conventional loans while the share of middle-income and LMI borrowers shrank. Although a smaller proportion of high-income home buyers use a government mortgage, its share of government loan home purchasers increased by 13.8 percentage points in 2022 from 2021 while the share of middle-income home buyers using a government mortgage rose 4.2 percentage points to 35.9 percent. The share of LMI home purchasers using a government loan fell from 44.7 to 27.7 percent over the 2021-2022 period. After declining amid lower interest rates, the share of younger mortgage home purchases, those under 35, remained at 31.9 percent from 2021 to 2022, rising slightly among conventional and decreasing among government home purchases. It is important to realize this youngest cohort of mortgage home purchasers is a larger share of government loans than conventional ones. And, combined with mortgage home buyers aged between 35 and 44, this younger cohort exceeds their share of all homeowners.

Share of Approved Borrowers by Income

	2018	2019	2020	2021	2022
Distribution of All Homeowners					
High	50.0%				
Middle	20.3%				
LMI	29.7%				
Total	100.0%				
Distribution of All Purchase Loans					
High	34.2%	35.6%	36.5%	39.5%	50.3%
Middle	26.4%	25.0%	26.7%	26.7%	26.5%
LMI	39.4%	39.4%	36.9%	33.8%	23.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Distribution of Conventional Purchase Loans					
High	40.9%	42.5%	43.3%	46.0%	55.5%
Middle	24.7%	24.4%	24.5%	24.5%	23.1%
LMI	34.5%	33.1%	32.1%	29.6%	21.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Distribution of Government Purchase Loans					
High	19.8%	21.1%	21.5%	22.6%	36.4%
Middle	30.5%	31.6%	31.6%	32.7%	35.9%
LMI	49.7%	47.3%	46.9%	44.7%	27.7%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Share of Approved Borrowers by Age

	2018	2019	2020	2021	2022
Distribution of all homeowners (2016-2021 average)					
Under 35	10.2%				
35-44	15.9%				
45-54	19.4%				
55-64	22.8%				
65+	31.8%				
Total	100%				
Distribution of all Home purchasers					
Under 35	38.8%	38.6%	40.9%	39.1%	39.1%
35-44	26.5%	26.5%	26.3%	27.5%	27.2%
45-54	17.1%	16.9%	15.9%	16.2%	16.2%
55-64	10.8%	11.0%	10.3%	10.4%	10.7%
65+	6.7%	7.0%	6.7%	6.8%	6.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Distribution of Conventional Home Purchasers					
Under 35	36.8%	36.5%	38.6%	37.3%	37.8%
35-44	26.6%	26.6%	26.5%	27.6%	27.3%
45-54	17.1%	16.9%	15.9%	16.2%	16.1%
55-64	12.0%	12.1%	11.4%	11.3%	11.4%
65+	7.5%	7.9%	7.6%	7.6%	7.4%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Distribution of Government Home Purchasers					
Under 35	41.0%	41.1%	43.5%	41.9%	41.2%
35-44	26.9%	26.9%	26.7%	27.8%	27.5%
45-54	17.8%	17.6%	16.4%	16.8%	17.0%
55-64	8.8%	9.0%	8.3%	8.6%	9.1%
65+	5.5%	5.5%	5.1%	5.0%	5.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Source: HMDA 2018-2022, 5-year ACS 2021 and Urban Institute Calculations.

Note: All originated owner-occupied purchase loans for 1-4 units. Low-to-Moderate Income (LMI) <= 80% of area median income (AMI); Middle income 80-120% of AMI; High Income >= 120% of AMI.

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