



HOUSING FINANCE AT A GLANCE

A MONTHLY CHARTBOOK

January 2021

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.

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CONTENTS

Overview

Market Size Overview

Value of the US Residential Housing Market	6
Size of the US Residential Mortgage Market	6
Private Label Securities	7
Agency Mortgage-Backed Securities	7

Origination Volume and Composition

First Lien Origination Volume & Share	8
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Mortgage Origination Product Type

Composition (All Originations)	9
Percent Refi at Issuance	9

Cash-Out Refinances

Loan Amount After Refinancing	10
Cash-out Refinance Share of All Originations	10
Total Home Equity Cashed Out	10

Nonbank Origination Share

Nonbank Origination Share: All Loans	11
Nonbank Origination Share: Purchase Loans	11
Nonbank Origination Share: Refi Loans	11

Securitization Volume and Composition

Agency/Non-Agency Share of Residential MBS Issuance	12
Non-Agency MBS Issuance	12
Non-Agency Securitization	12

Credit Box

Housing Credit Availability Index (HCAI)

Housing Credit Availability Index	13
Housing Credit Availability Index by Channel	13-14

Credit Availability for Purchase Loans

Borrower FICO Score at Origination Month	15
Combined LTV at Origination Month	15
DTI at Origination Month	15
Origination FICO and LTV by MSA	16

Nonbank Credit Box

Agency FICO: Bank vs. Nonbank	17
GSE FICO: Bank vs. Nonbank	17
Ginnie Mae FICO: Bank vs. Nonbank	17
GSE LTV: Bank vs. Nonbank	18
Ginnie Mae LTV: Bank vs. Nonbank	18
GSE DTI: Bank vs. Nonbank	18
Ginnie Mae DTI: Bank vs. Nonbank	18

State of the Market

Mortgage Origination Projections & Originator Profitability

Total Originations and Refinance Shares	19
Originator Profitability and Unmeasured Costs	19

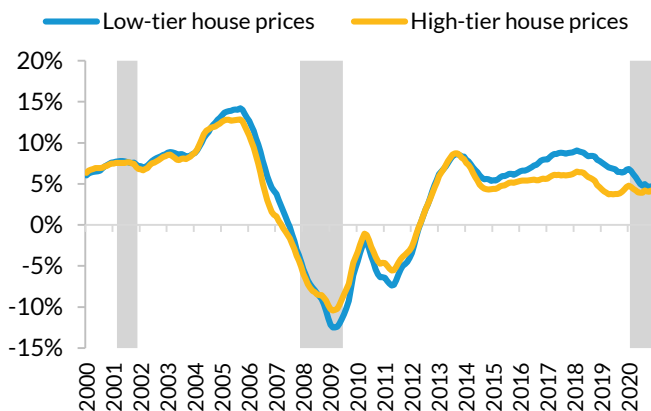
Housing Supply	
Months of Supply	20
Housing Starts and Home Sales	20
Housing Affordability	
National Housing Affordability Over Time	21
Affordability Adjusted for MSA-Level DTI	21
Home Price Indices	
National Year-Over-Year HPI Growth	22
Changes in CoreLogic HPI for Top MSAs	22
First-Time Homebuyers	
First-Time Homebuyer Share	23
Comparison of First-time and Repeat Homebuyers, GSE and FHA Originations	23
Delinquencies and Loss Mitigation Activity	
Negative Equity Share	24
Loans in Serious Delinquency/Foreclosure	24
Forbearance Rates by Channel	24
GSEs under Conservatorship	
GSE Portfolio Wind-Down	
Fannie Mae Mortgage-Related Investment Portfolio	25
Freddie Mac Mortgage-Related Investment Portfolio	25
Effective Guarantee Fees & GSE Risk-Sharing Transactions	
Effective Guarantee Fees	26
Fannie Mae Upfront Loan-Level Price Adjustment	26
GSE Risk-Sharing Transactions and Spreads	27-28
Serious Delinquency Rates	
Serious Delinquency Rates – Fannie Mae, Freddie Mac, FHA & VA	29
Serious Delinquency Rates – Single-Family Loans & Multifamily GSE Loans	29
Agency Issuance	
Agency Gross and Net Issuance	
Agency Gross Issuance	30
Agency Net Issuance	30
Agency Gross Issuance & Fed Purchases	
Monthly Gross Issuance	31
Fed Absorption of Agency Gross Issuance	31
Mortgage Insurance Activity	
MI Activity & Market Share	32
FHA MI Premiums for Typical Purchase Loan	33
Initial Monthly Payment Comparison: FHA vs. PMI	33
Related HFPC Work	
Publications and Events	34

INTRODUCTION

Homebuying Affordability May Be a Key 2021 Theme

Home prices have continued to climb throughout the current recession, led by faster-paced growth among the lowest-priced homes, but a slowdown in their rate of growth has brought the pace of growth in both the highest- and lowest-priced homes to near convergence. For renters, the slowdown in low-tier home price growth may have improved homebuying affordability, but rental price growth has also slowed, potentially neutralizing the choice between renting and owning. Even though rental price growth has slowed, the decline in mortgage rates makes homeownership relatively more attractive than it was at this time last year.

Year-Over-Year House Price Appreciation

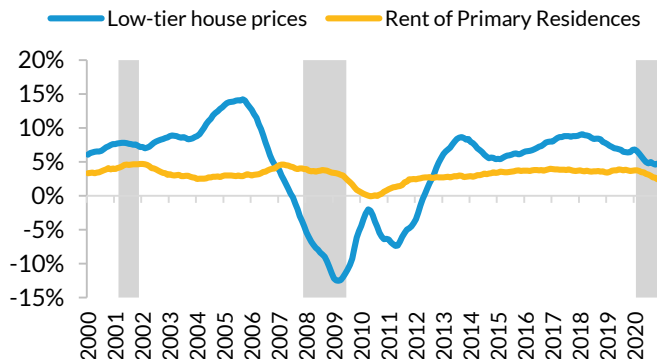


Note: Grey regions denote recessions as defined by the National Bureau of Economic Research.

Source: Urban Institute calculations using BlackKnight data, National Bureau of Economic Research.

BlackKnight provides home price data by five tiers ranging from the lowest priced to the highest priced homes. The figure above compares the year-over-year growth rate between the lowest-tier and highest-tier of home prices. During the current recession, the gap in the home price appreciation in the two tiers narrowed from 2.0 percentage points in January to 0.5 percentage point by November. Over this period, low-tier growth slowed from 6.8 to 4.7 percent and high-tier growth slowed from 4.8 to 4.2 percent.

Year-Over-Year Change in House Prices and Rent



Note: Grey regions denote recessions as defined by the National Bureau of Economic Research.

Source: Urban Institute calculations using BlackKnight data, Bureau of Labor Statistics, National Bureau of Economic Research.

The convergence between low- and high-tier home price growth largely reflects a slowdown in price appreciation among lowest-tier homes, a trend broadly in place since the beginning of 2018, which is a welcome sign for homebuying affordability, particularly for first-time homebuyers. However, the Consumer Price Index data indicate that rent growth for primary residences slowed over 2020 as well, from 3.8 percent in January to 2.4 percent by November.

The slowdown in low-tier home price growth combined with a 90-basis point decline in mortgage rates, from an average of 3.6 percent to 2.7 percent between January and December 2020, likely improved the affordability of low-tier homes relative to renting for many.

The following example illustrates the impact of lower rates. Assume a first-time homebuyer is choosing between purchasing a \$210,000 home with a 3.5 percent downpayment using a Federal Housing Administration (FHA) mortgage or renting a home for \$1,775. The mortgage payment, assuming the upfront mortgage insurance premium was folded into the mortgage amount, would be \$1,109 month. Allowing for taxes, insurance and maintenance (3.75 percent of home price) their total monthly housing expenses would be \$1,765, \$10 cheaper than renting. By contrast, a year earlier, with lower home prices and higher interest rates, the cost of owning a home was \$1,808, versus renting at \$1,733, a \$74 gap in favor of renting. These dynamics likely contributed to the recovery in home sales.

Will this continue to be the case? It's hard to tell. Many housing analysts predict slower home price growth in 2021, but mortgage rates are expected to rise in response to prospects for fiscal policy and the continued vaccine rollout. Higher rates could offset any improvement in housing affordability from slower home price growth. Amid these dynamics, maintaining homebuying access and affordability by expanding down payment assistance programs, reassessing how we qualify borrowers for mortgages, including a full accounting for income and using alternative credit, and encouraging more high-density building will help more renters reach homeownership.

INSIDE THIS ISSUE

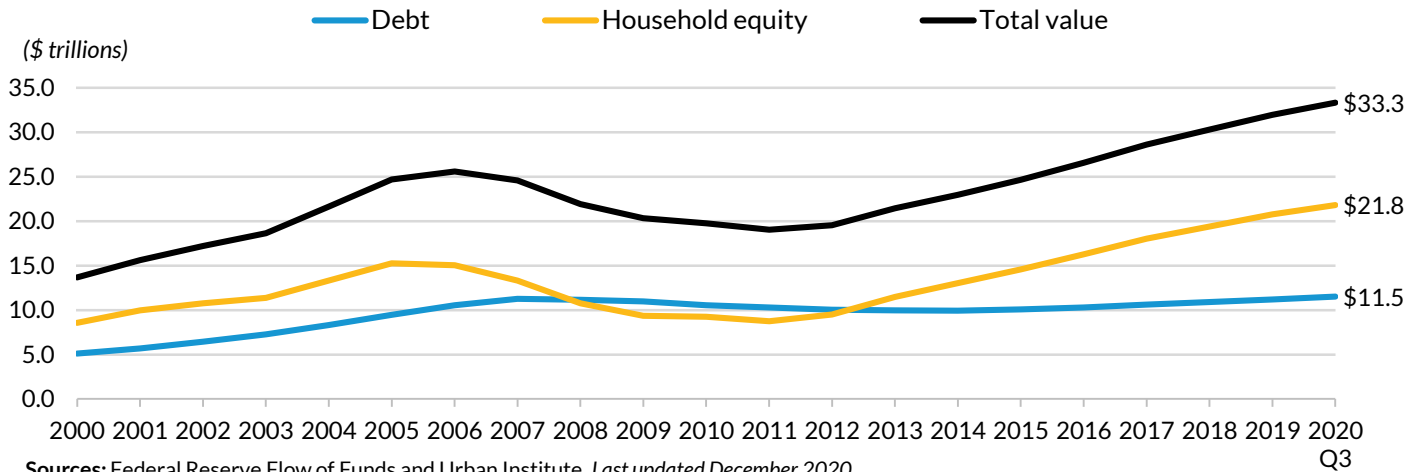
- The refinance share for Ginnie Mae mortgages reached 61.7 percent in December 2020, the highest level since December 2009 (Page 9).
- The non-agency share of mortgage securitizations fell to 2.44 percent in 2020, from 4.9 percent in 2019 and 7.4 percent in 2018. This decline reflects both the large increase in agency securitization volume triggered by ultra-low rates in 2020, as well as the fact that the non-agency market was effectively shut during for 4 months as a result of COVID-related liquidity issues (Page 12).
- Our latest Housing Credit Availability Index (HCAI) shows that credit availability fell marginally from 5.1 percent in Q2 2020 to 5.0 percent in Q3 (Page 13).
- Months of supply declined to a new record low for the fourth month in a row, reaching 1.9 months in December 2020 (Page 20).

OVERVIEW

MARKET SIZE OVERVIEW

The Federal Reserve's Flow of Funds Report has indicated a gradually increasing total value of the housing market, driven primarily by growing home equity since 2012. The Q3 2020 numbers show that while mortgage debt outstanding remained steady at \$11.5 trillion, total home equity grew slightly from \$21.5 trillion in Q2 2020 to \$21.8 trillion in the third quarter of 2020, bringing the total value of the housing market to \$33.3 trillion. This is 30.3 percent higher than the pre-crisis peak in 2006. Agency MBS account for 63.4 percent of the total mortgage debt outstanding, private-label securities make up 3.7 percent, and unsecuritized first liens make up 28.9 percent. Home equity loans comprise the remaining 4.0 percent of the total.

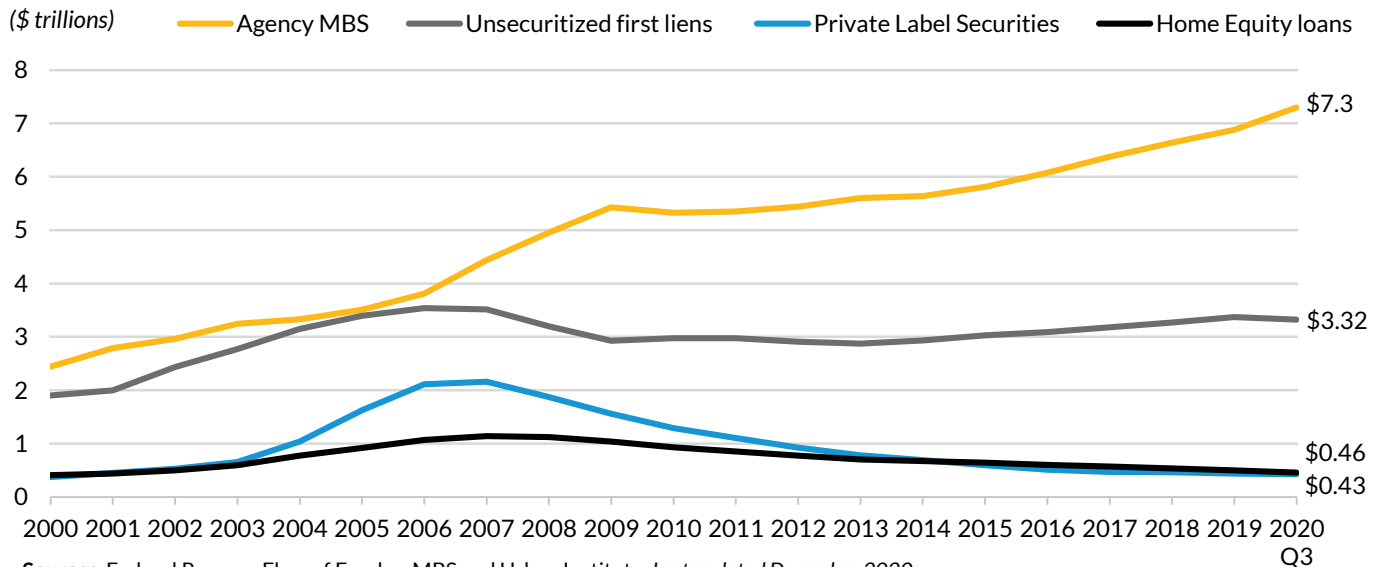
Value of the US Single Family Housing Market



Sources: Federal Reserve Flow of Funds and Urban Institute. Last updated December 2020.

Note: Single family includes 1-4 family mortgages. The home equity number is grossed up from Fed totals to include the value of households and the non-financial business sector.

Composition of the US Single Family Mortgage Market



Sources: Federal Reserve Flow of Funds, eMBS and Urban Institute. Last updated December 2020.

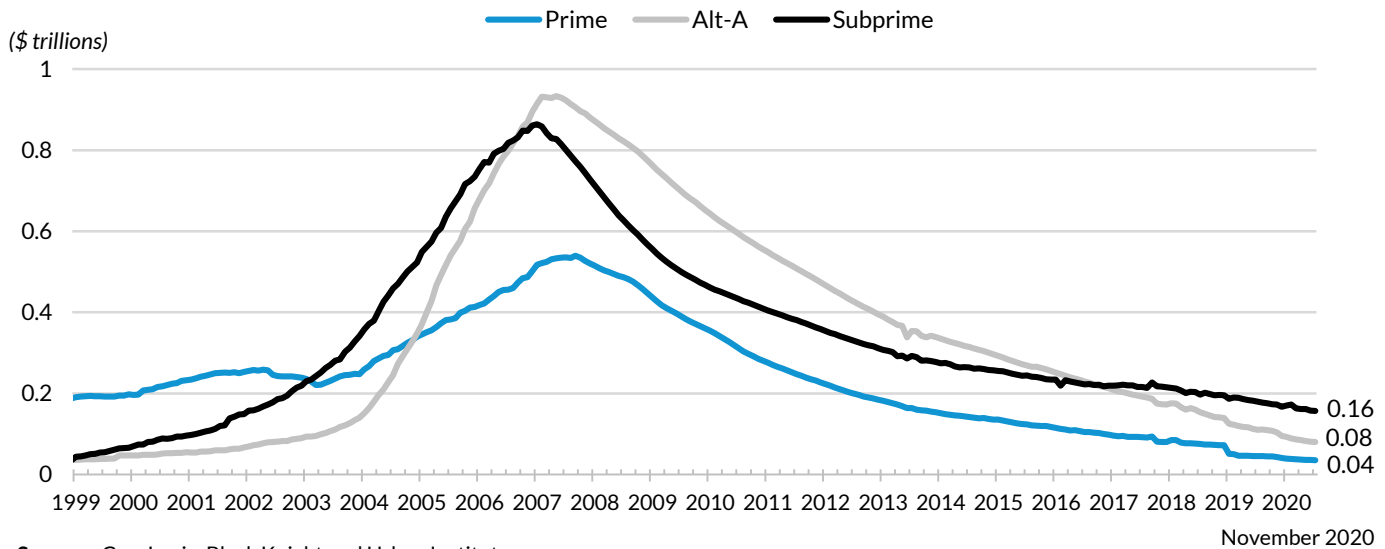
Note: Unsecuritized first liens includes loans held by commercial banks, GSEs, savings institutions, credit unions and other financial companies.

OVERVIEW

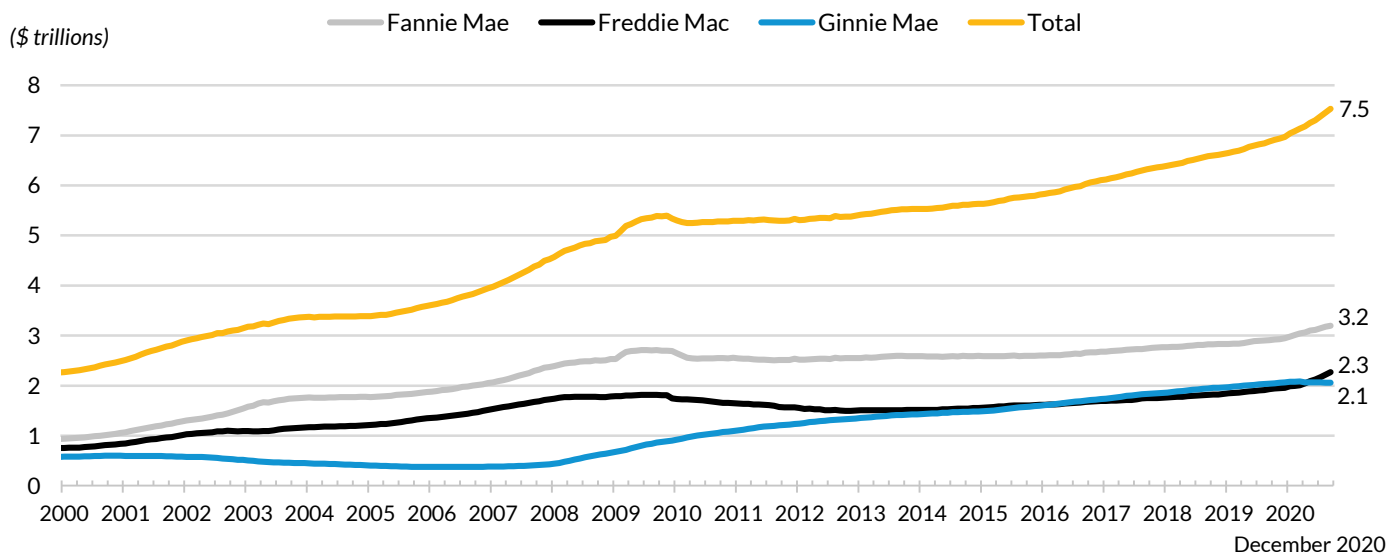
MARKET SIZE OVERVIEW

As of November 2020, our sample of first lien mortgage debt in the private-label securitization market totaled \$272 billion and was split among prime (12.9 percent), Alt-A (29.4 percent), and subprime (57.8 percent) loans. In December 2020, outstanding securities in the agency market totaled \$7.5 trillion, 42.5 percent of which was Fannie Mae, 30.2 percent Freddie Mac, and 27.4 percent Ginnie Mae.

Private-Label Securities by Product Type



Agency Mortgage-Backed Securities

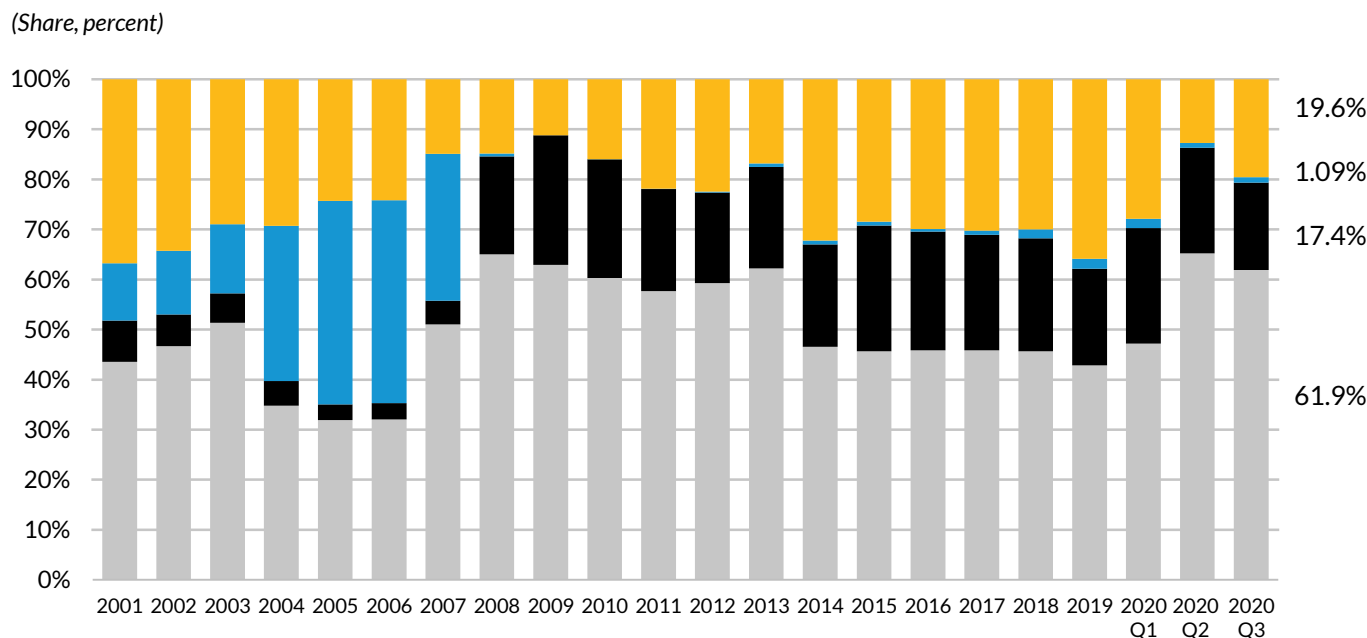
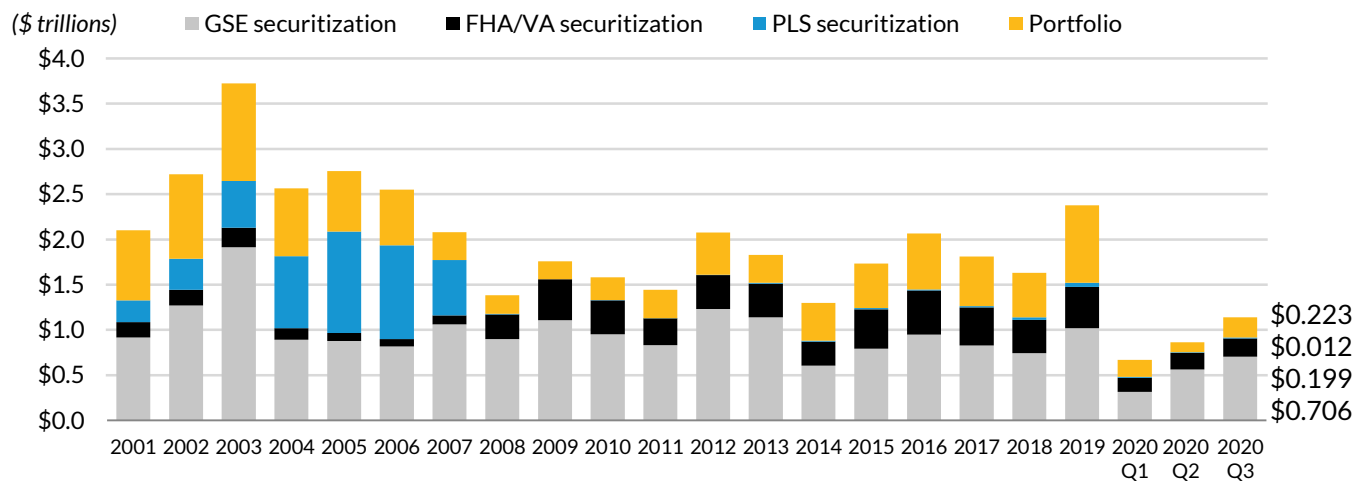


OVERVIEW

ORIGINATION VOLUME AND COMPOSITION

First Lien Origination Volume

In the third quarter of 2020, first lien originations totaled \$1.14 trillion, up 62.9 percent from the Q3 2019 volume of \$700 billion. The share of portfolio originations was 19.6 percent in Q3 2020, a significant decline from the 33.3 percent share in the same period of 2019. The Q3 2020 GSE share stood at 61.9 percent, up from 45.3 percent in Q3 2019. The Q3 2020 FHA/VA share declined slightly to 17.4 percent, compared to 19.5 percent last year. Private-label securitization currently tallies 1.1 percent, down from 1.8 percent one year ago, and a fraction of its share in the pre-bubble years. With private capital pulling back significantly because of the economic downturn, the federal government is once again playing the dominant role in the mortgage market.

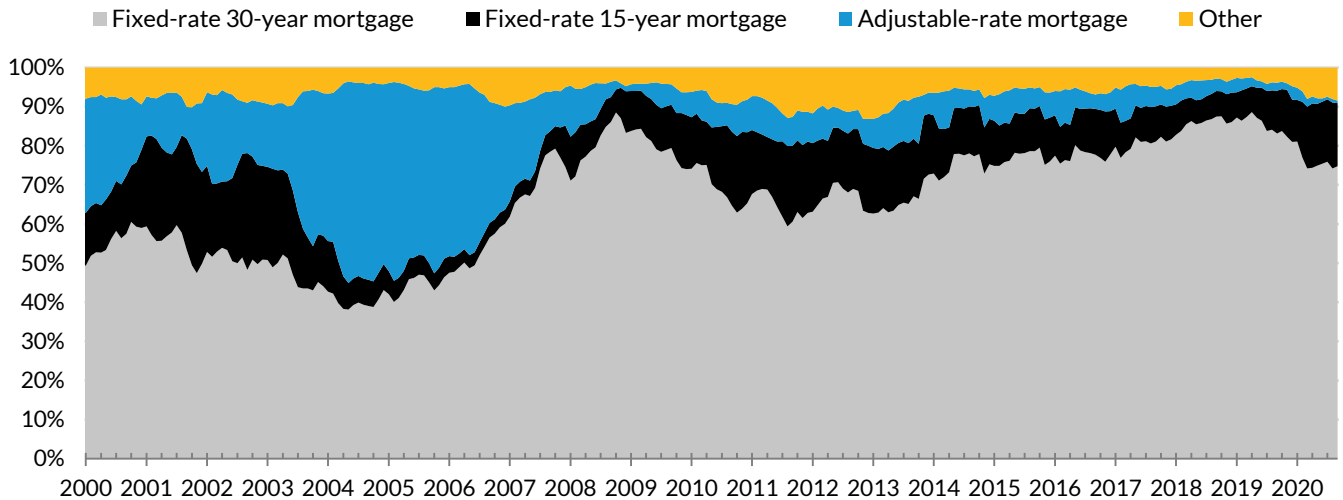


OVERVIEW

PRODUCT COMPOSITION AND REFINANCE SHARE

The 30-year fixed-rate mortgage continues to remain the bedrock of the US housing finance system, accounting for 74.7 percent of new originations in November 2020. The share of 15-year fixed-rate mortgages, predominantly a refinance product, was 16.1 percent of new originations in November 2020, up from 11.0 percent in November 2019, reflecting a refinance boom amidst record low rates. The ARM share accounted for 0.7 percent of new originations. Since late 2018, while there has been some month-to-month variation, the refinance share (bottom chart) has generally grown for both the GSEs as interest rates have dropped; the GSE refi shares are in the 70 to 76 percent range. The Ginnie Mae refi share spiked significantly in December 2020 to 61.7 percent, up from 52.0 percent the previous month.

Product Composition

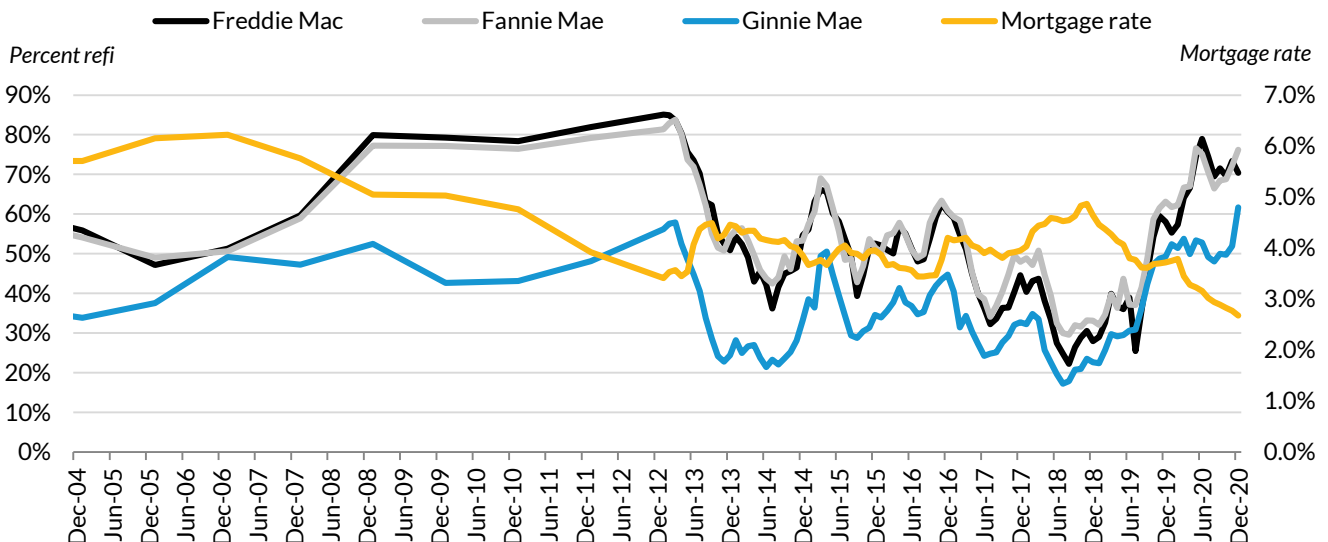


Sources: Black Knight, eMBS, HMDA, SIFMA and Urban Institute.

November 2020

Note: Includes purchase and refinance originations.

Percent Refi at Issuance



Sources: eMBS and Urban Institute.

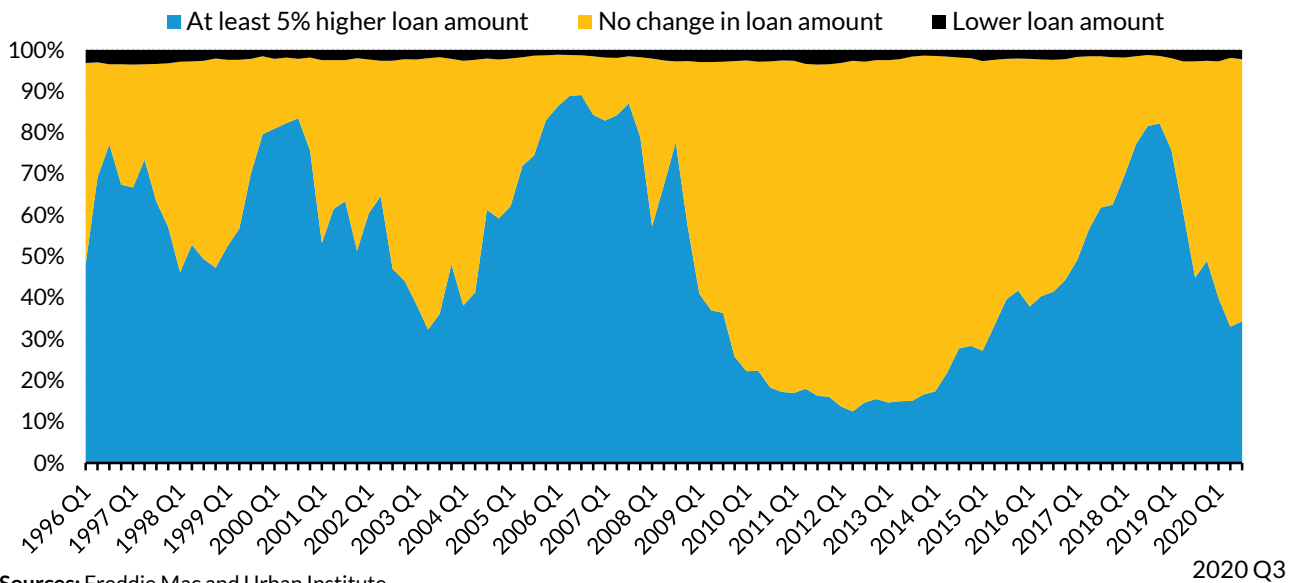
Note: Based on at-issuance balance. Figure based on data from December 2020.

OVERVIEW

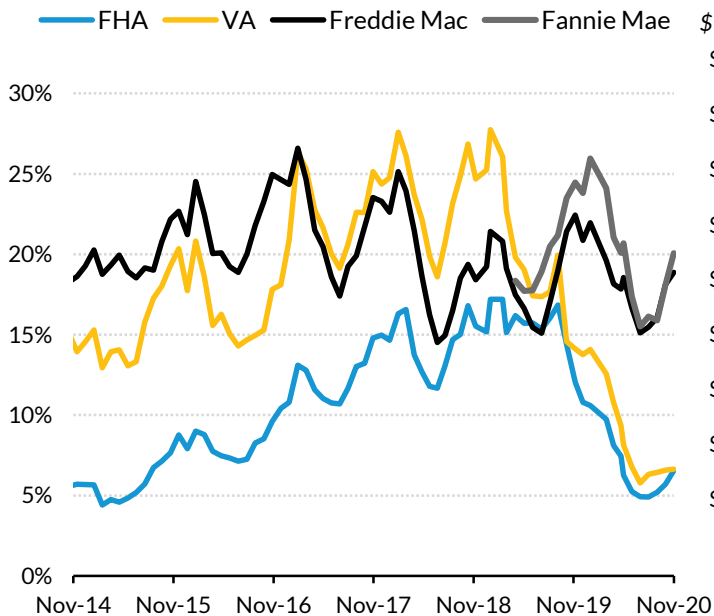
CASH-OUT REFINANCES

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 refi share has generally fallen during 2020, due to increased rate refinance activity from borrowers taking advantage of historically low rates, though Q3 showed a slight uptick to 34 percent, from 33 percent the previous quarter. Note that while home prices have risen, equity take-out volumes are still substantially lower now than during the bubble years.

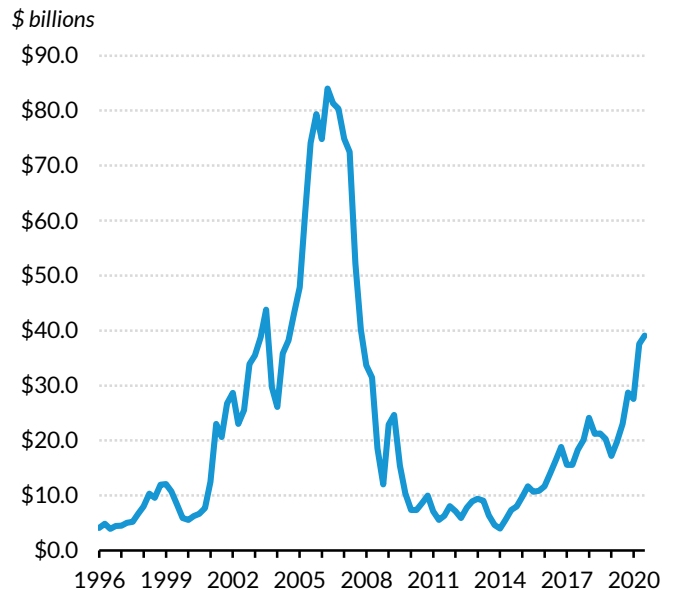
Loan Amount after Refinancing



Cash-out Refi Share of All Originations



Equity Take-Out from Conventional Mortgage Refinance Activity

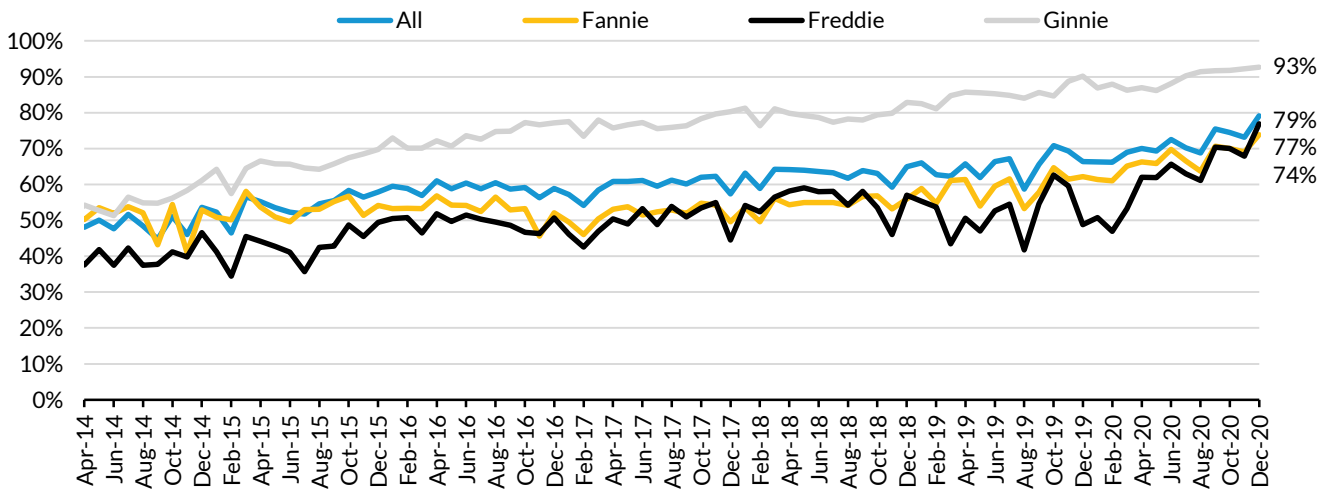


OVERVIEW

AGENCY NONBANK ORIGINATION SHARE

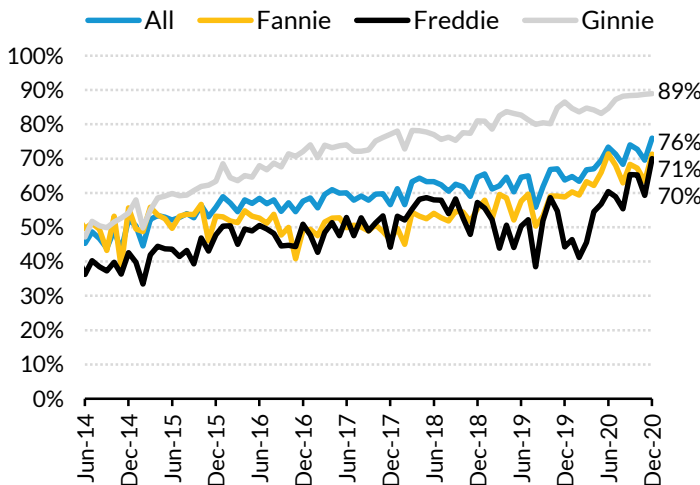
The nonbank share for agency originations has been rising steadily since 2013, standing at 79 percent in December 2020. The Ginnie Mae nonbank share has been consistently higher than the GSEs, increasing slightly in December 2020 to 93 percent. Fannie and Freddie had nonbank shares of 74 and 77 percent, respectively, in December 2020. Ginnie Mae, Fannie Mae, and Freddie Mac all have higher nonbank origination shares for refi activity than for purchase activity.

Nonbank Origination Share: All Loans



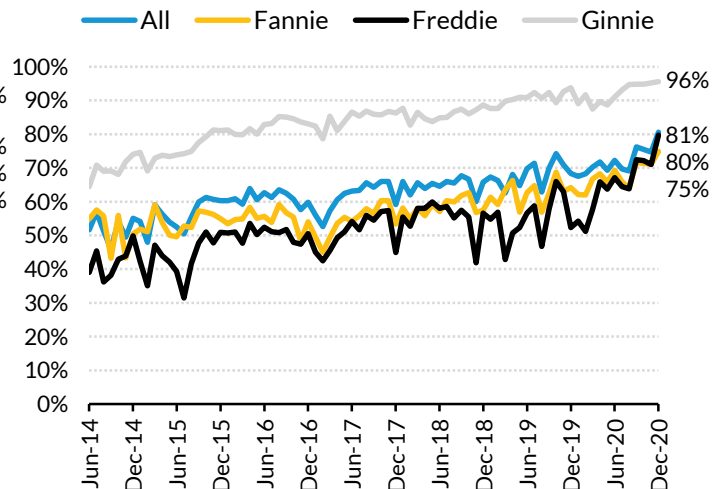
Sources: eMBS and Urban Institute.

Nonbank Origination Share: Purchase Loans



Sources: eMBS and Urban Institute.

Nonbank Origination Share: Refi Loans



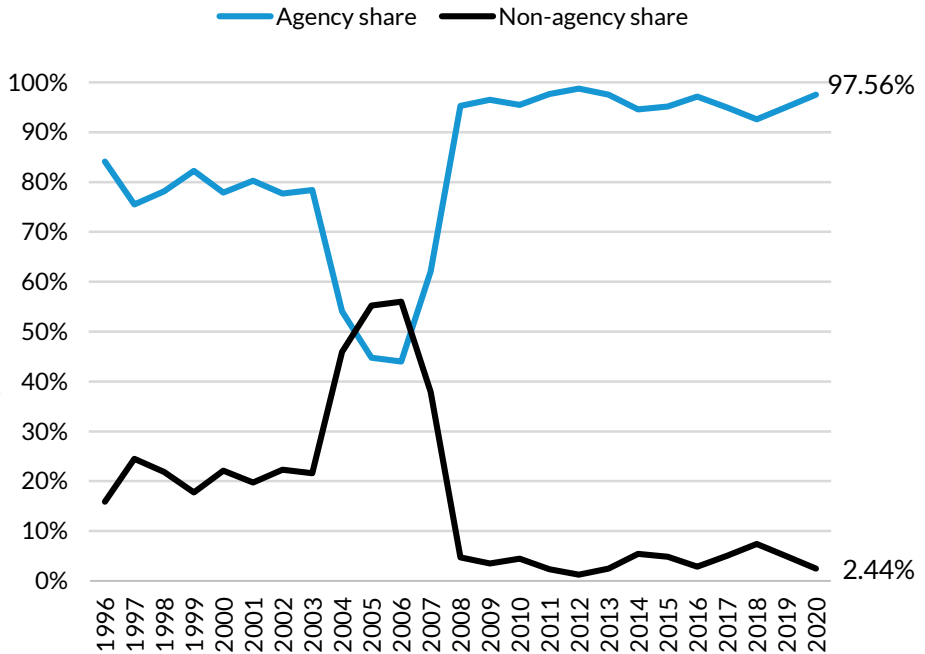
Sources: eMBS and Urban Institute.

OVERVIEW

SECURITIZATION VOLUME AND COMPOSITION

Agency/Non-Agency Share of Residential MBS Issuance

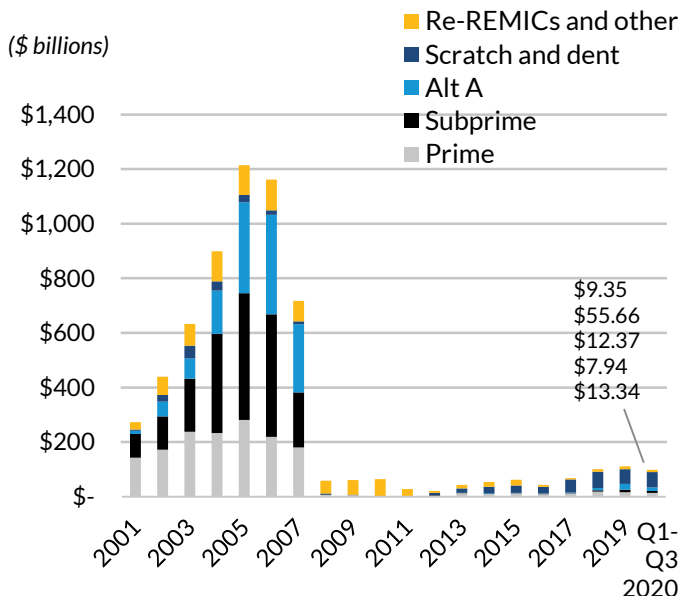
The non-agency share of mortgage securitizations increased gradually over the post-crisis years, from 1.83 percent in 2012 to 5.0 percent in 2019. In 2020, the non-agency share was 2.44 percent, compared to 4.96 percent in 2019. The sharp drop in 2020 reflects the fact that the non-agency market production has been low due to dislocations caused by COVID-19. Non-agency securitization volume totaled \$98.65 billion in the first three quarters of 2020, an increase relative to the \$76.16 billion total from the same period of 2019, but much less of an increase than we saw in the agency market, hence the smaller market share. There was a strong rebound in Q3 of 2020—\$60 billion of the \$98.65 billion was securitized during the quarter (mostly scratch and dent), suggesting improved market conditions compared to Q1 and Q2. Non-agency securitizations continue to be tiny compared to pre-housing market crisis levels.



Sources: Inside Mortgage Finance and Urban Institute.

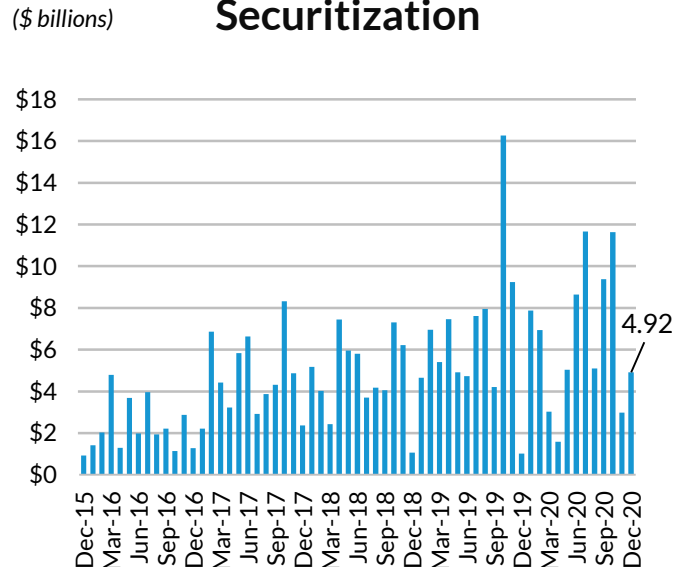
Note: Based on data from November 2020. Monthly non-agency volume is subject to revision.

Non-Agency MBS Issuance



Sources: Inside Mortgage Finance and Urban Institute.

Monthly Non-Agency Securitization



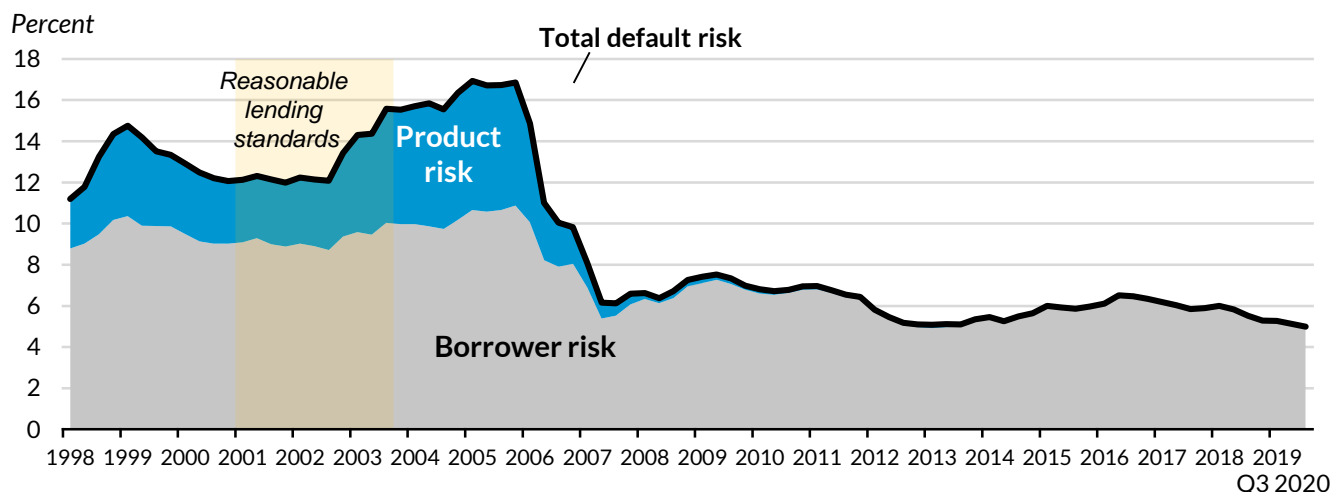
Sources: Inside Mortgage Finance and Urban Institute.

CREDIT BOX

HOUSING CREDIT AVAILABILITY INDEX

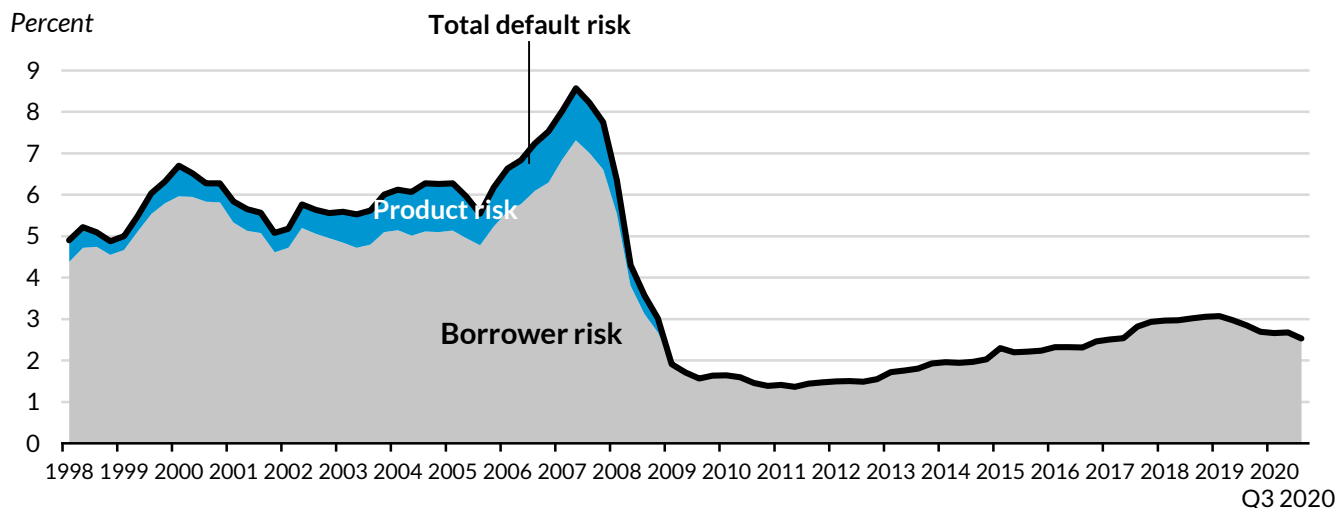
The Urban Institute's Housing Credit Availability Index (HCAI) assesses lenders' tolerance for both borrower risk and product risk, calculating the share of owner-occupied purchase loans that are likely to go 90+ days delinquent over the life of the loan. The HCAI stood at 5.0 percent in Q3 2020, down very slightly from 5.1 percent in Q1 2020. Note that we updated the methodology as of Q2 2020, see new methodology [here](#). Tightening in the GSE and government channels has driven a retraction of credit availability through the first three quarters of 2020, as the risk in the portfolio and private-label securitization market remains a shadow of what it once was. More information about the HCAI is available [here](#).

All Channels



GSE Channel

The credit box has expanded proportionately more in the GSE channel than in the government channel in recent years, although the GSE box is still much narrower. From Q2 2011 to Q1 2019, the total risk taken by the GSE channel more than doubled, from 1.4 percent to 3.0 percent. This is still very modest by pre-crisis standards. However, over the past year, credit availability has trended down and tightened further throughout 2020 in response to changing market conditions due to COVID-19, standing at 2.5 percent in Q3 2020.



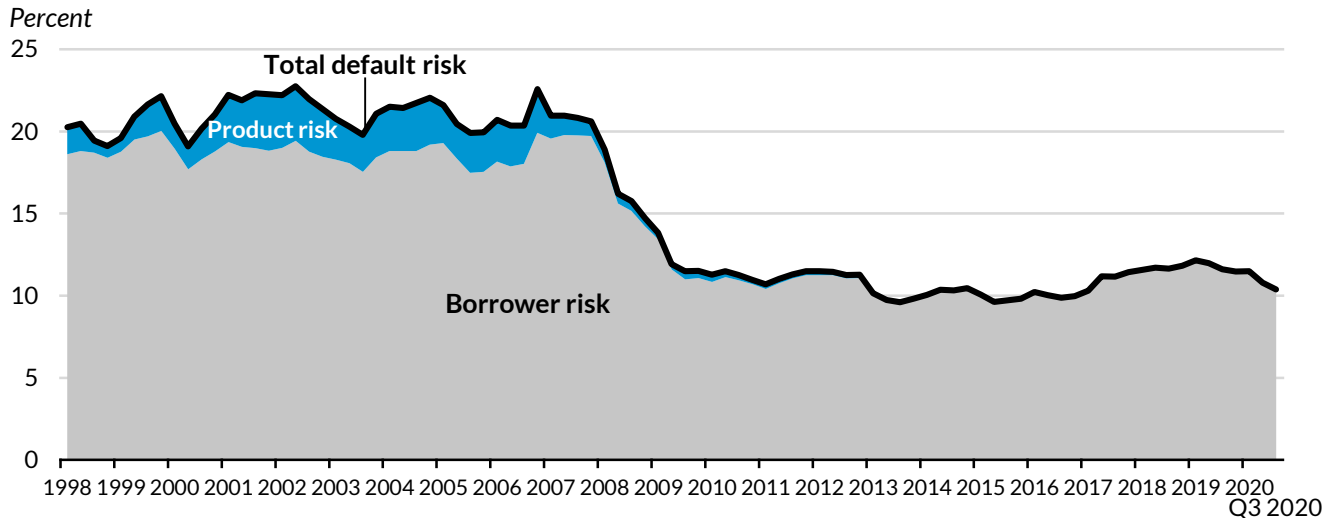
Sources: eMBS, CoreLogic, HMDA, IMF, and Urban Institute.

Note: Default is defined as 90 days or more delinquent at any point. Last updated January 2021.

HOUSING CREDIT AVAILABILITY INDEX

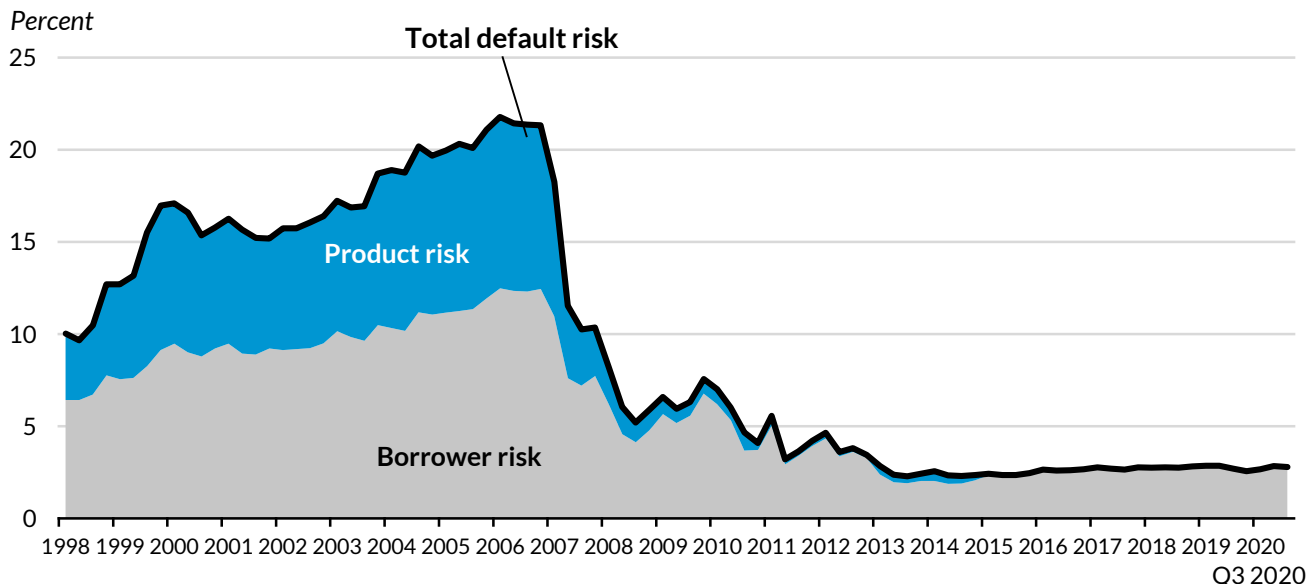
Government Channel

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 nine quarters from Q4 2016 to Q1 2019, the risk in the government channel had risen significantly from 9.9 to 12.1 percent. The risk in the government channel has been reduced since then, notably in quarters two and three of 2020, declining to 10.4 percent in Q3 and moving closer to 2016 levels, still far below the pre-bubble level 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 2.5 to 3.0 percent; it was 2.8 percent in Q3 2020. However, the PP market share plummeted during the COVID-19 crisis, as borrowers increasingly used government or GSE channels or could not obtain a mortgage at all.



Sources: eMBS, CoreLogic, HMDA, IMF, and Urban Institute.

Note: Default is defined as 90 days or more delinquent at any point. Last updated January 2021.

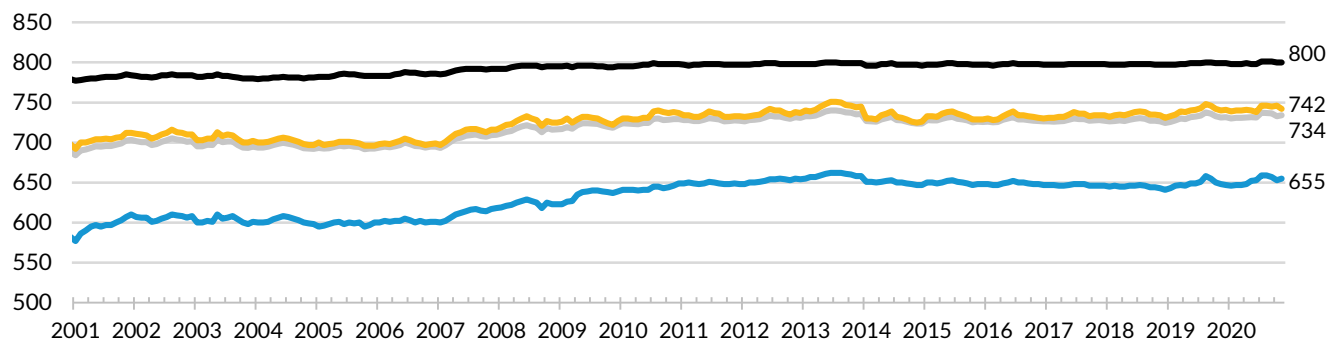
CREDIT AVAILABILITY FOR PURCHASE LOANS

Access to credit remains tight, especially for lower FICO borrowers. The median FICO for current purchase loans is about 42 points higher than the pre-housing crisis level of around 700. The 10th percentile, which represents the lower bound of creditworthiness to qualify for a mortgage, was 655 in November 2020, which is high compared to low-600s pre-bubble. The median LTV at origination of 95 percent also remains high, reflecting the rise of FHA and VA lending. Origination DTIs have trended lower over the course of 2020, reflecting the sharp decline in mortgage rates.

— Mean — 90th percentile — 10th percentile — Median

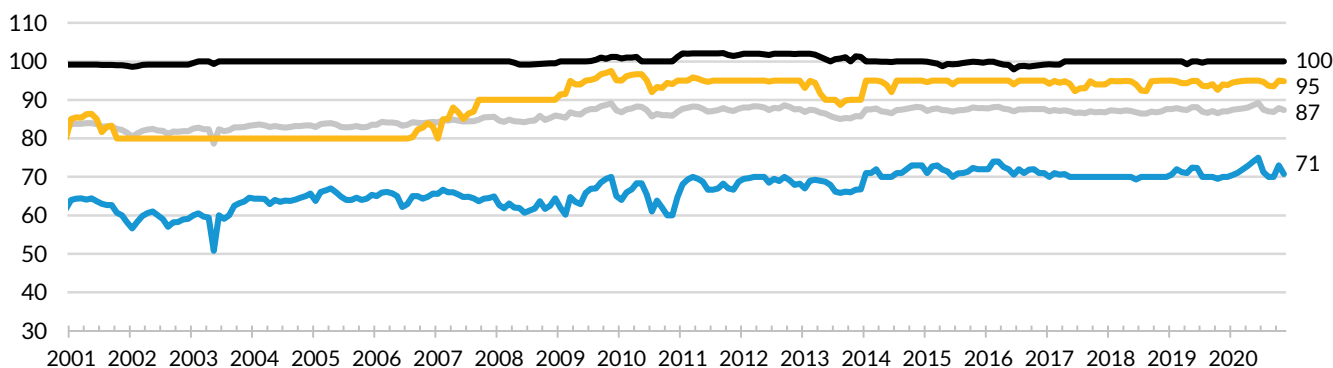
Borrower FICO Score at Origination

FICO Score



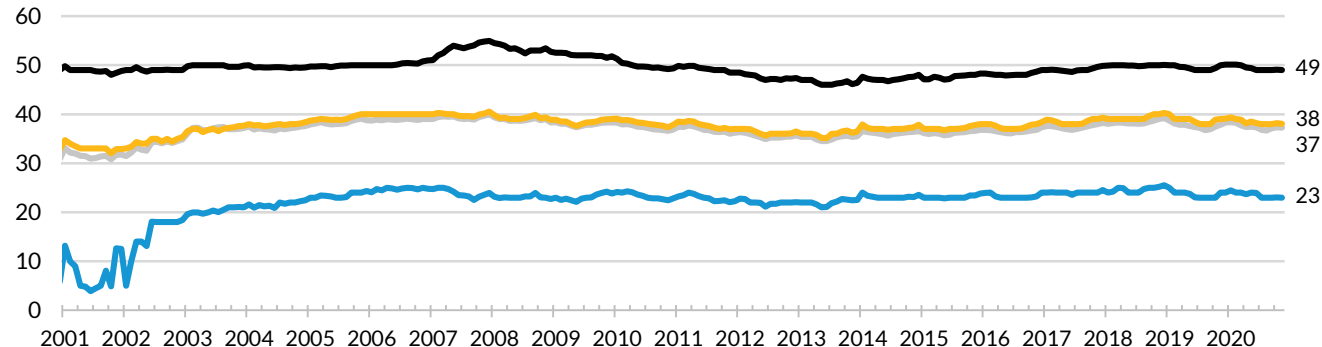
Combined LTV at Origination

LTV



DTI at Origination

DTI



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

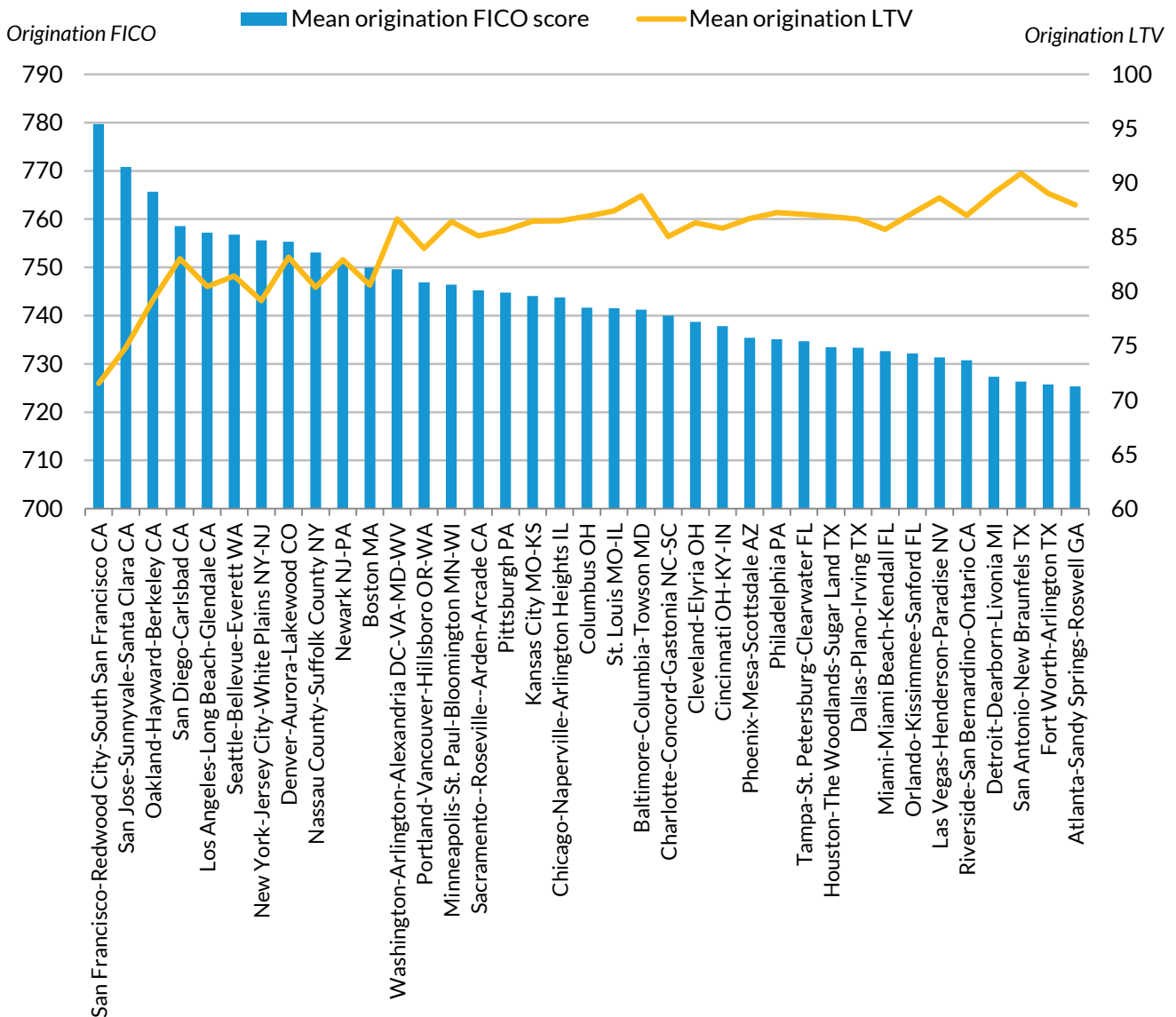
Note: Includes owner-occupied purchase loans only. DTI data prior to April 2018 is from CoreLogic; after that date, it is from Black Knight. Data as of November 2020.

CREDIT BOX

CREDIT AVAILABILITY BY MSA FOR PURCHASE LOANS

Credit has been tight for all borrowers with less-than-stellar credit scores—especially in MSAs with high housing prices. For example, the mean origination FICO for borrowers in San Francisco-Redwood City-South San Francisco, CA is approximately 780 in November 2020. Across all MSAs, lower average FICO scores tend to be correlated with high average LTVs, as these MSAs rely heavily on FHA/VA financing.

Origination FICO and LTV



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

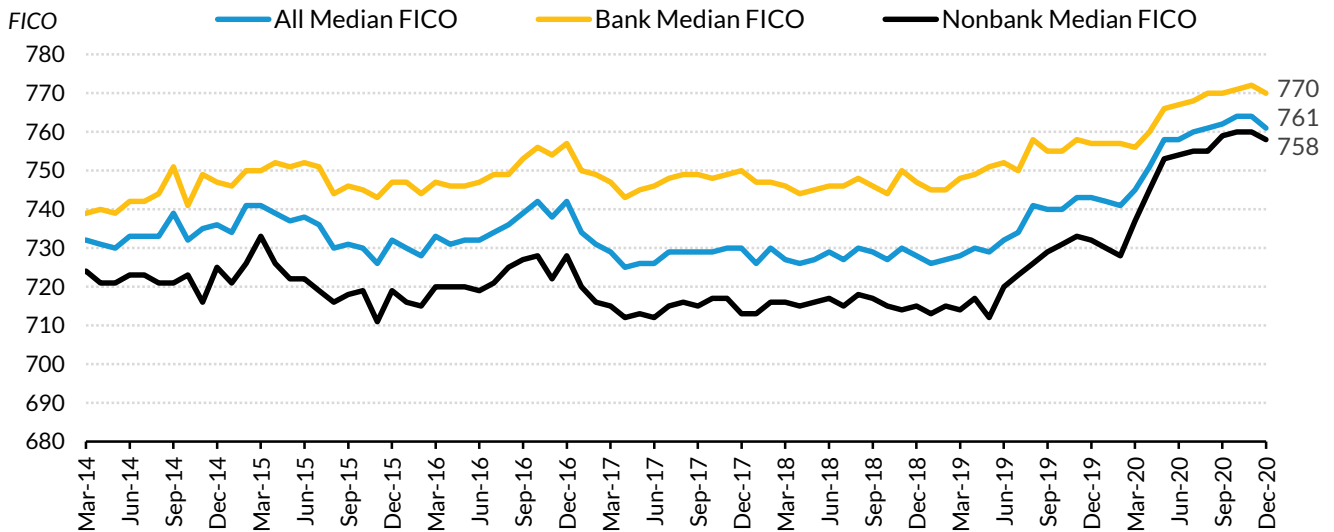
Note: Includes owner-occupied purchase loans only. Data as of November 2020.

CREDIT BOX

AGENCY NONBANK CREDIT BOX

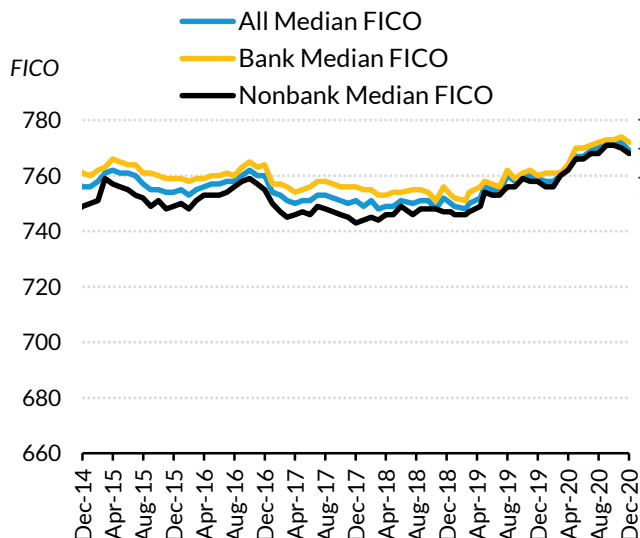
Nonbank originators have played a key role in expanding access to credit. In the GSE space, FICO scores for banks and nonbanks have nearly converged; the differential is much larger in the Ginnie Mae space. FICO scores for banks and nonbanks in both GSE and Ginnie Mae segments increased over the course of 2019-2020, due to increased refi activity; this activity is skewed toward higher FICO scores. This was particularly pronounced over the last nine months of available data: March through November of 2020. Comparing Ginnie Mae FICO scores today versus six years ago (early 2015), FICO scores have risen significantly for both banks and nonbanks, but more for banks. This partly reflects the 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.

Agency FICO: Bank vs. Nonbank



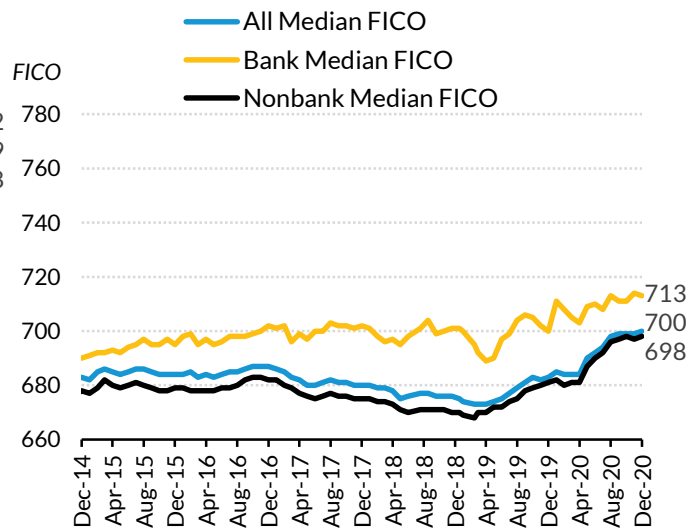
Sources: eMBS and Urban Institute.

GSE FICO: Bank vs. Nonbank



Sources: eMBS and Urban Institute.

Ginnie Mae FICO: Bank vs. Nonbank



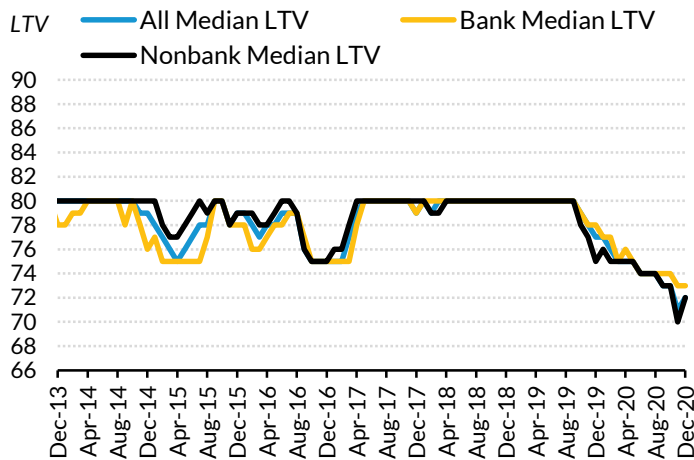
Sources: eMBS and Urban Institute.

CREDIT BOX

AGENCY NONBANK CREDIT BOX

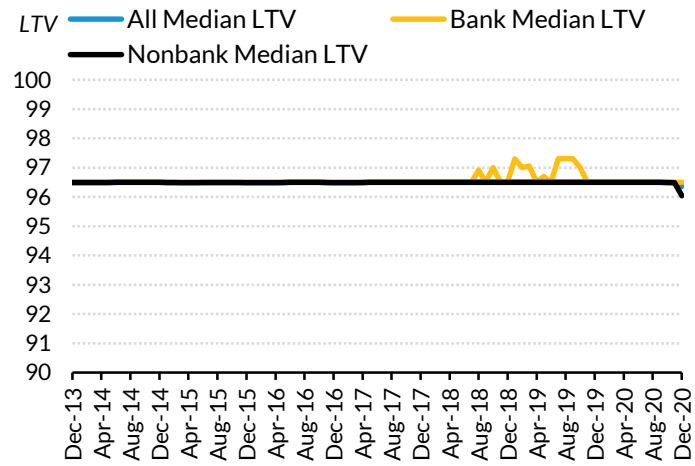
The median LTVs for nonbank and bank originations are comparable, while the median DTI for nonbank loans is higher than for bank loans, more so in the Ginnie Mae space. From early 2017 to early 2019, there was a sustained increase in DTIs, which has reversed beginning in the spring of 2019. This is true for both Ginnie Mae and the GSEs, for banks and nonbanks. As interest rates in 2017 and 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.

GSE LTV: Bank vs. Nonbank



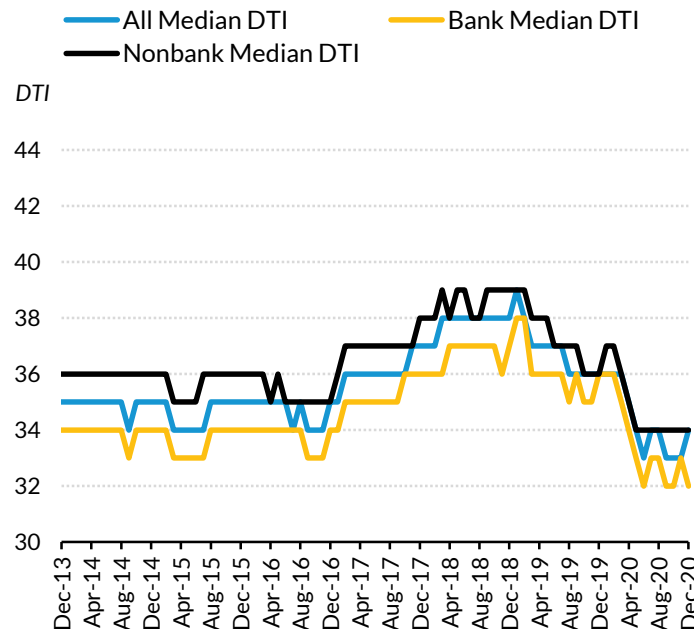
Sources: eMBS and Urban Institute.

Ginnie Mae LTV: Bank vs. Nonbank



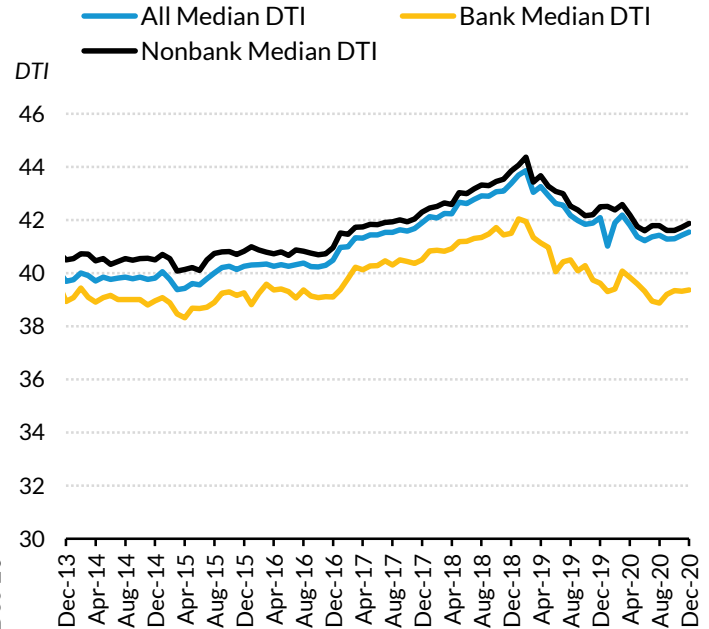
Sources: eMBS and Urban Institute.

GSE DTI: Bank vs. Nonbank



Sources: eMBS and Urban Institute.

Ginnie Mae DTI: Bank vs. Nonbank



Sources: eMBS and Urban Institute.

MORTGAGE ORIGINATION PROJECTIONS

Fannie Mae, Freddie Mac and the MBA estimate 2021 origination volume to be between \$2.75 and \$3.91 trillion, lower than the \$3.57 to \$4.41 trillion in 2020. 2020 is in competition to be either the highest origination year in the 21st century, or just behind the 2003 number of \$3.73 trillion; page 8 top provides the longer historical time series. The very robust 2020 origination volume is due to very strong refinance activity. All three groups expect the 2021 refinance share to be 9 to 16 percentage points lower than in 2020.

Total Originations and Refinance Shares

Period	Originations (\$ billions)			Refi Share (percent)		
	Total, FNMA estimate	Total, FHLMC estimate	Total, MBA estimate	FNMA estimate	FHLMC estimate	MBA estimate
2020 Q1	752	675	563	61	60	52
2020 Q2	1095	975	928	68	68	61
2020 Q3	1324	1140	1076	61	65	55
2020 Q4	1239	1214	1006	64	64	58
2021 Q1	1095	965	835	68	67	59
2021 Q2	1059	958	704	54	53	45
2021 Q3	924	759	639	47	48	30
2021 Q4	828	612	574	49	37	25
2017	1826	1810	1760	36	37	35
2018	1766	1700	1677	30	32	28
2019	2462	2432	2253	46	46	44
2020	4411	4004	3573	64	65	57
2021	3906	3294	2752	55	53	41
2022	3213	2416	2201	45	37	24

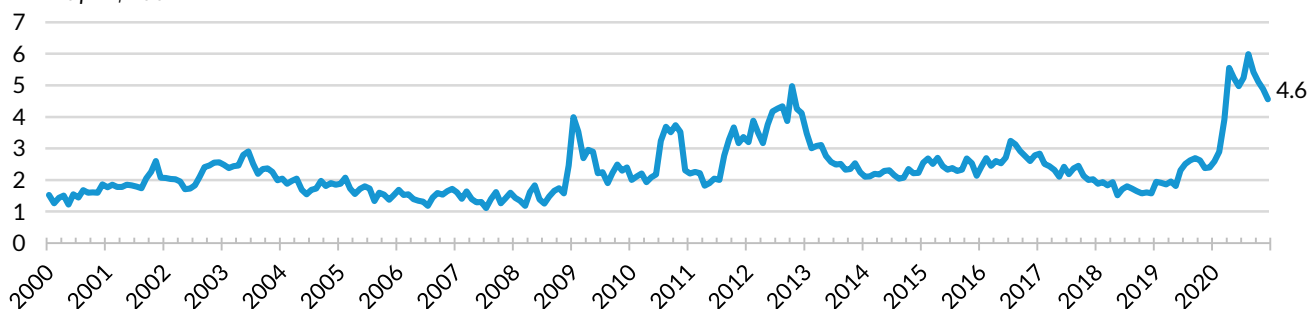
Sources: Fannie Mae, Freddie Mac, Mortgage Bankers Association and Urban Institute.

Note: Shaded boxes indicate forecasted figures. All figures are estimates for total single-family market. Regarding interest rates, the yearly averages for 2017, 2018, 2019 and 2020 were 4.0, 4.6, 3.9, and 3.0 percent. For 2021, the respective projections for Fannie, Freddie, and MBA are 3.2, 2.9, and 3.2 percent. Freddie Mac forecasts are now released quarterly, last updated January 2021.

Originator Profitability and Unmeasured Costs

In December 2020, Originator Profitability and Unmeasured Costs (OPUC) stood at \$4.56 per \$100 loan, down slightly from last month's \$4.88, but still high by historical standards. Increased profitability reflects lender capacity constraints amidst strong refi demand. Additionally, the Fed's massive purchases of agency MBS since March pushed down secondary yields, thus widening the spread to primary rates. We would expect OPUC to remain elevated for some time, declining as the backlog of refinance activity is processed, volumes ebb and originators begin 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. 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.

Dollars per \$100 loan



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 December 2020.

Note: OPUC is a monthly (4-week moving) average as discussed in [Fuster et al. \(2013\)](#).

STATE OF THE MARKET

HOUSING SUPPLY

Months of supply in December 2020 was 1.9, 1.1 months lower than it was in December 2019 and a new record low for the fourth month in a row. Strong demand for housing in recent years, fueled by low mortgage rates, has kept the months supply limited. Fannie Mae, the MBA, and the NAHB forecast 2021 housing starts to be 1.38 to 1.48 million units; these 2021 forecasts are above 2020 levels. Fannie Mae, Freddie Mac, and the MBA predict total home sales of 6.50 to 7.26 million units in 2021; Fannie and the MBA's predictions are above 2020 levels, while Freddie's are equivalent to 2020 sales.

Months of Supply

Months of supply



December 2020

Source: National Association of Realtors and Urban Institute. Data as of December 2020.

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, FHLMC estimate	Total, MBA estimate	Total, NAHB estimate*
2017	1203	1208	1208	6123	6120	6158	5520
2018	1250	1250	1250	5957	5960	5956	5351
2019	1290	1295	1295	6023	6000	6016	5439
2020	1383	1367	1380	6470	6500	6501	5785
2021	1450	1482	1383	6719	6500	7259	6304
2022	1504	1489	1433	6550	6200	7308	6364

Sources: Mortgage Bankers Association, Fannie Mae, Freddie Mac, National Association of Home Builders and Urban Institute.

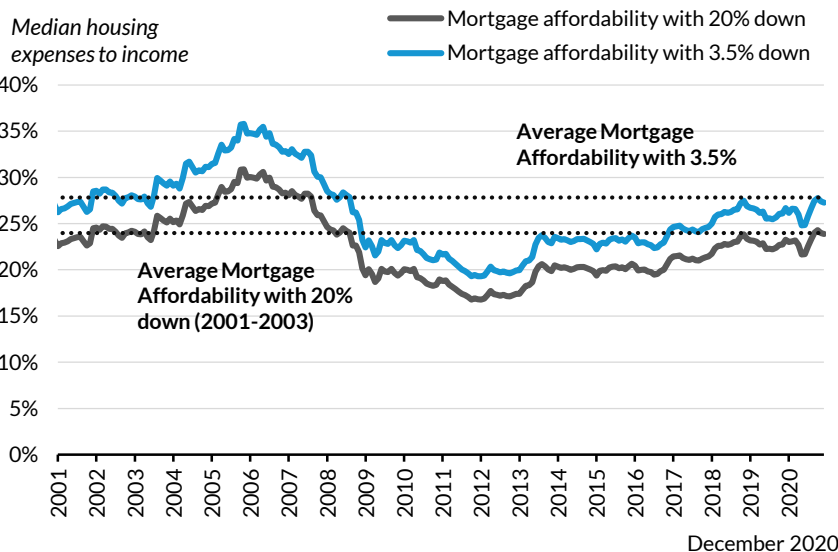
Note: Shaded boxes indicate forecasted figures; column labels indicate source of estimate. Freddie Mac home sales are now updated quarterly instead of monthly, with the last update in January 2021. *NAHB home sales estimate is for single-family structures only, it excludes condos and co-ops. Other figures include all single-family sales.

STATE OF THE MARKET

HOUSING AFFORDABILITY

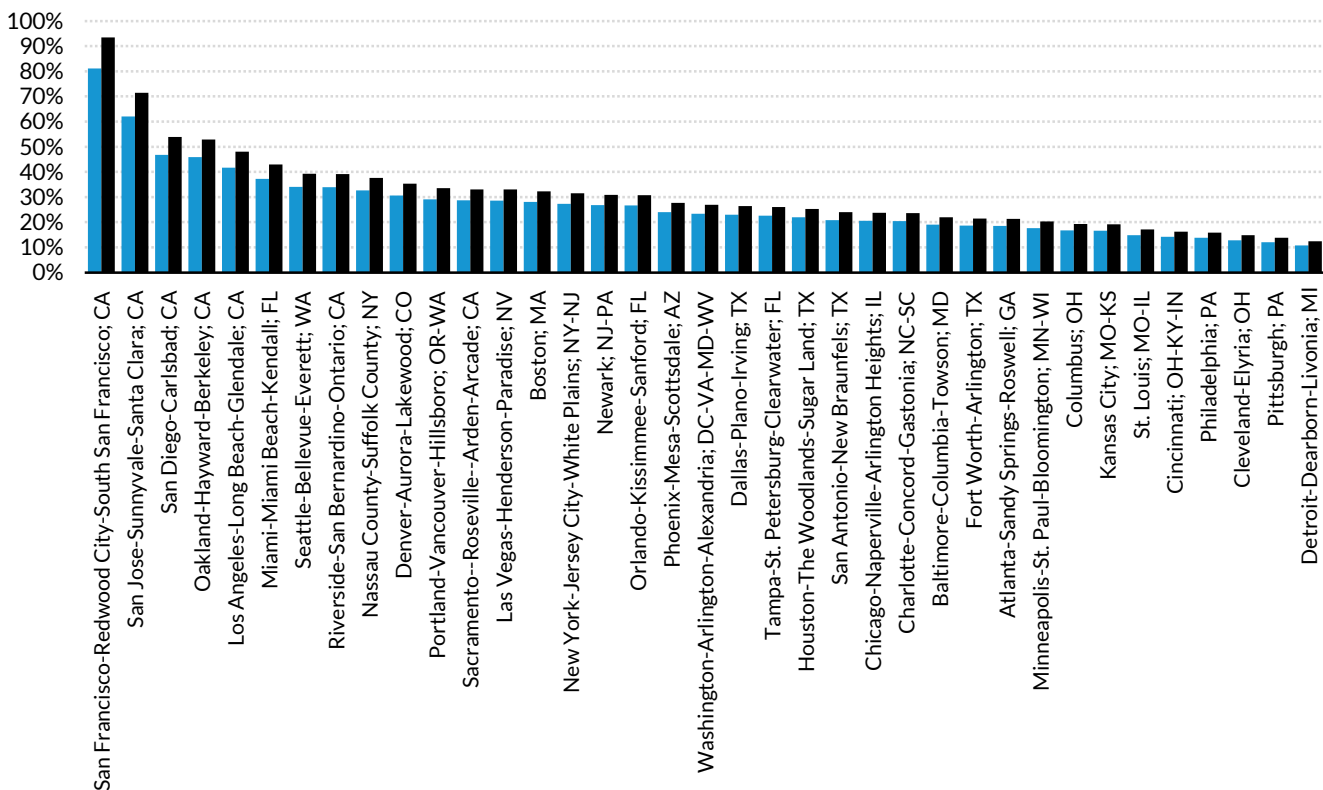
National Mortgage Affordability Over Time

Despite price increases over the last 8 years, home prices remain affordable by historic standards, as interest rates are now near generational lows. As of December 2020, with a 20 percent down payment, the share of median income needed for the monthly mortgage payment stood at 23.9 percent; with 3.5 down, it is 27.3 percent. These numbers are very close to the 2001-2003 median, and represent a sharp decrease in affordability in recent months. The last time we were at this affordability level was in February of 2019, and before that, in 2008. As shown in the bottom picture, mortgage affordability varies widely by MSA.



Mortgage Affordability by MSA

Mortgage affordability index



Sources: National Association of Realtors, US Census Bureau, Current Population Survey, American Community Survey, Moody's Analytics, Freddie Mac Primary Mortgage Market Survey, 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 2018 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 as of Q2 2019.

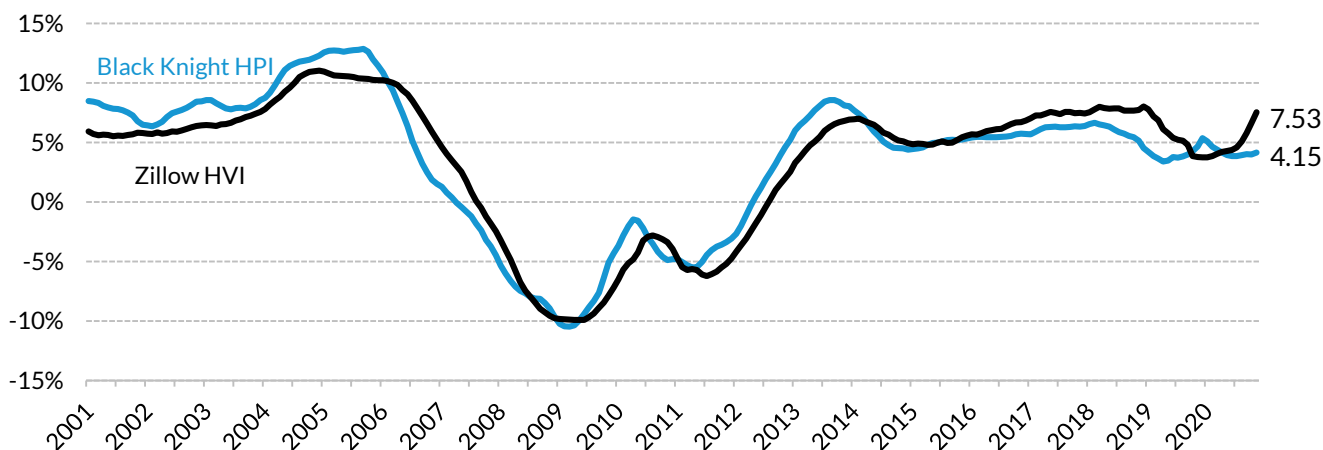
STATE OF THE MARKET

HOME PRICE INDICES

National Year-Over-Year HPI Growth

According to Black Knight's repeat sales index, year-over-year home price appreciation increased to 4.15 percent in November 2020, compared to 3.99 percent the previous month. Year-over-year home price appreciation as measured by Zillow's hedonic index was 7.53 percent in November 2020, up from 6.63 in October. Although housing affordability remains constrained, especially at the lower end of the market, recent declines in rates serve as a partial offset.

Year-over-year growth



Sources: Black Knight, Zillow, and Urban Institute. Note: Data as of November 2020.

Changes in Black Knight HPI for Top MSAs

After rising 60.0 percent from the trough, national house prices are now 19.7 percent higher than pre-crisis peak levels. At the MSA level, twelve of the top 15 MSAs have exceeded their pre-crisis peak HPI: New York, NY; Los Angeles, CA; Atlanta, GA; Washington, DC; Houston, TX; Phoenix, AZ; Dallas, TX; Minneapolis, MN; Seattle, WA; Denver, CO; San Diego, CA; and Anaheim, CA. Three MSAs particularly hard hit by the boom and bust—Chicago, IL; Riverside, CA; and Baltimore, MD—are 8.8, 4.5, and 5.7 percent, respectively, below peak values.

MSA	HPI changes (%)			% above peak
	2000 to peak	Peak to trough	Trough to current	
United States	74.8	-25.2	60.0	19.7
New York-Jersey City-White Plains, NY-NJ	127.7	-22.5	50.8	16.9
Los Angeles-Long Beach-Glendale, CA	179.3	-38.1	96.3	21.6
Chicago-Naperville-Arlington Heights, IL	67.2	-38.4	48.0	-8.8
Atlanta-Sandy Springs-Roswell, GA	32.3	-35.0	86.1	21.0
Washington-Arlington-Alexandria, DC-VA-MD-WV	148.9	-28.3	43.2	2.7
Houston-The Woodlands-Sugar Land, TX	29.2	-6.6	52.8	42.7
Phoenix-Mesa-Scottsdale, AZ	113.0	-51.0	108.9	2.3
Riverside-San Bernardino-Ontario, CA	174.3	-51.6	97.2	-4.5
Dallas-Plano-Irving, TX	26.4	-7.3	72.3	59.8
Minneapolis-St. Paul-Bloomington, MN-WI	69.1	-30.6	66.4	15.5
Seattle-Bellevue-Everett, WA	90.3	-33.1	114.3	43.4
Denver-Aurora-Lakewood, CO	34.1	-12.2	97.3	73.2
Baltimore-Columbia-Towson, MD	123.2	-24.4	24.7	-5.7
San Diego-Carlsbad, CA	148.0	-37.4	86.0	16.4
Anaheim-Santa Ana-Irvine, CA	163.0	-35.1	70.9	10.9

Sources: Black Knight HPI and Urban Institute. Data as of November 2020.

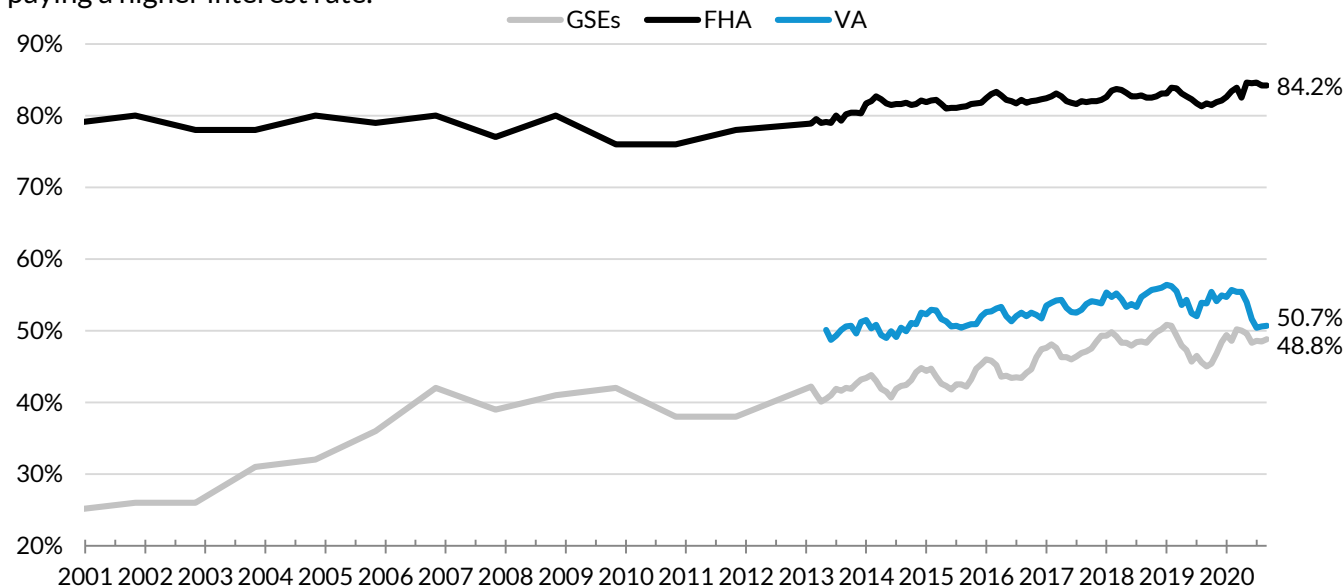
Note: This table includes the largest 15 Metropolitan areas by mortgage count.

STATE OF THE MARKET

FIRST-TIME HOMEBUYERS

First-Time Homebuyer Share

In November 2020, the FTHB share for FHA, which has always been more focused on first time homebuyers, was 84.2 percent. The FTHB share of VA lending in November was 50.7 percent. The GSE FTHB share in November was up slightly relative to October, at 48.8 percent. The bottom table shows that based on mortgages originated in November 2020, 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 higher interest rate.



Sources: eMBS, Federal Housing Administration (FHA), and Urban Institute.

November 2020

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

Characteristics	GSEs		FHA		GSEs and FHA	
	First-time	Repeat	First-time	Repeat	First-time	Repeat
Loan Amount (\$)	288,952	311,274	238,919	254,725	271,934	304,163
Credit Score	748	758	678	678	724	748
LTV (%)	87	79	96	94	90	81
DTI (%)	34	35	43	44	37	36
Loan Rate (%)	2.93	2.86	3.03	3.00	2.97	2.88

Sources: eMBS and Urban Institute.

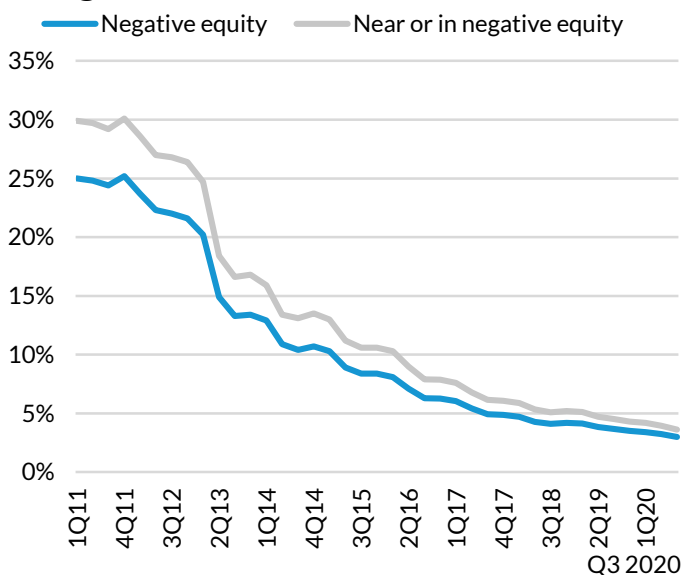
Note: Based on owner-occupied purchase mortgages originated in November 2020.

STATE OF THE MARKET

DELINQUENCIES AND LOSS MITIGATION ACTIVITY

Loans in and near negative equity continued to decline in Q3 2020; 3.0 percent now have negative equity, an additional 0.6 percent have less than 5 percent equity. Due to the effects of COVID-19, loans that are 90 days or more delinquent or in foreclosure rose in Q3 2020, to 5.16 percent. 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, the total forbearance rate has declined to 5.38 percent as of January 17, 2021. GSE loans have consistently had the lowest forbearance rates, standing at 3.11 percent as of January. The most recent forbearance rate for Ginnie Mae loans was 7.61 percent; other (e.g., portfolio and PLS) loans had the highest forbearance rate at 8.94 percent.

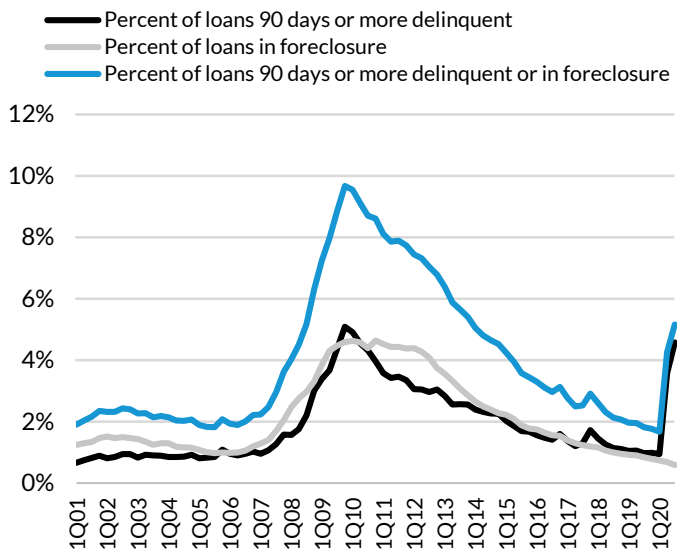
Negative Equity Share



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 December 2020.

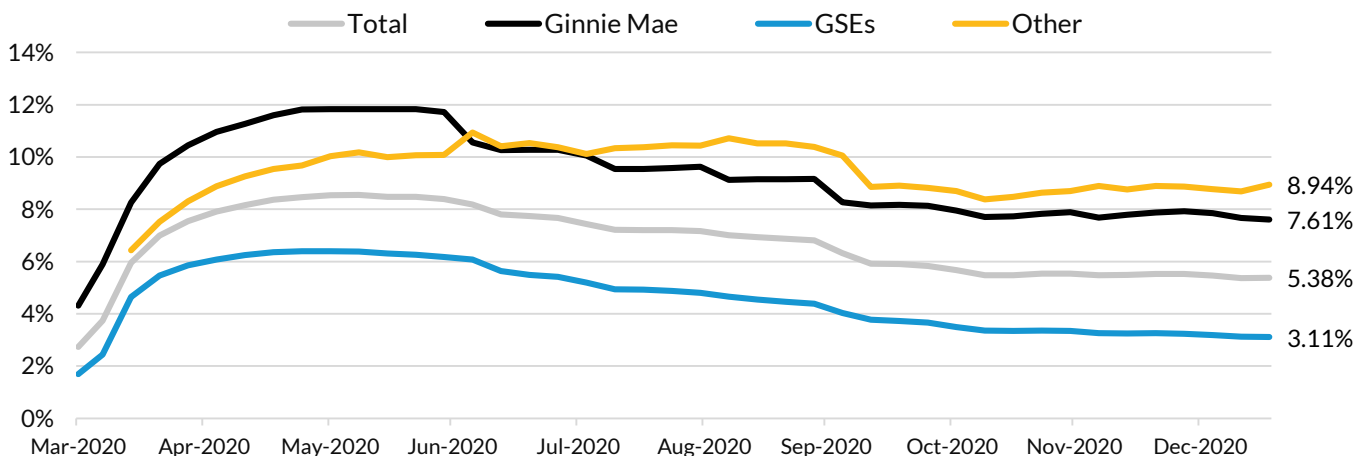
Loans in Serious Delinquency/Foreclosure



Sources: Mortgage Bankers Association and Urban Institute. Last updated December 2020.

Q3 2020

Forbearance Rates by Channel



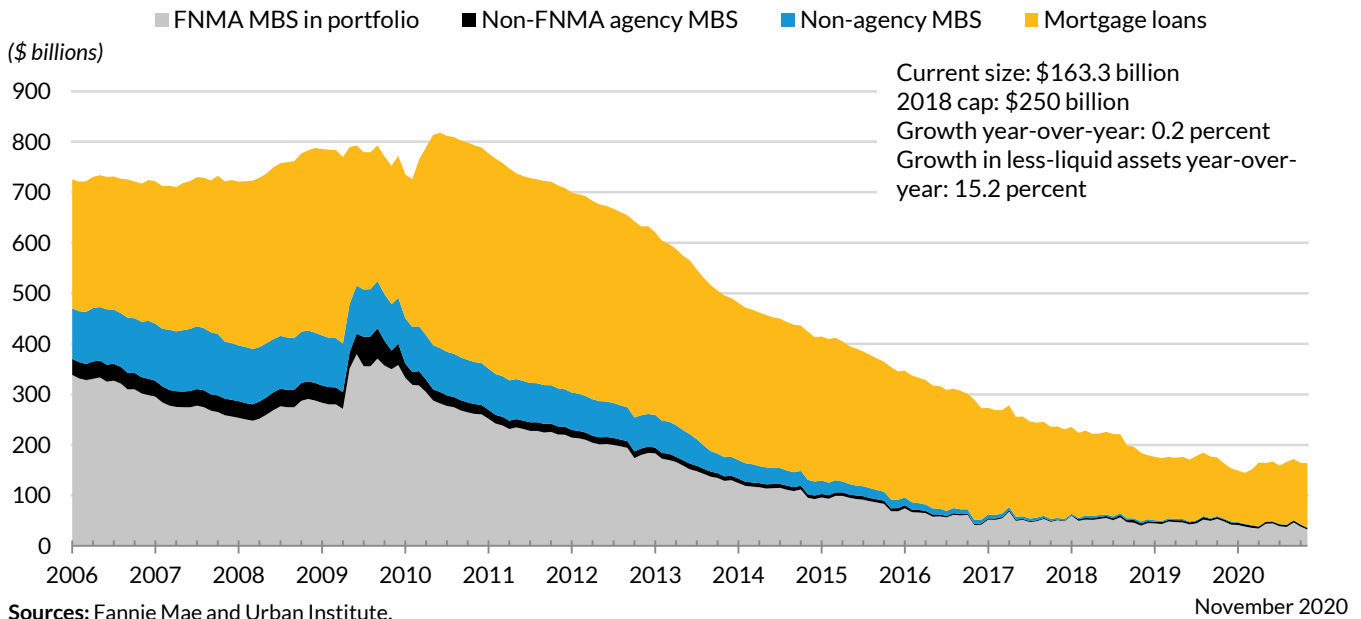
Source: MBA Weekly Forbearance and Call Volume Survey. Forbearance rates as of January 17, 2021.

GSES UNDER CONSERVATORSHIP

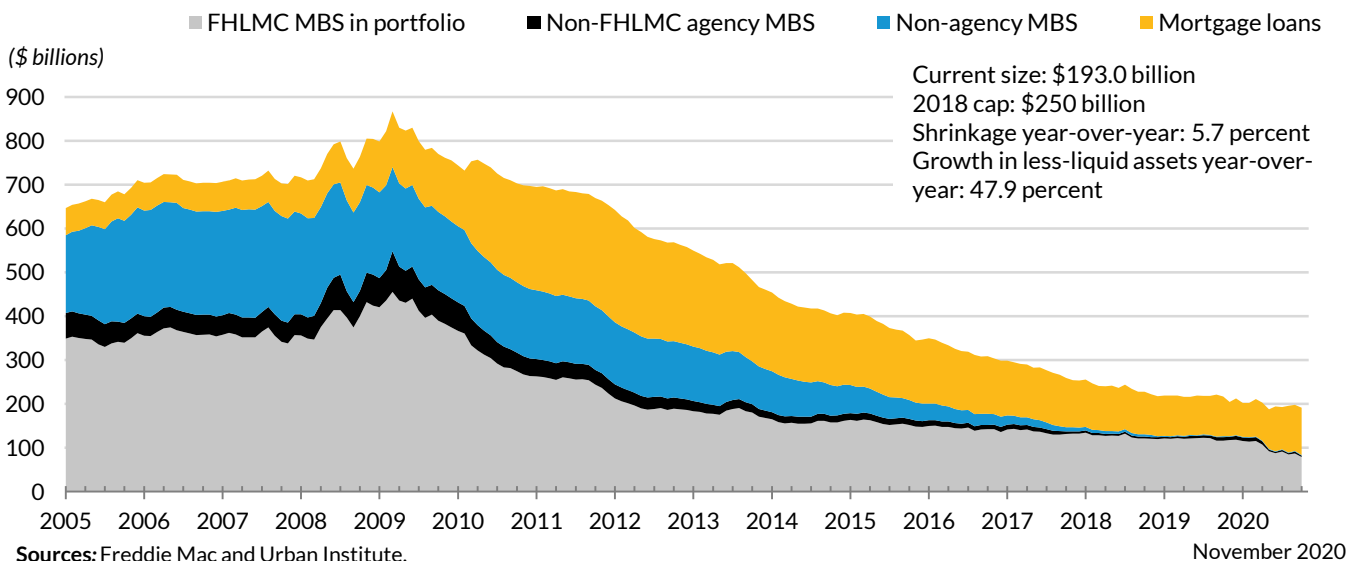
GSE PORTFOLIO WIND-DOWN

The Fannie Mae and Freddie Mac portfolios remain well below the \$250 billion size they were required to reach by year-end 2018, or the \$225 billion cap mandated in January 2021 by the new Preferred Stock Purchase Agreements (PSPAs). From November 2019 to November 2020, the Fannie portfolio grew year-over-year for the first time since February 2011, by 0.2 percent. The Freddie portfolio contracted by 5.7 percent. Within the portfolio, both Fannie Mae and Freddie Mac increased their less-liquid assets (mortgage loans, non-agency MBS) by 15.2 percent and 47.9 percent, respectively, over the same 12 month period. These changes reflect both a smaller overall portfolio and the increased need to hold loans in portfolio for loss mitigation purposes.

Fannie Mae Mortgage-Related Investment Portfolio Composition



Freddie Mac Mortgage-Related Investment Portfolio Composition



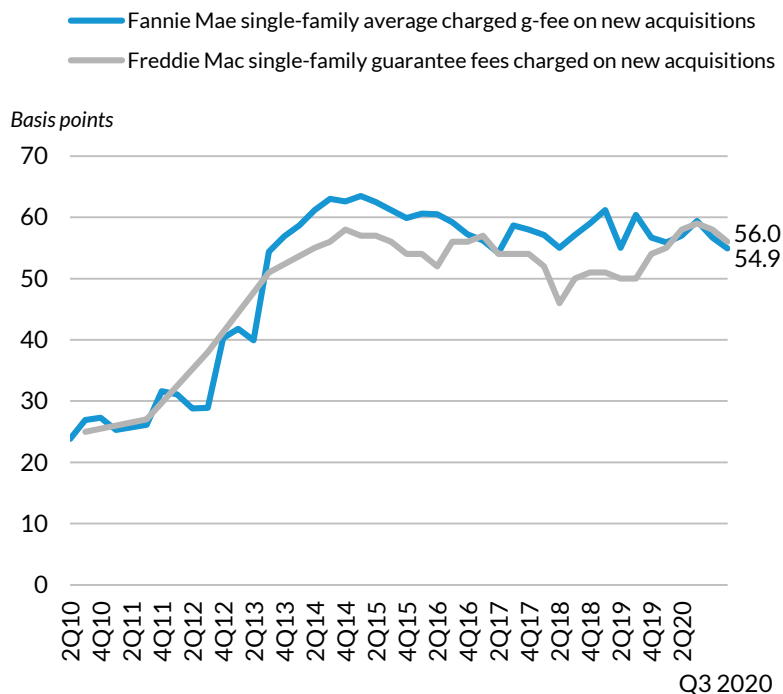
GSES UNDER CONSERVATORSHIP

EFFECTIVE GUARANTEE FEES

Guarantee Fees Charged on New Acquisitions

Fannie Mae's average g-fees charged on new acquisitions fell from 56.7 bps in Q2 2020 to 54.9 bps in Q3 2020.

Freddie's also fell slightly from 58.0 bps to 56.0 bps. The gap between the two g-fees was 1.1 bps in Q3 2020. Today's g-fees are markedly higher than g-fee levels in 2011 and 2012, and have contributed to the GSEs' earnings; the bottom table shows Fannie Mae LLPAs, which are expressed as upfront charges. Note: The GSEs instituted a new LLPA of 50.0 basis points on most refinances, effective Dec 1, 2020.



Sources: Fannie Mae, Freddie Mac and Urban Institute.
Last updated November 2020.

Fannie Mae Upfront Loan-Level Price Adjustments (LLPAs)

Credit Score	LTV (%)								
	≤60	60.01 – 70	70.01 – 75	75.01 – 80	80.01 – 85	85.01 – 90	90.01 – 95	95.01 – 97	>97
> 740	0.00	0.25	0.25	0.50	0.25	0.25	0.25	0.75	0.75
720 – 739	0.00	0.25	0.50	0.75	0.50	0.50	0.50	1.00	1.00
700 – 719	0.00	0.50	1.00	1.25	1.00	1.00	1.00	1.50	1.50
680 – 699	0.00	0.50	1.25	1.75	1.50	1.25	1.25	1.50	1.50
660 – 679	0.00	1.00	2.25	2.75	2.75	2.25	2.25	2.25	2.25
640 – 659	0.50	1.25	2.75	3.00	3.25	2.75	2.75	2.75	2.75
620 – 639	0.50	1.50	3.00	3.00	3.25	3.25	3.25	3.50	3.50
< 620	0.50	1.50	3.00	3.00	3.25	3.25	3.25	3.75	3.75
Product Feature (Cumulative)									
Investment Property	2.125	2.125	2.125	3.375	4.125	4.125	4.125	4.125	4.125

Sources: Fannie Mae and Urban Institute.
Last updated March of 2019.

GSEs UNDER CONSERVATORSHIP

GSE RISK-SHARING TRANSACTIONS

Fannie Mae and Freddie Mac have been laying off back-end credit risk through CAS and STACR deals and through reinsurance transactions. They have also done front-end transactions with originators and reinsurers, and experimented with deep mortgage insurance coverage with private mortgage insurers. Historically, the GSEs have transferred vast majority of their credit risk to private markets. Fannie Mae's CAS issuances since inception total \$1.65 trillion; Freddie's STACR totals \$1.74 trillion. Since the COVID-19 induced spread widening in March 2020, Freddie Mac has issued seven deals, while Fannie has issued none.

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
January 2020	CAS 2020 - R01	\$29,000	\$1,030	3.6
February 2020	CAS 2020 - R02	\$29,000	\$1,134	3.9
March 2020	CAS 2020 - SBT1	\$152,000	\$966	0.6
Total		\$1,649,572	\$46,601	2.8

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
January 2020	STACR Series 2020 – DNA1	\$29,641	\$794	2.7
February 2020	STACR Series 2020 – HQA1	\$24,268	\$738	3.0
February 2020	STACR Series 2020 – DNA2	\$43,596	\$1,169	2.7
March 2020	STACR Series 2020 – HQA2	\$35,066	\$1,006	2.9
July 2020	STACR Series 2020 – DNA3	\$48,328	\$1,106	2.3
July 2020	STACR Series 2020 – HQA3	\$31,278	\$835	2.7
August 2020	STACR Series 2020 – DNA4	\$41,932	\$1,088	2.6
September 2020	STACR Series 2020 – HQA4	\$25,009	\$680	2.7
October 2020	STACR Series 2020 – DNA5	\$43,406	\$1,086	2.5
November 2020	STACR Series 2020 – HQA5	\$42,257	\$1,080	2.6
December 2020	STACR Series 2020 – DNA6	\$38,810	\$790	2.0
Total		\$1,738,072	\$46,282	2.7

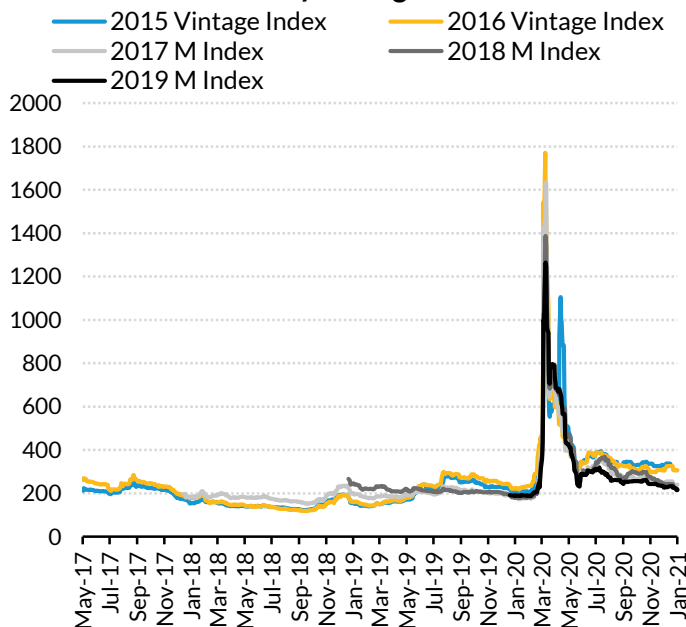
Sources: Fannie Mae, Freddie Mac and Urban Institute. **Note:** Classes A-H, M-1H, M-2H, and B-H are reference tranches only. These classes are not issued or sold. The risk is retained by Fannie Mae and Freddie Mac. "CE" = credit enhancement.

GSES UNDER CONSERVATORSHIP

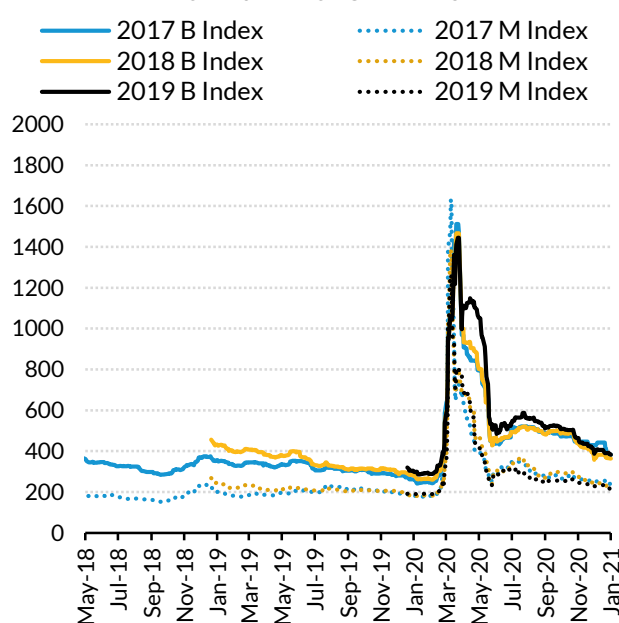
GSE RISK-SHARING INDICES

The figures below show the spreads on the 2015, 2016, 2017, 2018, and 2019 indices, as priced by dealers. Note the substantial spread widening in March 2020. This reflected investor expectations of higher defaults and potential credit losses owing to COVID-19, as well as some forced selling. Spreads have tightened considerably since then, but remain well above pre-COVID levels. The 2015 and 2016 indices consist of the bottom mezzanine tranche in each deal, weighted by the original issuance amount; the equity tranches were not sold in these years. The 2017, 2018, and 2019 indices contain both the bottom mezzanine tranche as well as the equity tranche (the B tranche), in all deals when the latter was sold.

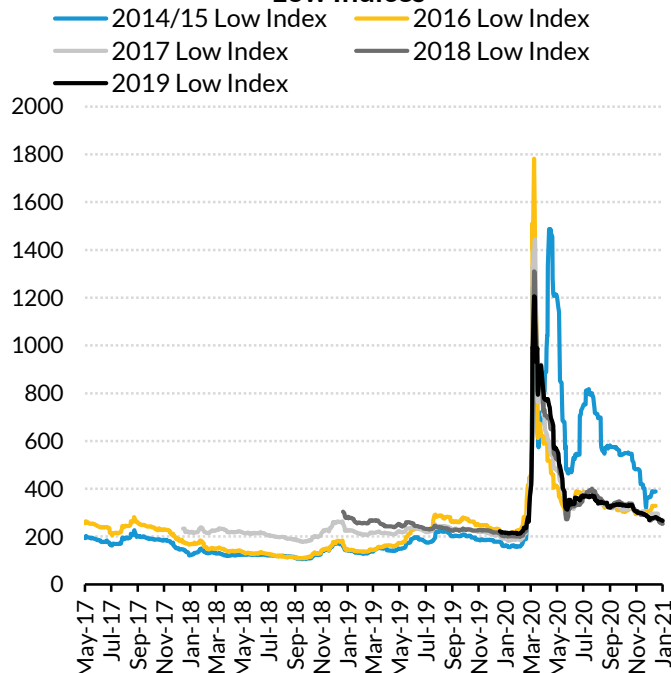
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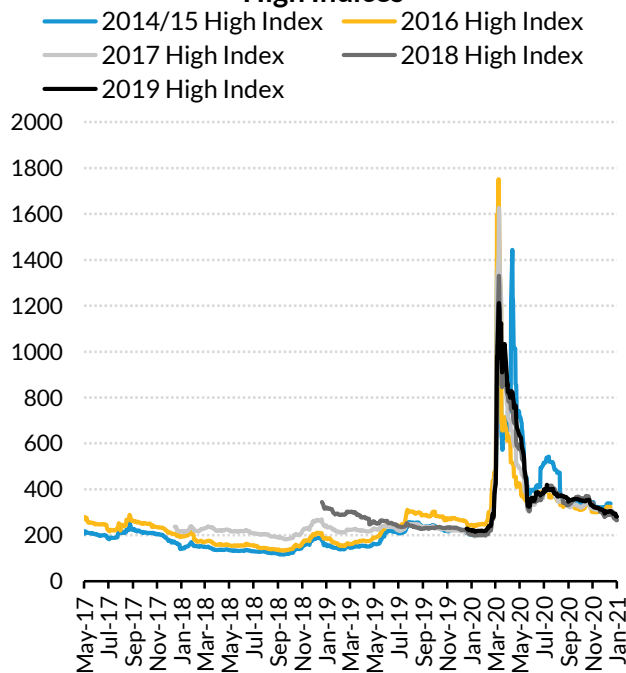
2017 and 2018 Indices



Low Indices



High Indices



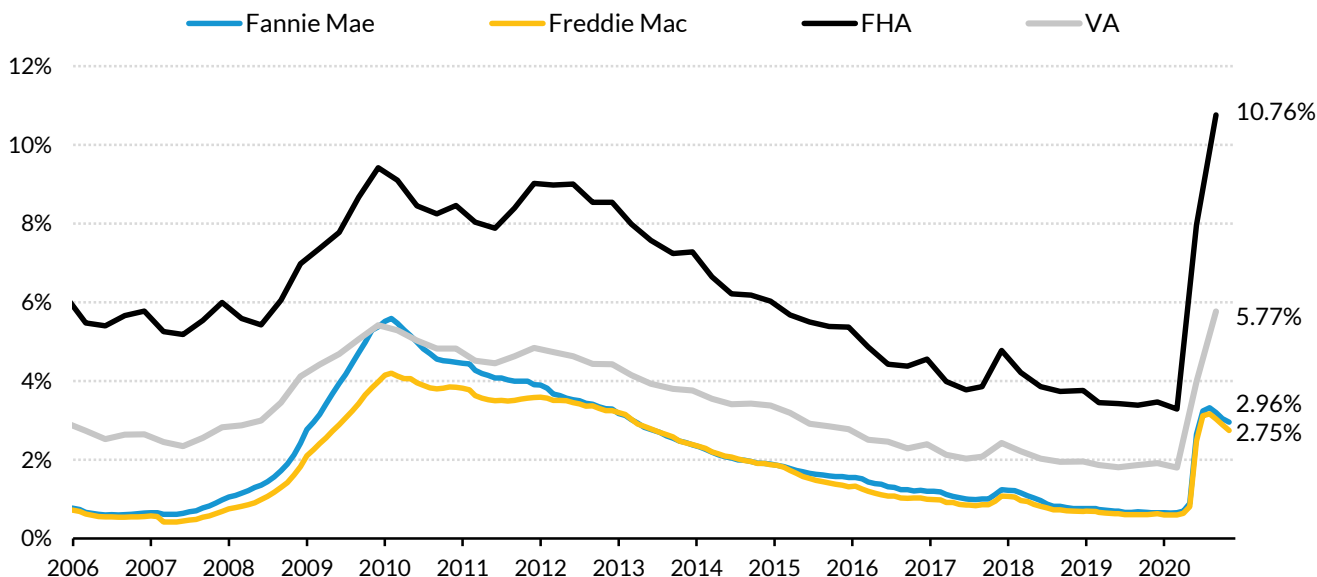
Sources: Vista Data Services and Urban Institute.

Note: Data as of January 15, 2020.

GSES UNDER CONSERVATORSHIP SERIOUS DELINQUENCY RATES

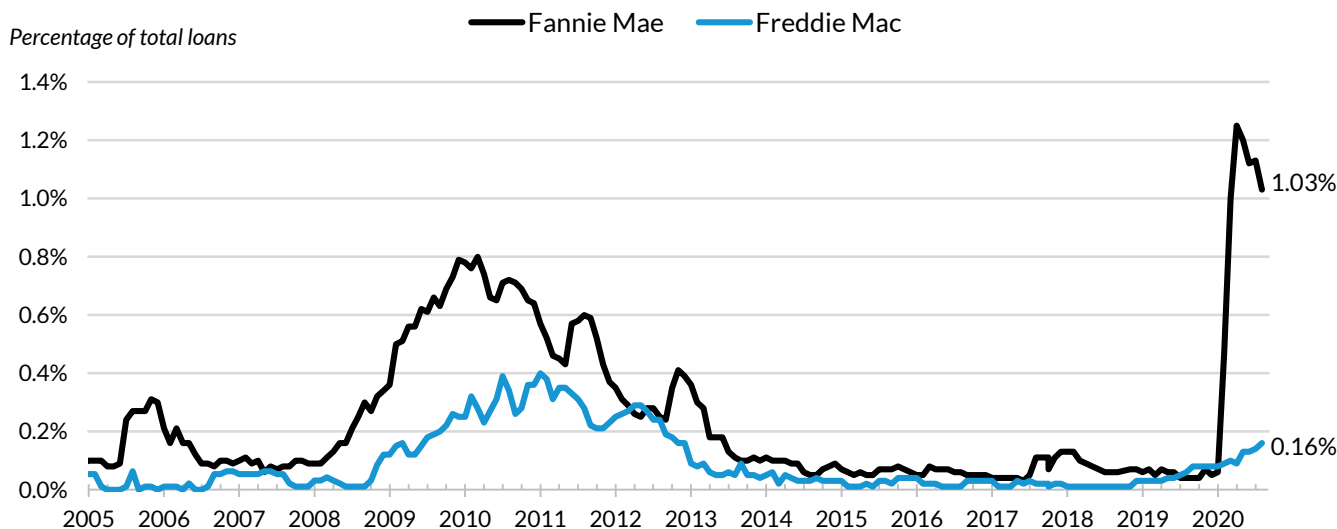
Serious delinquency rates for single-family GSE loans both decreased slightly in November 2020, to 2.96 percent for Fannie Mae and 2.75 percent for Freddie Mac. In Q3 2020, serious delinquency rates for FHA and VA loans increased significantly, both rising above their previous peaks from the housing crisis. Note that loans that are in forbearance are counted as delinquent for the purpose of measuring delinquency rates. Fannie multifamily delinquencies decreased in November 2020 to 1.03 percent, while Freddie multifamily delinquencies increased very slightly to 0.16 percent.

Serious Delinquency Rates–Single-Family Loans



Sources: Fannie Mae, Freddie Mac, 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. FHA and VA delinquencies are reported on a quarterly basis, last updated November 2020. GSE delinquencies are reported monthly, last updated November 2020.

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.

November 2020

AGENCY GROSS AND NET ISSUANCE

Agency gross issuance was \$3.18 trillion for full year 2020, higher than any year since 2000, including 2003, the previous record holder. The sharp increase is due to the refinance wave, which accelerated significantly in 2020. Net issuance (new securities issued less the decline in outstanding securities due to principal pay-downs or prepayments) totaled \$652.7 billion in 2020, up 122.4 percent from 2019. Like gross issuance, 2020 net issuance was also higher than any full year this century.

Agency Gross Issuance

Issuance Year	GSEs	Ginnie Mae	Total
2001	\$885.1	\$171.5	\$1,056.6
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
2020 % Change Over 2019	130.9%	52.5%	105.2%

Agency Net Issuance

Issuance Year	GSEs	Ginnie Mae	Total
2001	\$368.40	-\$9.90	\$358.50
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
2020 % Change Over 2019	220.0%	-79.2%	122.4%

Sources: eMBS and Urban Institute.

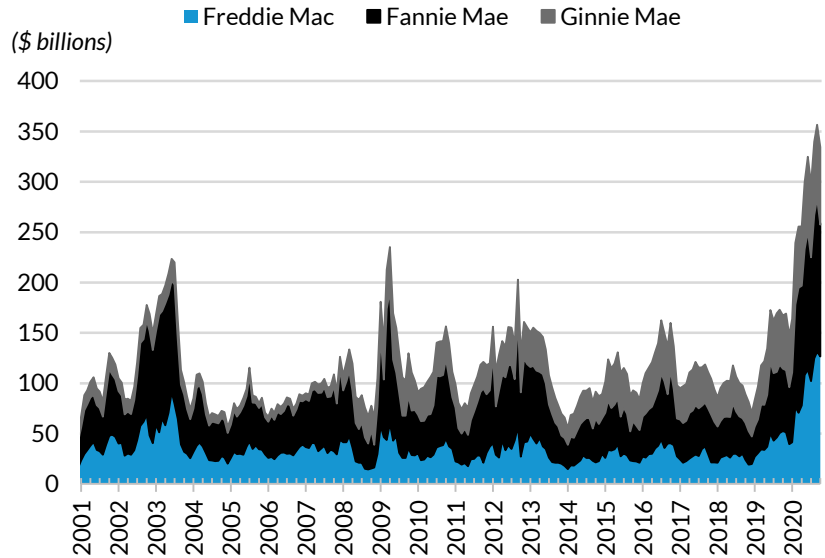
Note: Dollar amounts are in billions. Data as of December 2020.

AGENCY ISSUANCE

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. Since then, the Ginnie share had declined, reaching 23.0 percent in December 2020; the drop reflects the more robust ramp up in GSE refinances relative to Ginnie Mae refinances.

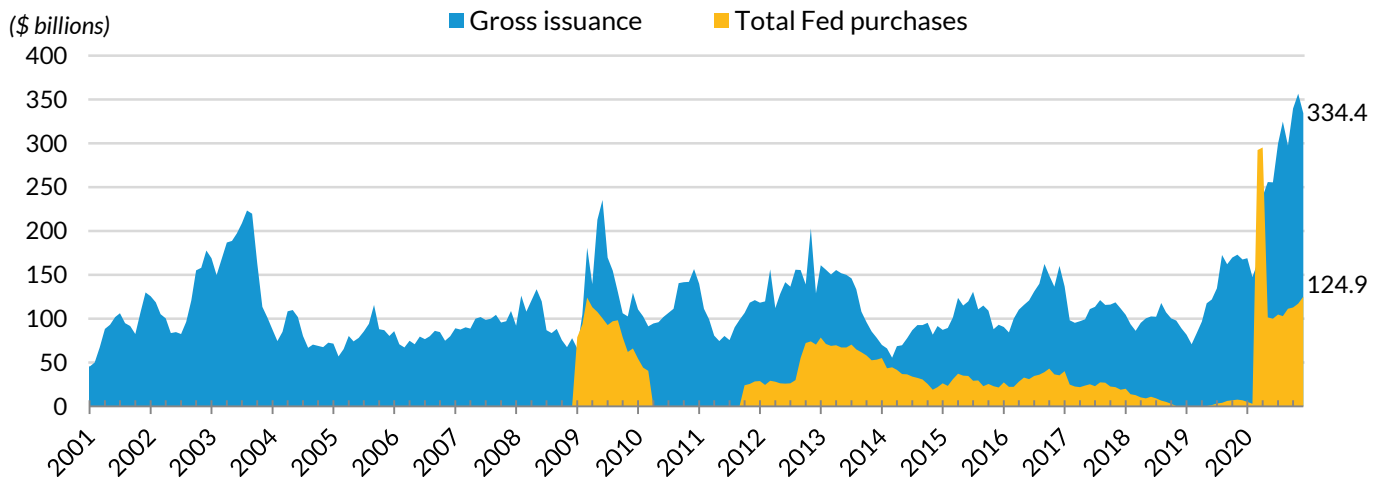


Sources: eMBS, Federal Reserve Bank of New York, and Urban Institute.

December 2020

Fed Absorption of Agency Gross Issuance

On March 23, 2020, in response to the market dislocations caused by the coronavirus pandemic, the Fed announced they would purchase Treasuries and agency MBS in an amount necessary to support smooth functioning markets. In March the Fed bought \$292.2 billion in agency MBS, and April clocked in at \$295.1 billion, the largest two months of mortgage purchases ever; and well over 100 percent of gross issuance for each of those two months. After the market stabilized, the Fed slowed its purchases to around \$100 billion per month in May through August of 2020. Recently, Fed purchases have ramped up again slightly; purchases totaled \$124.9 billion in December 2020. December Fed purchases totaled 37 percent of monthly issuance. Prior to the COVID-19 intervention, the Fed was winding down its MBS portfolio from its 2014 prior peak.



December 2020

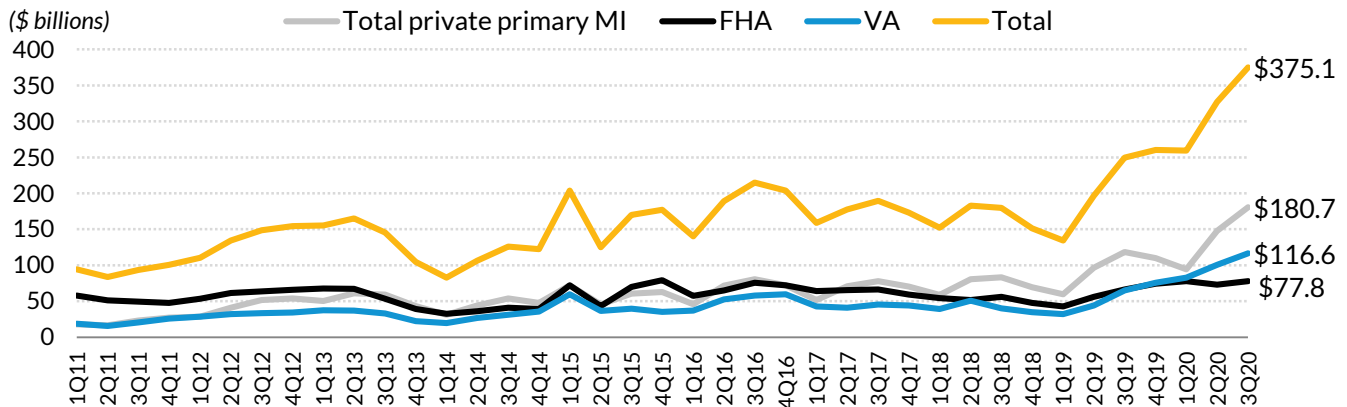
Sources: eMBS, Federal Reserve Bank of New York and Urban Institute.

AGENCY ISSUANCE

MORTGAGE INSURANCE ACTIVITY

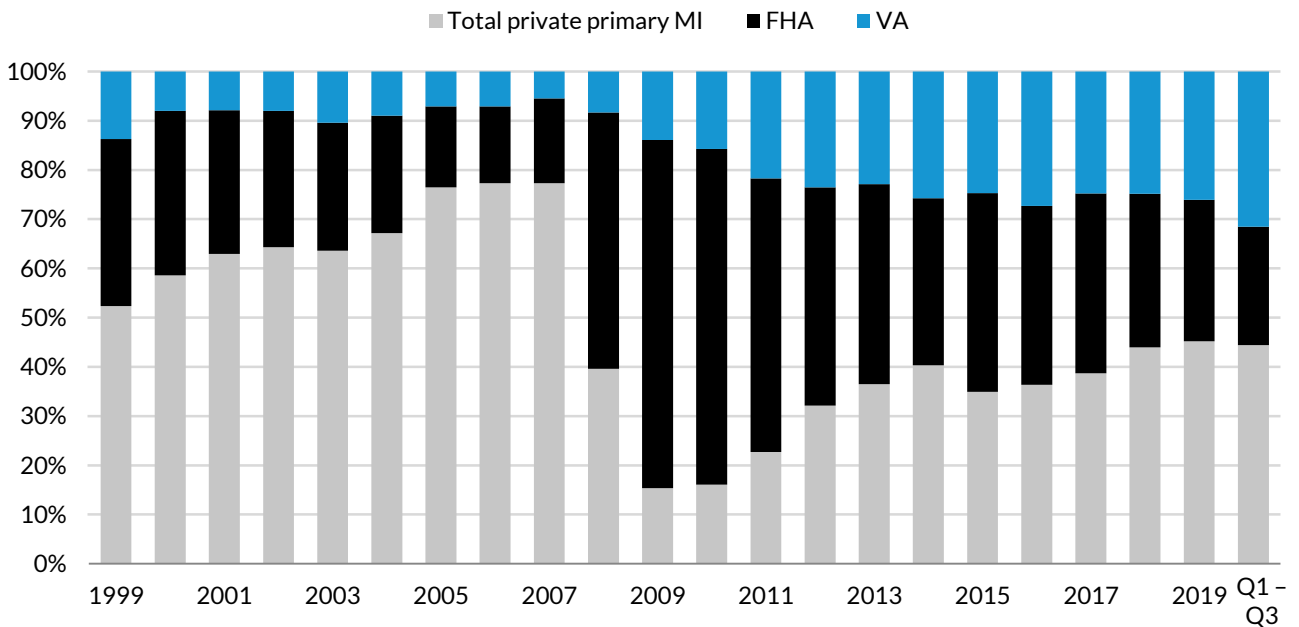
MI Activity

Mortgage insurance activity via the FHA, VA and private insurers increased from \$250 billion in Q3 2019 to \$375 billion in Q3 2020, a 50.2 percent increase. In the third quarter of 2020, private mortgage insurance written increased by \$62.5 billion, FHA increased by \$11.3 billion, and VA increased by \$51.6 billion relative to Q3 2019. During this period, the VA share increased from 26.0 to 31.0 percent, the highest on record, while the FHA share fell from 26.6 to 20.7 percent. The private mortgage insurers share increased, from 47.3 to 48.2 percent compared to the same period a year ago.



Sources: Inside Mortgage Finance and Urban Institute. Last updated November 2020.

MI Market Share



Sources: Inside Mortgage Finance and Urban Institute. Last updated November 2020.

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 bps cut in annual insurance premiums, making FHA mortgages more attractive than GSE mortgages for the overwhelming majority of borrowers putting down less than 5%. The April 2016 reduction in PMI rates for borrowers with higher FICO scores and April 2018 reduction for lower FICO borrowers has partially offset that. As shown in the bottom table, a borrower putting 3.5 percent down with a FICO of less than 720 will find FHA financing to be more financially attractive, borrowers with FICO's of 720 and above will find GSE execution with PMI to be more attractive.

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
Beginning 1/26/2015 ^c	175	85

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. PMI

Assumptions								
Property Value	\$250,000							
Loan Amount	\$241,250							
LTV	96.5							
Base Rate								
Conforming	2.77							
FHA	3.05							

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	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
PMI								
GSE LLPA*	3.50	2.75	2.25	1.50	1.50	1.00	0.75	0.75
PMI Annual MIP	1.86	1.65	1.54	1.21	0.99	0.87	0.70	0.58
Monthly Payment								
FHA	\$1,199	\$1,199	\$1,199	\$1,199	\$1,199	\$1,199	\$1,199	\$1,199
PMI	\$1,441	\$1,379	\$1,344	\$1,258	\$1,214	\$1,176	\$1,136	\$1,112
PMI Advantage	-\$242	-\$180	-\$145	-\$59	-\$14	\$23	\$63	\$87

Sources: Genworth Mortgage Insurance, Ginnie Mae, and Urban Institute. FHA rate from MBA Weekly Applications Survey. Conforming rate from Freddie Mac Primary Mortgage Market Survey.

Note: Rates as of December 2020.

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 does not include special programs like Fannie Mae's HomeReady and Freddie Mac's Home Possible (HP), both offer more favorable rates for low- to moderate-income borrowers.

LLPA= Loan Level Price Adjustment, described in detail on page 25.

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