



HOUSING FINANCE AT A GLANCE

A MONTHLY CHARTBOOK

October 2020

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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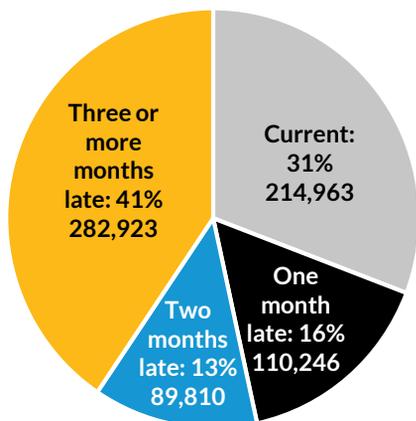
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INTRODUCTION

HUD Rule Seeks to Expand Mortgage Credit Access for FHA Borrowers

On September 10, 2020, the Department of Housing and Urban Development (HUD) issued Mortgagee Letter 2020-30, which provides lenders with guidelines for borrowers with a previous mortgage payment forbearance. According to the Letter, a borrower who was granted a mortgage payment forbearance and continues to make payments as originally agreed is not considered delinquent and shall be treated as if not in forbearance. This rule would allow these borrowers to access a new mortgage provided the forbearance plan is terminated at or prior to closing. In addition, the Letter also provides guidelines on future mortgage credit access for borrowers who missed payments during their forbearance period but have since resolved their financial hardship and exited their forbearance agreement; potentially allowing these borrowers to refinance.

Figure 1: Composition of FHA Loans In Forbearance by the Number of Months Delinquent



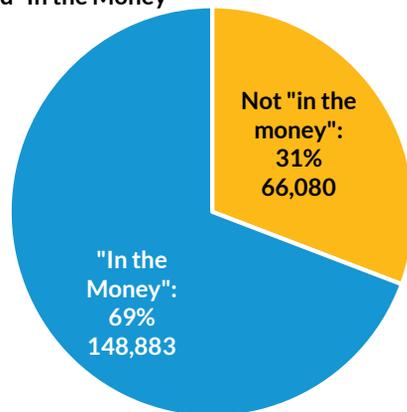
Source: Urban Institute calculations of data.

Data provided by Ginnie Mae can help estimate the impact of HUD's new guidance for borrowers in forbearance but current. Of all FHA loans outstanding as of September, 9.9 percent of them are in forbearance, including a COVID-related forbearance. Figure 1 indicates that the majority of the FHA loans that are in forbearance are also considered delinquent. These delinquent borrowers would otherwise be at risk of losing their home and their credit score would certainly be lower in the absence of forbearance.

While most FHA loans in forbearance as of September were at some stage of delinquency, a significant minority of forbore loans were considered current. Of the 697,942 FHA loans in forbearance in September, and not liquidated, 31 percent of them were considered current, totaling 214,963 FHA loans.

Amid historically low mortgage rates, the new HUD rule may help the majority of current borrowers in forbearance reduce their monthly mortgage payments through a rate refinancing. Fannie Mae and Freddie Mac took similar action in May, allowing loans that are in forbearance but current to refinance.

Figure 2: Share of FHA Loans Current and in Forbearance Considered "In the Money"



Source: Urban Institute calculations of data provided publicly by Ginnie Mae.

Using the average mortgage rate on FHA-to-FHA refinances endorsed in August, 3.10 percent, Figure 2 shows that 69 percent of the 214,963 loans in a forbearance but current, 148,883 loans, had a mortgage rate that exceeded 3.10 percent by 75 basis points or more. These borrowers would be considered "in-the-money" for a rate refinancing.

It is important to realize that FHA borrowers in forbearance but current have a lower credit score than those that recently received a rate-term or streamlined FHA refinance mortgage. As of September, the median credit score on a FHA loan considered current but in forbearance was 661, 19 points below the median credit score across all FHA non-cash out refinance originations, 680.

While these borrowers may be encouraged to refinance, as a practical matter they may be unable to obtain the refinance. As of September, the Mortgage Bankers Association's Mortgage Credit Availability Index for government loans is 18 percent tighter than its level in February, the month just prior to when the CARES Act implementing forbearance was signed into law. The lower credit scores for these borrowers are certainly an impediment. And [research indicates that at least part of the pandemic-era mortgage credit tightening by lenders is due to institutionalized forbearance. Forbearance is a successful home retention tool, but its costs may keep some homeowners from reaping the full benefits of homeownership.](#)

INSIDE THIS ISSUE

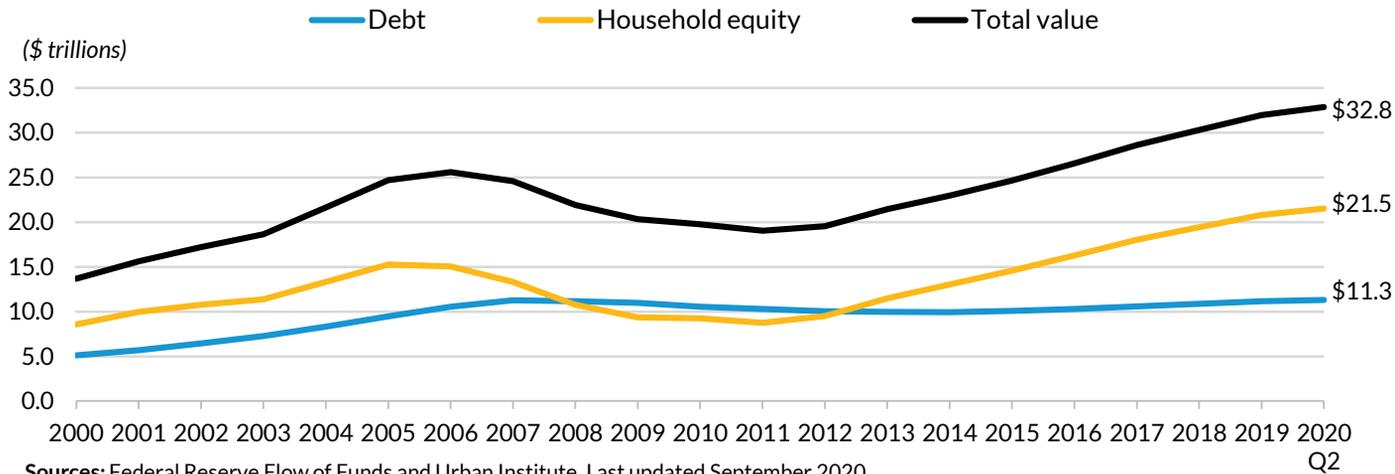
- Fannie Mae and Freddie Mac's nonbank origination shares reached record highs of 71 and 70 percent, respectively, in September 2020 (page 11).
- Originator profitability remained highly elevated in September 2020 as lenders continued to face capacity constraints due to strong demand for refinance (page 19).
- Months supply of housing touched another record low of 2.7 months in September 2020, reflecting the severe shortage of housing supply (page 20).
- Freddie's most recent STACR deal, 2020-DNA 5, was the first credit risk transfer deal to use a SOFR-based index, instead of a LIBOR-based index; LIBOR is scheduled to sunset at the end of 2021 (page 27).

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 Q2 2020 numbers show that while mortgage debt outstanding remained steady at \$11.3 trillion, total home equity grew slightly from \$21.1 trillion in Q1 2020 to \$21.5 trillion in the second quarter of 2020, bringing the total value of the housing market to \$32.8 trillion, 28.4 percent higher than the pre-crisis peak in 2006. Agency MBS account for 63.1 percent of the total mortgage debt outstanding, private-label securities make up 3.9 percent, and unsecuritized first liens make up 28.8 percent. Home equity loans comprise the remaining 4.2 percent of the total.

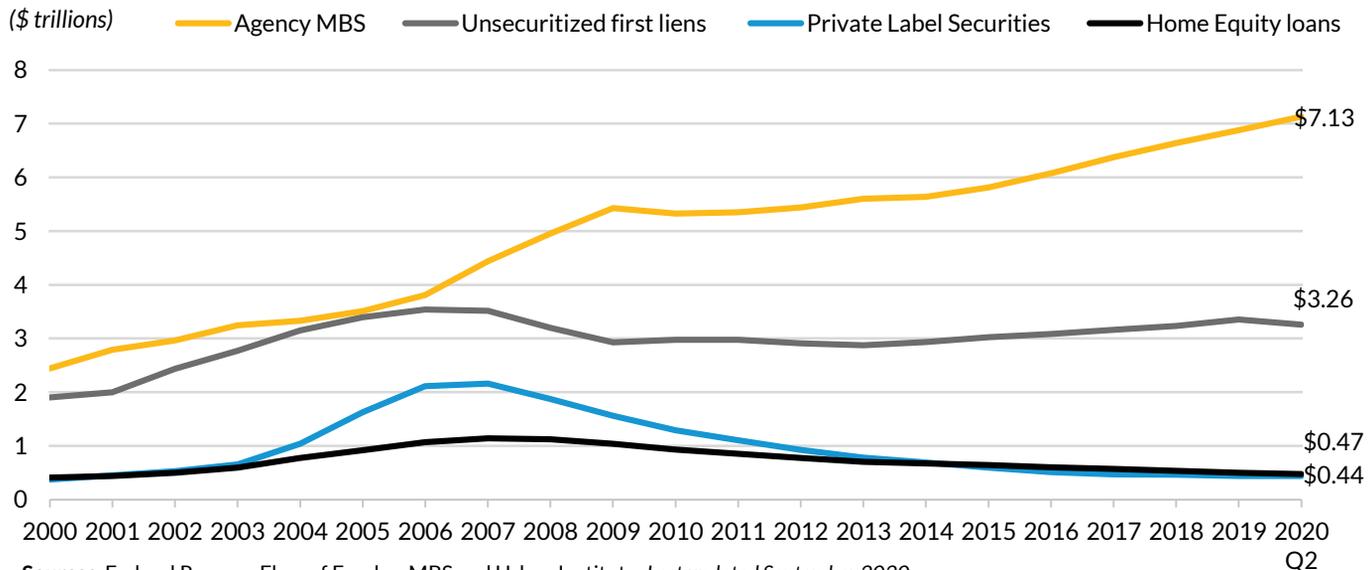
Value of the US Single Family Housing Market



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

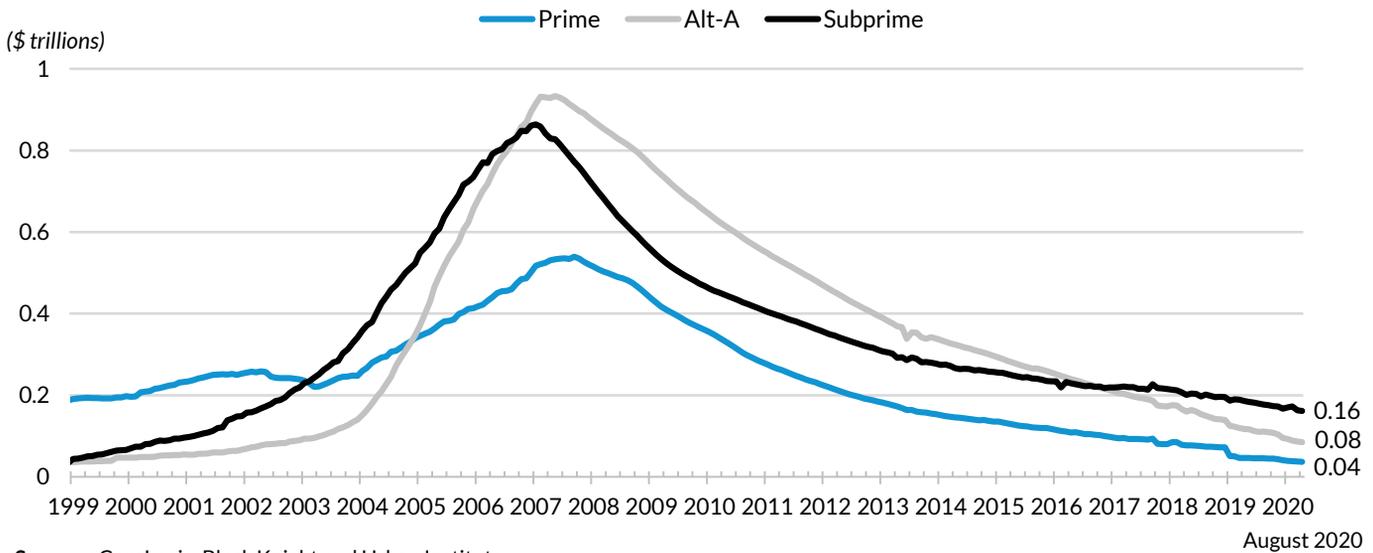
Note: Unsecuritized first liens includes loans held by commercial banks, GSEs, savings institutions, credit unions and other financial companies

OVERVIEW

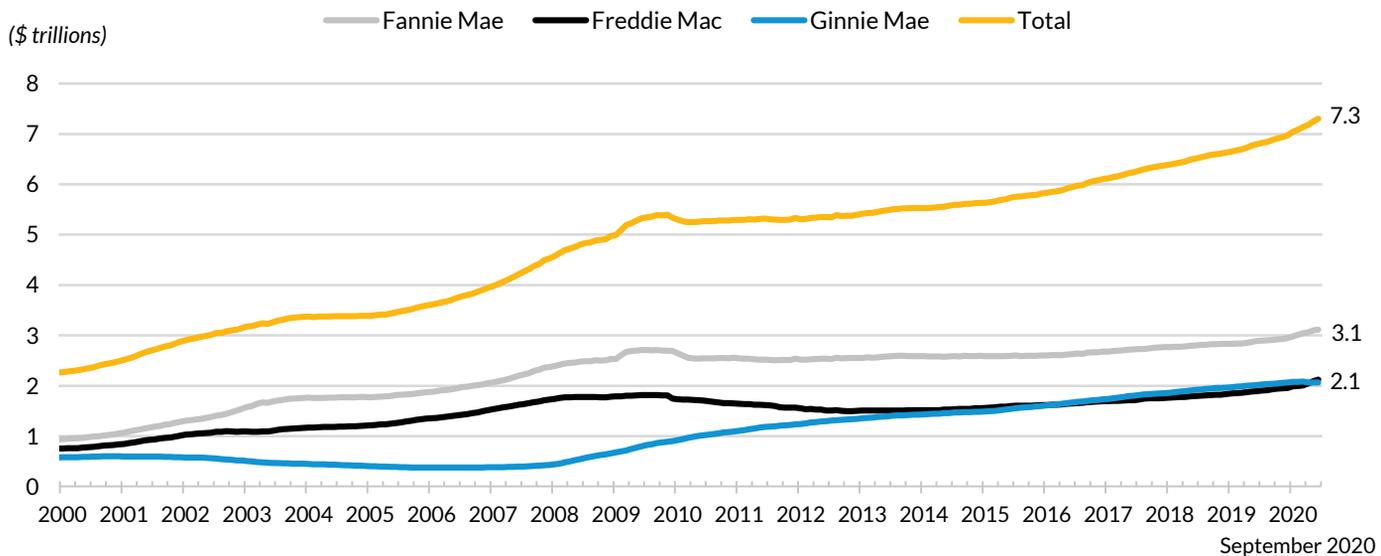
MARKET SIZE OVERVIEW

As of August 2020, our sample of first lien mortgage debt in the private-label securitization market totaled \$283 billion and was split among prime (13.0 percent), Alt-A (30.0 percent), and subprime (57.0 percent) loans. In August 2020, outstanding securities in the agency market totaled \$7.3 trillion, 42.7 percent of which was Fannie Mae, 29.1 percent Freddie Mac, and 28.2 percent Ginnie Mae.

Private-Label Securities by Product Type



Agency Mortgage-Backed Securities

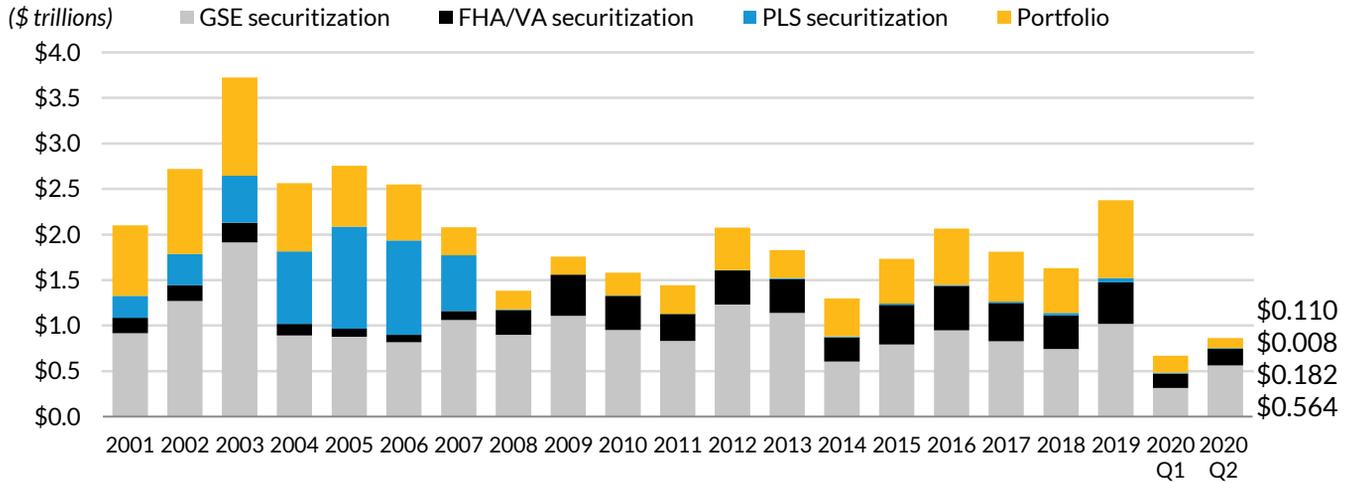


OVERVIEW

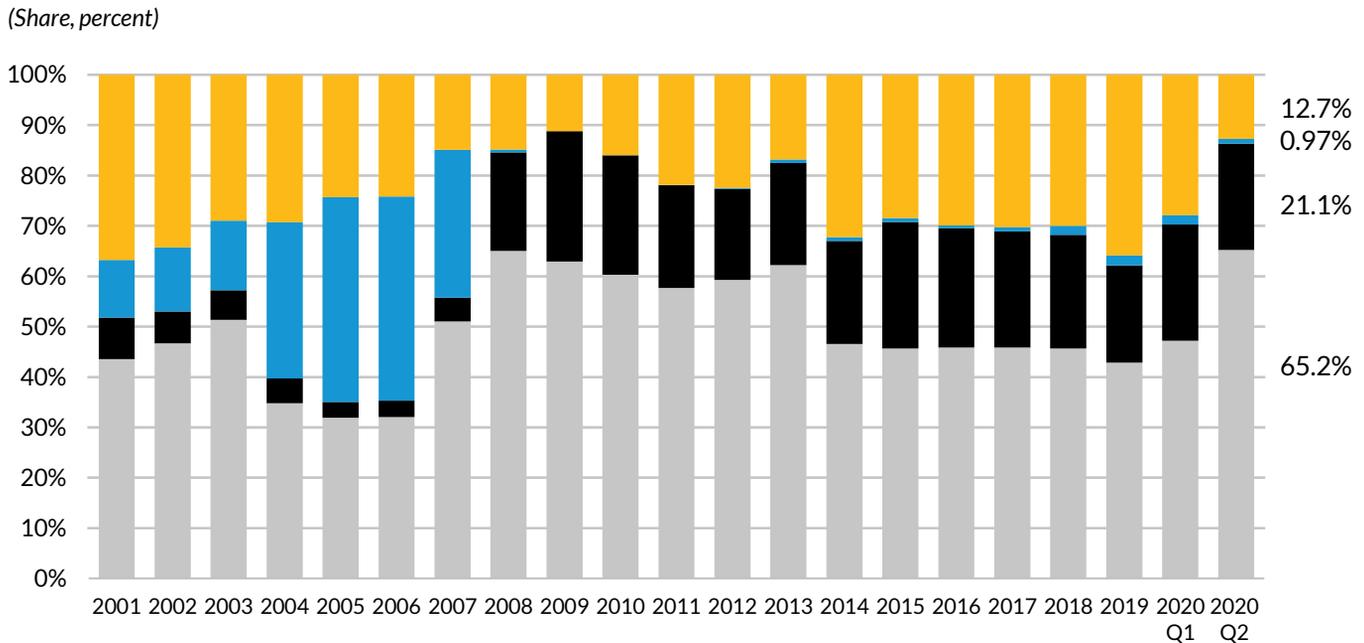
ORIGINATION VOLUME AND COMPOSITION

First Lien Origination Volume

In the second quarter of 2020, first lien originations totaled \$865 billion, up 53.1 percent from the Q2 2019 volume of \$565 billion. The share of portfolio originations was 12.7 percent in Q2 2020, a significant decline from the 38.6 percent share in the same period of 2019. The Q2 2020 GSE share stood at 65.2 percent, up from 42.1 percent in Q2 2019. The FHA/VA share grew to 21.1 percent, compared to 17.7 percent last year. Private-label securitization currently tallies 1.0 percent, down from 1.6 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.



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



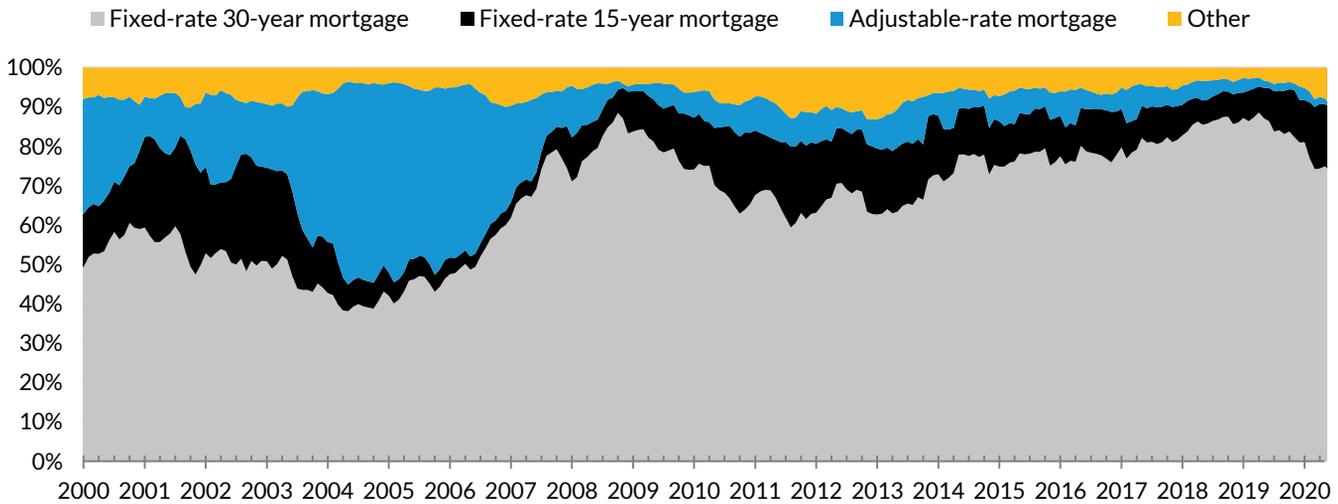
Sources: Inside Mortgage Finance and Urban Institute. Last updated August 2020.

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 73.9 percent of new originations in August 2020. The share of 15-year fixed-rate mortgages, predominantly a refinance product, was 16.0 percent of new originations in August 2020, as refinances continue to boom due to record low interest rates, up from 8.4 percent last year. The ARM share accounted for 1.1 percent. 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 Ginnie Mae refi share has remained relatively stable in 2020. With rates at historic lows the refi share is very high; the GSEs are in the 68 to 72 percent range, Ginnie Mae at 50.0 percent.

Product Composition

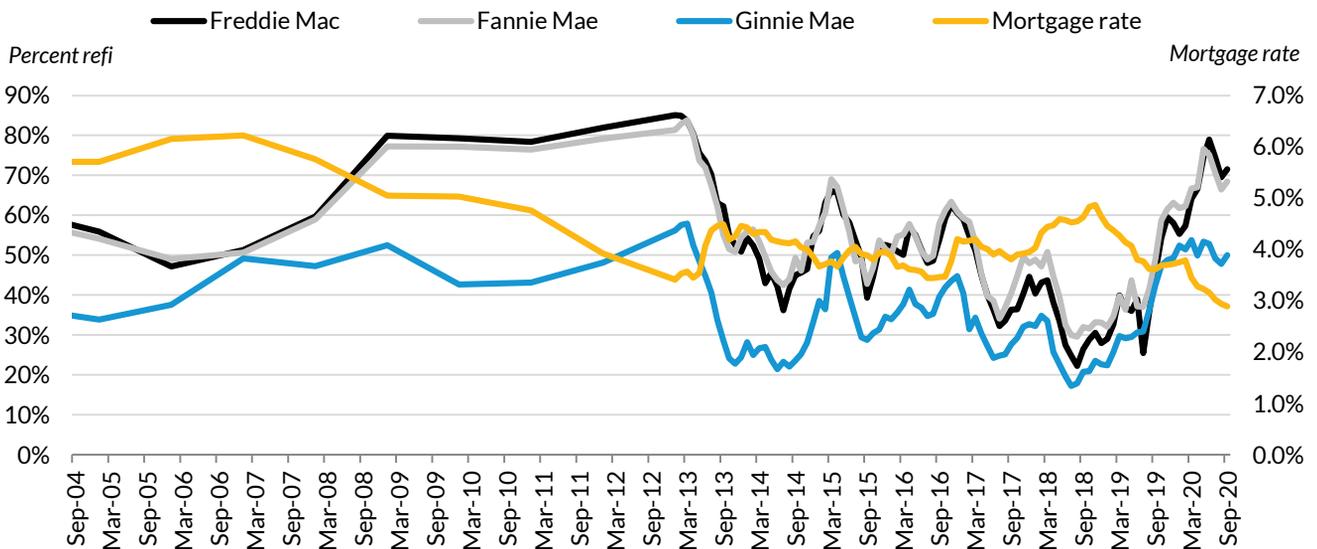


Sources: Black Knight, eMBS, HMDA, SIFMA and Urban Institute.

August 2020

Note: Includes purchase and refinance originations.

Percent Refi at Issuance



Sources: eMBS and Urban Institute.

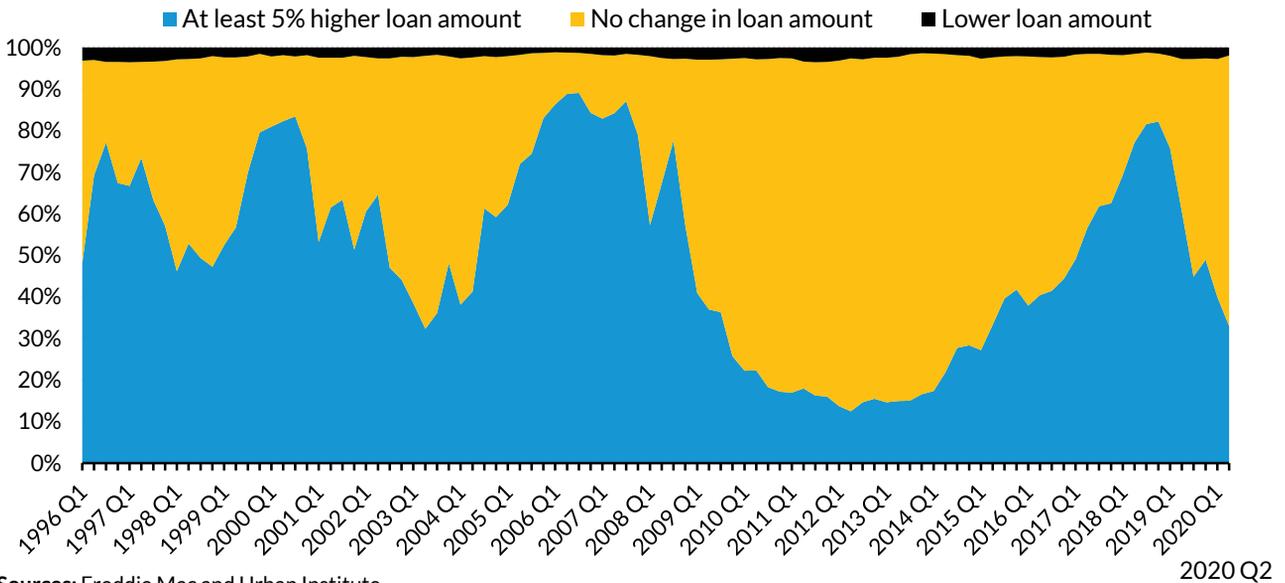
Note: Based on at-issuance balance. Figure based on data from September 2020.

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 share of all refinances fell from 40 percent in the first quarter of 2020 to 33 percent in the second quarter. The cash-out refi share has generally fallen during 2020—although it increased slightly in August—due to increased rate refinance activity from borrowers taking advantage of historically low rates. Note that while home prices have risen, equity take-out volumes are substantially lower now than during the bubble years.

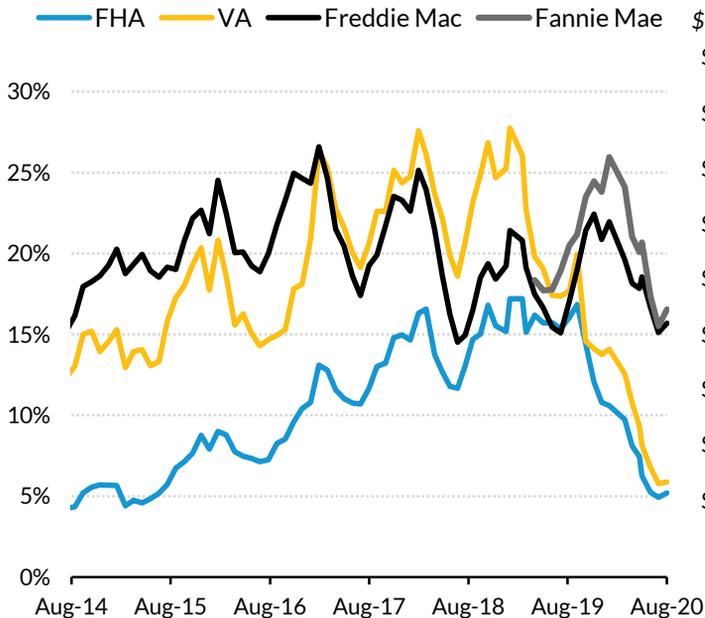
Loan Amount after Refinancing



Sources: Freddie Mac and Urban Institute.

Note: Estimates include conventional mortgages only.

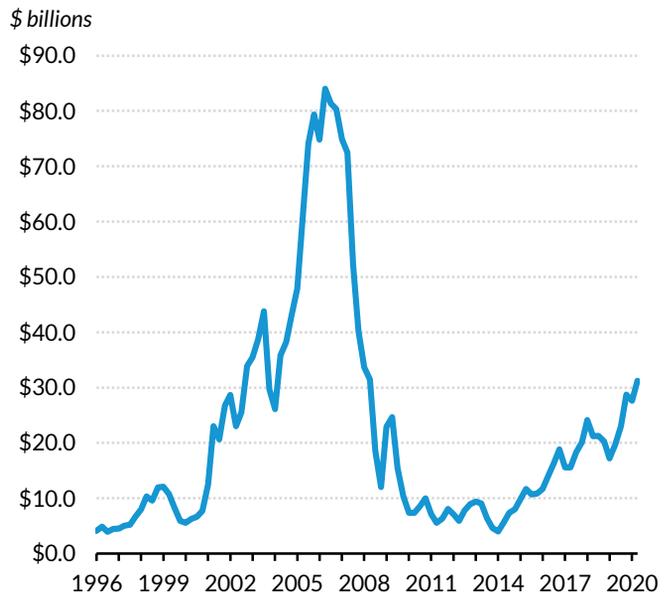
Cash-out Refi Share of All Originations



Sources: eMBS and Urban Institute.

Note: Data as of August 2020.

Equity Take-Out from Conventional Mortgage Refinance Activity



Sources: Freddie Mac and Urban Institute.

Note: These quarterly estimates include conventional mortgages only.

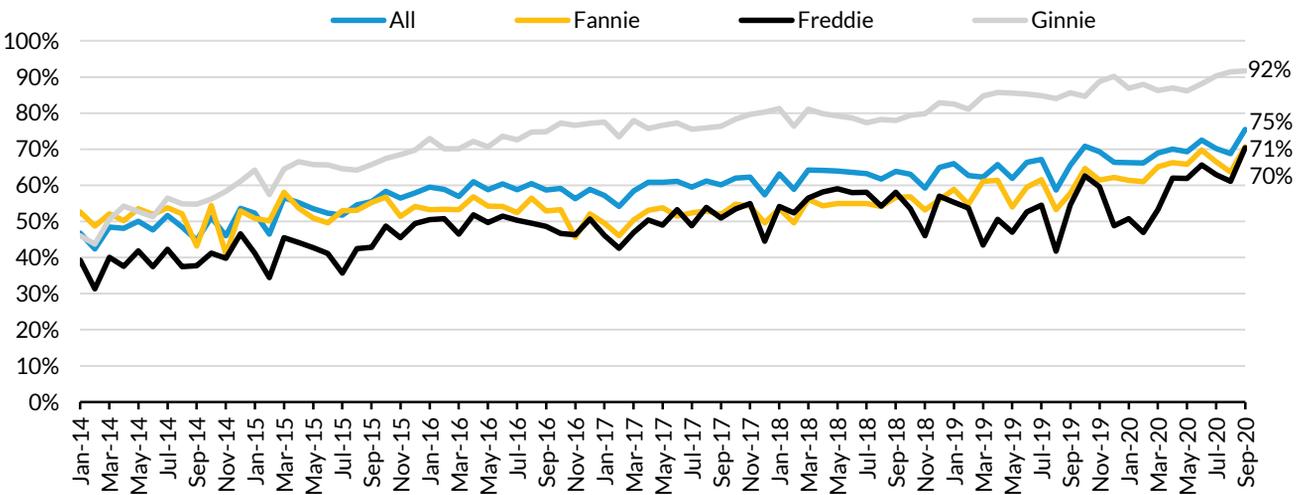
Q2 2020

OVERVIEW

AGENCY NONBANK ORIGINATION SHARE

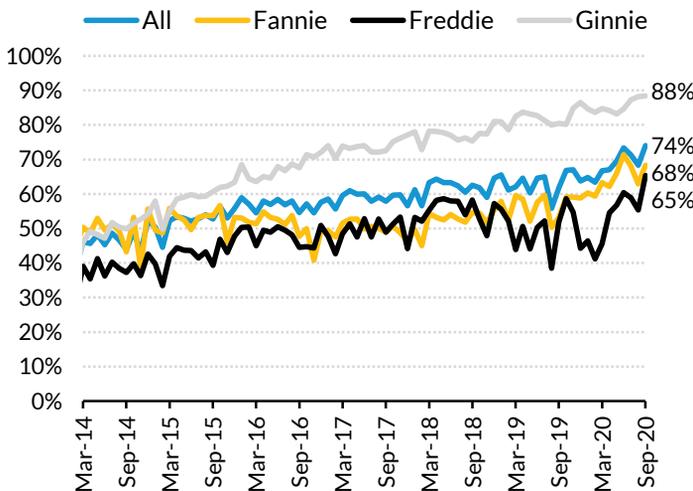
The nonbank share for agency originations has been rising steadily since 2013, standing at 75 percent in September 2020. The Ginnie Mae nonbank share has been consistently higher than the GSEs, rising in September 2020 to 92 percent. Fannie and Freddie's nonbank shares both rose in September, to 71 and 70 percent, respectively, a record for both GSEs (note that these numbers can be volatile on a month-to-month basis). 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



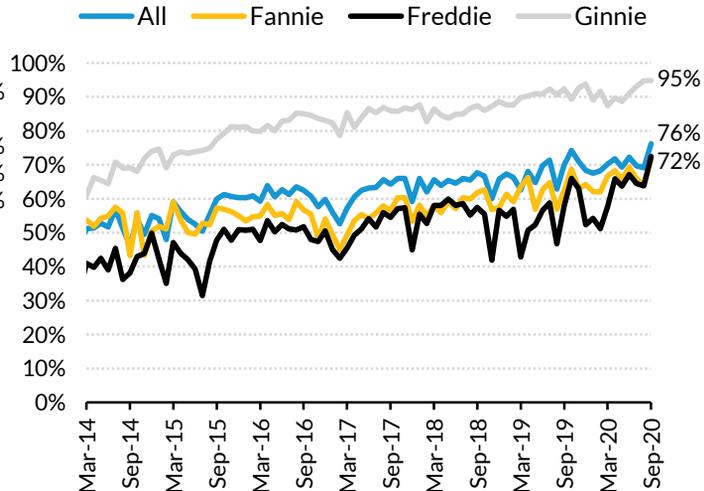
Sources: eMBS and Urban Institute.

Nonbank Origination Share: Purchase Loans



Sources: eMBS and Urban Institute.

Nonbank Origination Share: Refi Loans



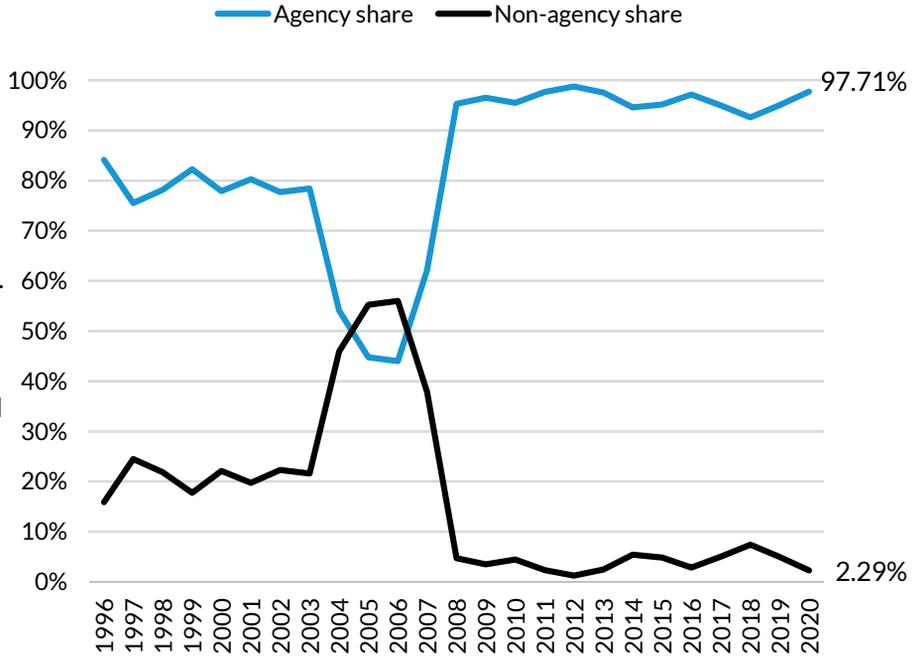
Sources: eMBS and Urban Institute.

OVERVIEW

SECURITIZATION VOLUME AND COMPOSITION

Agency/Non-Agency Share of Residential MBS Issuance

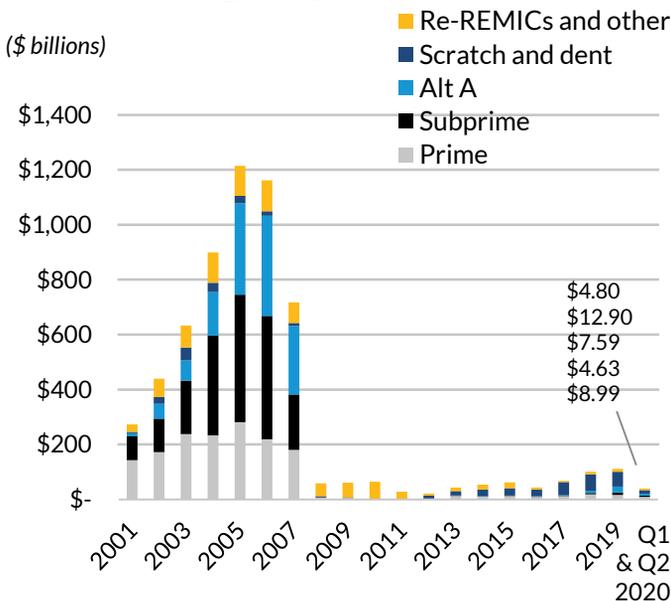
The non-agency share of mortgage securitizations increased gradually over the post-crisis years, from 1.83 percent in 2012 to 5.0 percent in 2019. Through September of 2020, the non-agency share was 2.29 percent; the sharp drop in 2020 reflects the fact that the non-agency market production has been low due to dislocations caused by COVID-19. Non-agency securitization volume totaled \$38.91 billion in the first half of 2020, a decrease relative to 1H 2019's \$49.82 billion total. Alt-A and scratch and dent securitizations have both declined since the same period last year. Non-agency securitizations continue to be tiny compared to pre-housing market crisis levels.



Sources: Inside Mortgage Finance and Urban Institute.

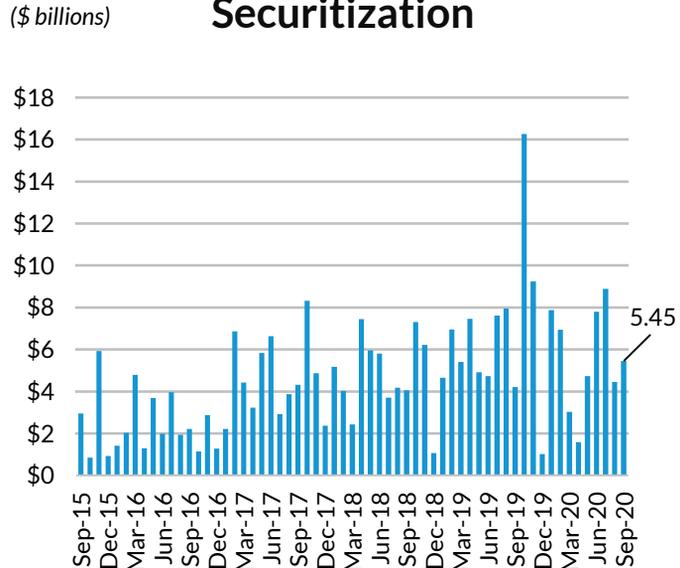
Note: Based on data from September 2020. Monthly non-agency volume is subject to revision.

Non-Agency MBS Issuance



Sources: Inside Mortgage Finance and Urban Institute.

Monthly Non-Agency Securitization



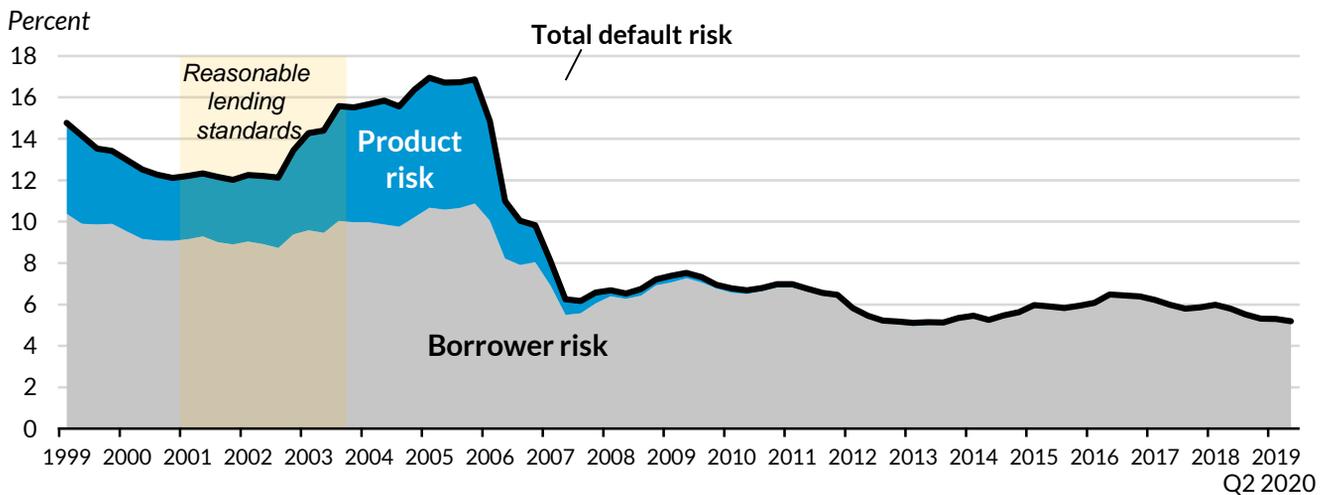
Sources: Inside Mortgage Finance and Urban Institute.

CREDIT BOX

HOUSING CREDIT AVAILABILITY INDEX

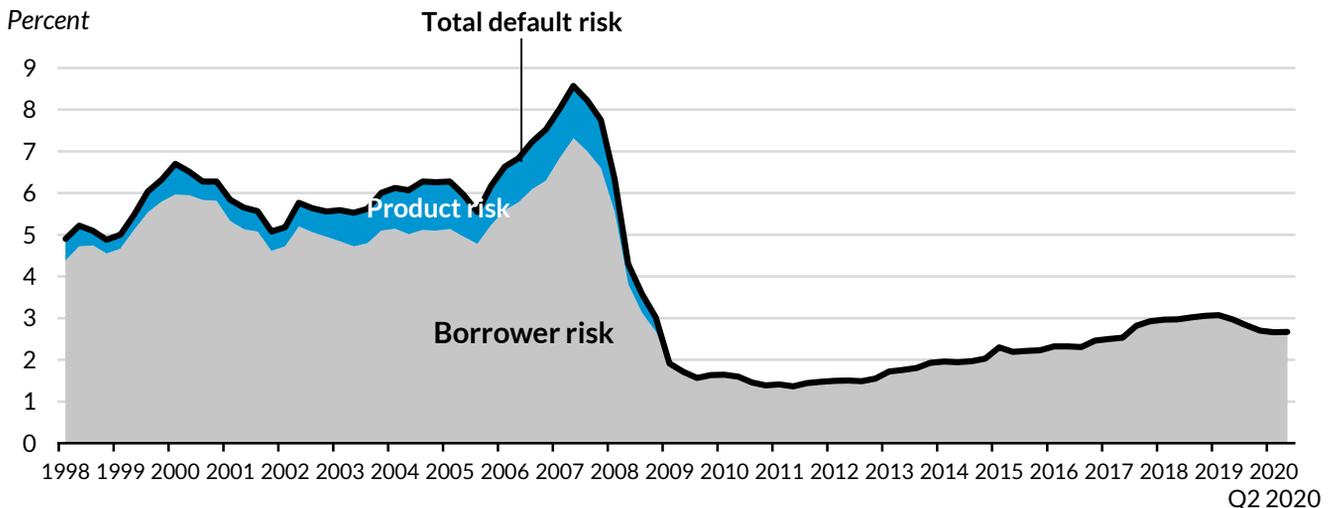
The Urban Institute's Housing Credit Availability Index (HCAI) assesses lenders' tolerance for both borrower risk and product risk, calculating the share of owner-occupied purchase loans that are likely to go 90+ days delinquent over the life of the loan. The HCAI stood at 5.2 percent in Q2 2020, down from an adjusted 5.3 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 half 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 GSE market has expanded the credit box proportionately more than 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 in the first half of 2020 in response to changing market conditions due to COVID-19, standing at 2.7 percent in Q2 2020.



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

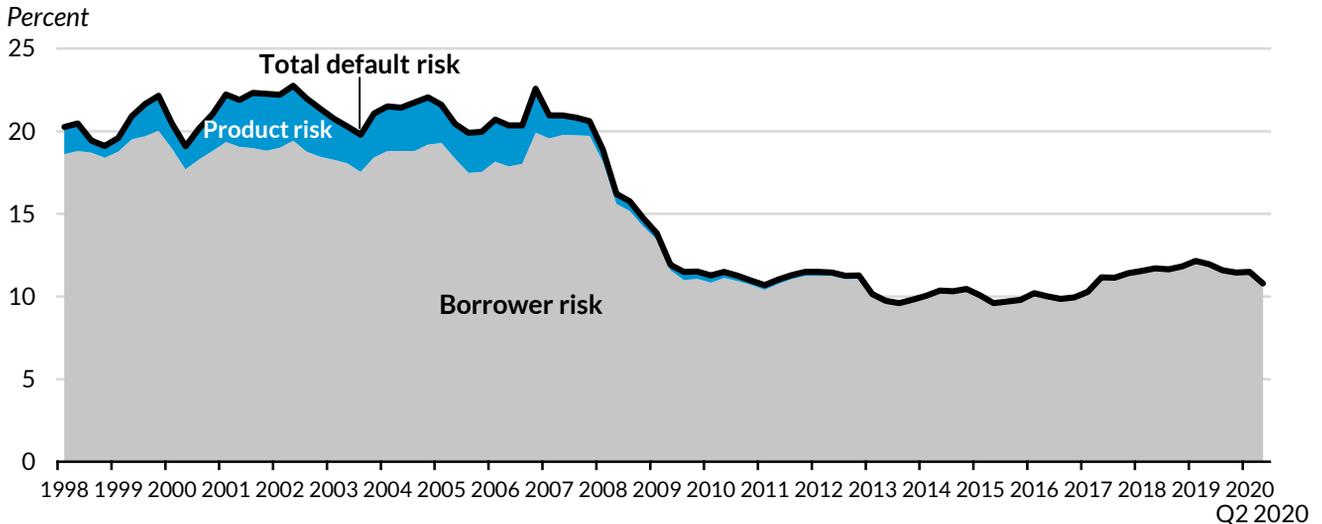
Note: Default is defined as 90 days or more delinquent at any point. Last updated October 2020.

CREDIT BOX

HOUSING CREDIT AVAILABILITY INDEX

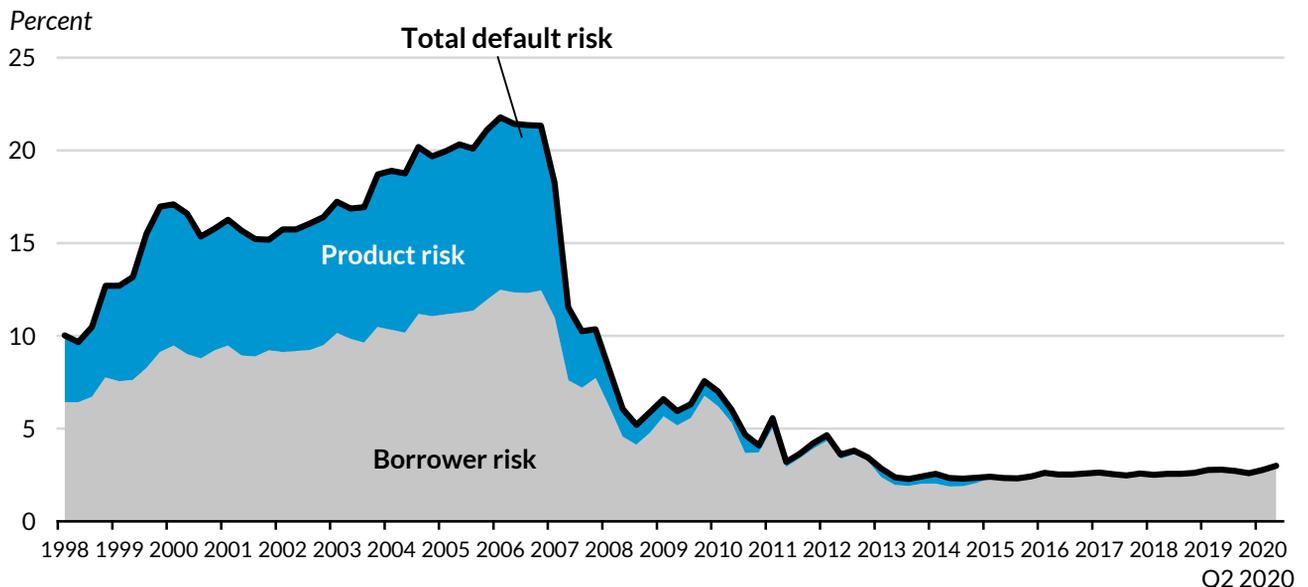
Government Channel

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. In Q2 2020, risk in the government channel receded to 10.8 percent, moving closer to 2016 levels and 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 3.0 percent in Q2 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 October 2020.

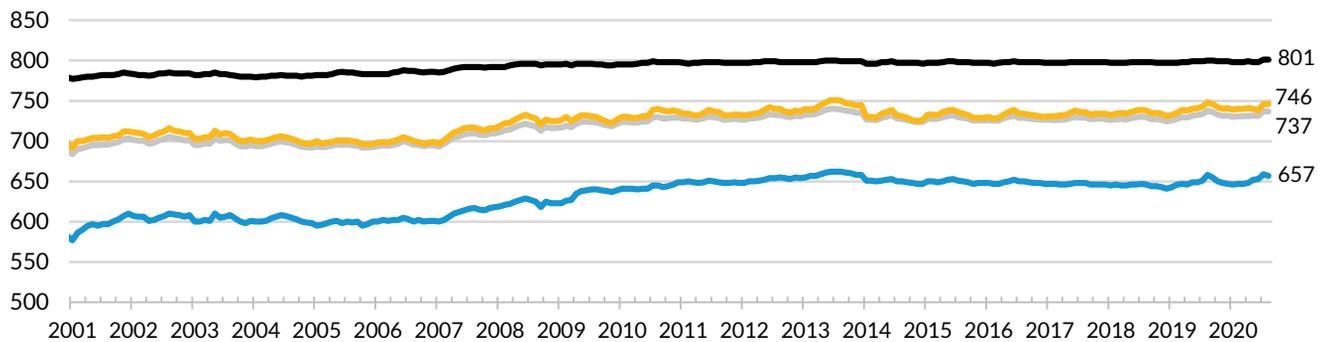
CREDIT AVAILABILITY FOR PURCHASE LOANS

Access to credit remains tight, especially for lower FICO borrowers. The median FICO for current purchase loans is about 46 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 657 in August 2020, which is high compared to low-600s pre-bubble. The median LTV at origination of 94 percent also remains high, reflecting the rise of FHA and VA lending. Although the current median DTI of 38 percent exceeds the pre-bubble level of 36 percent, higher FICO scores more than compensate.

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

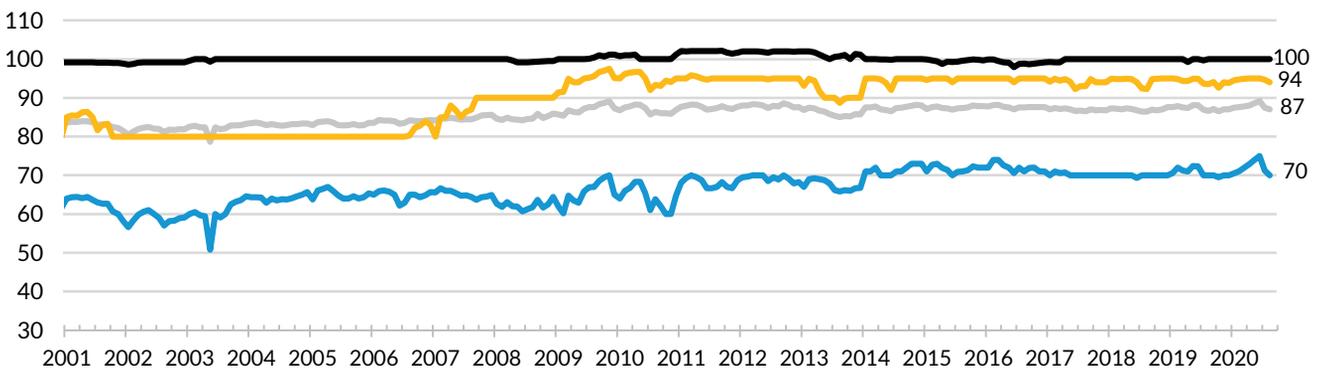
Borrower FICO Score at Origination

FICO Score



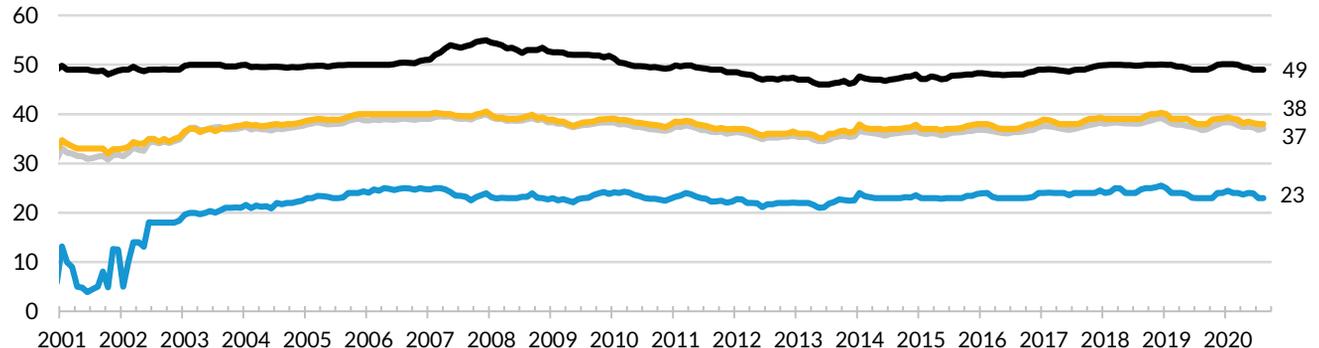
Combined LTV at Origination

LTV



DTI at Origination

DTI



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

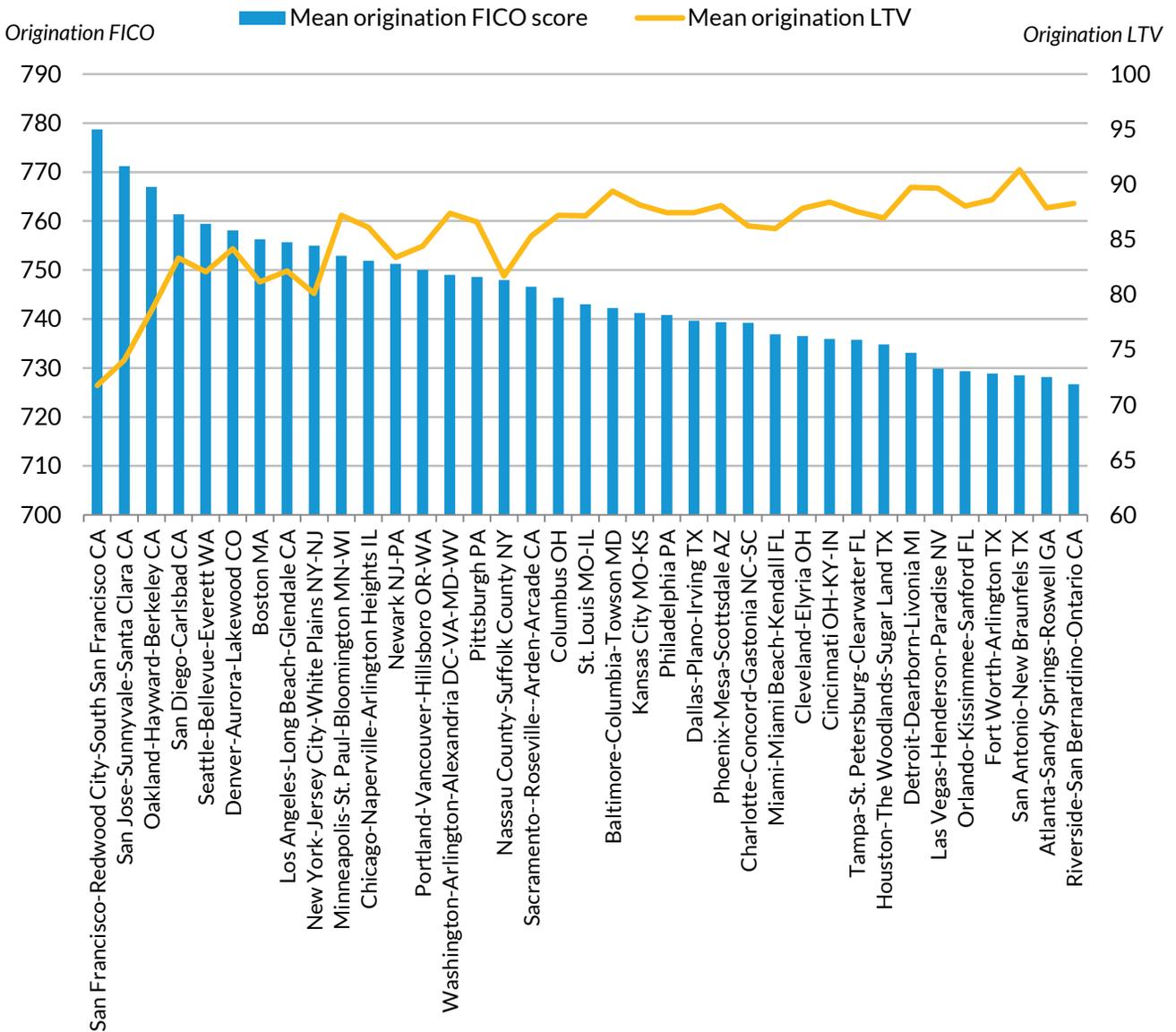
Note: Includes owner-occupied purchase loans only. DTI data prior to April 2018 is from CoreLogic; after that date, it is from Black Knight. Data as of August 2020.

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 779. 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.

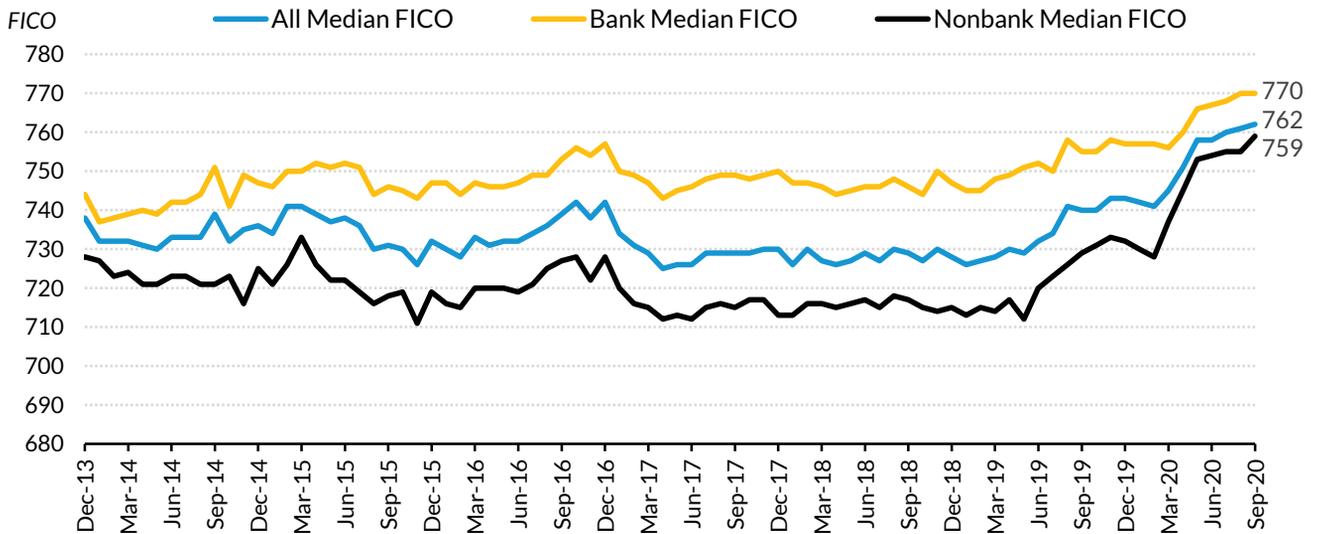
Note: Includes owner-occupied purchase loans only. Data as of August 2020.

CREDIT BOX

AGENCY NONBANK CREDIT BOX

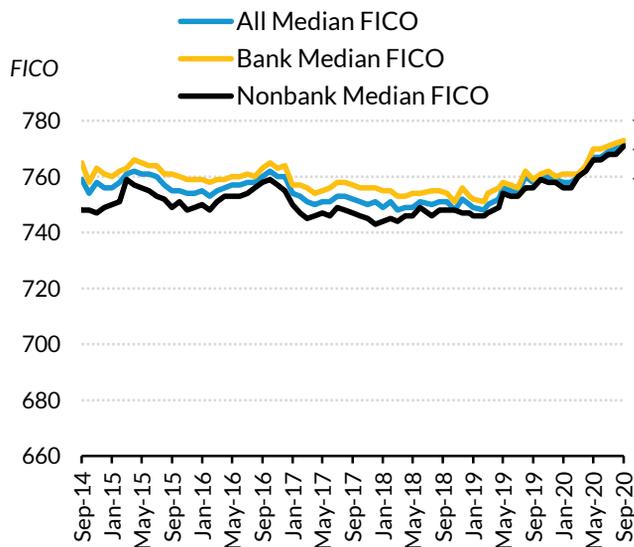
Nonbank originators have played a key role in expanding access to credit. In the GSE space, FICO scores for banks and nonbanks have nearly converged; the differential is much larger in the Ginnie Mae space. FICO scores for banks and nonbanks in both GSE and Ginnie Mae segments increased over the course of 2019 and the first nine months of 2020, due to increased refi activity; this activity is skewed toward higher FICO scores. This has been particularly pronounced the last seven months: March through September of 2020. Comparing Ginnie Mae FICO scores today versus six years ago (late 2014), 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 8 percent of Ginnie Mae originations.

Agency FICO: Bank vs. Nonbank



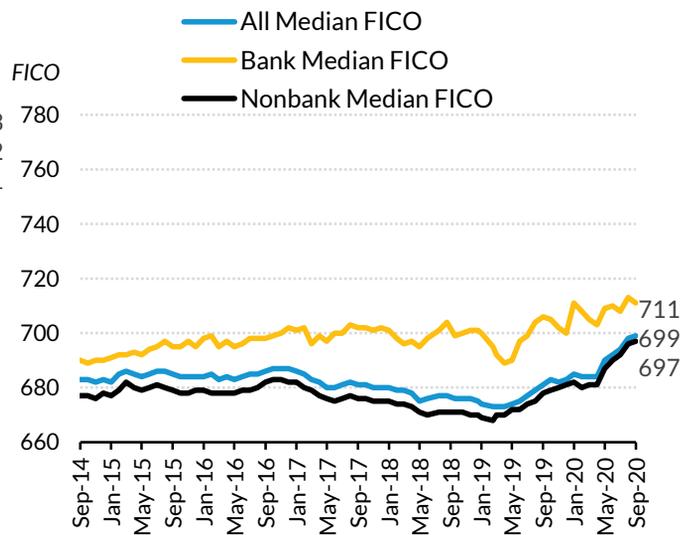
Sources: eMBS and Urban Institute.

GSE FICO: Bank vs. Nonbank



Sources: eMBS and Urban Institute.

Ginnie Mae FICO: Bank vs. Nonbank



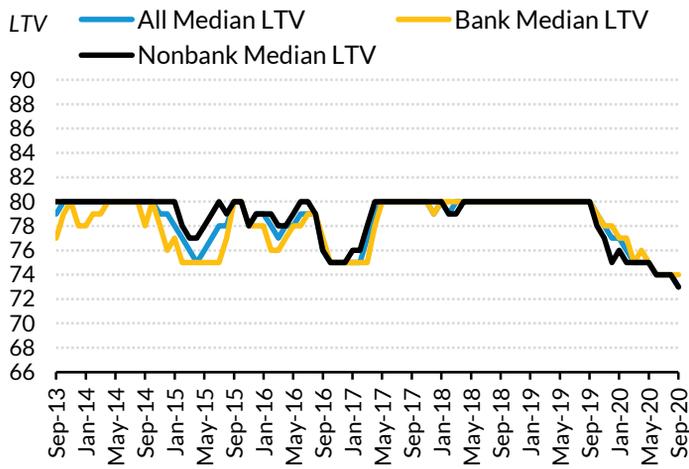
Sources: eMBS and Urban Institute.

CREDIT BOX

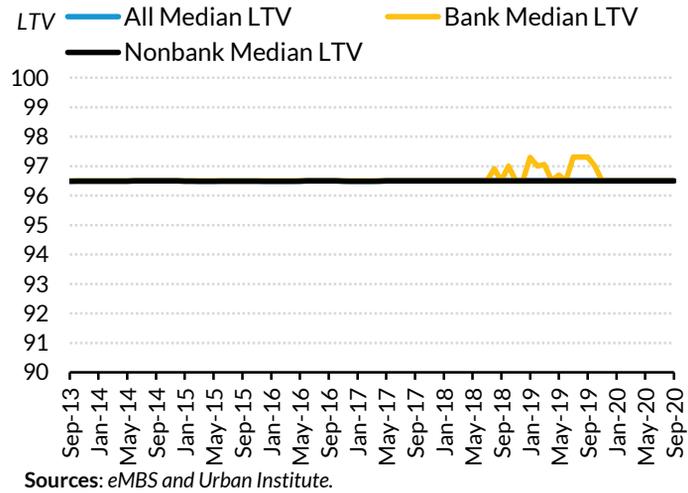
AGENCY NONBANK CREDIT BOX

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 thus far in 2020, DTIs fell as borrower payments declined relative to incomes.

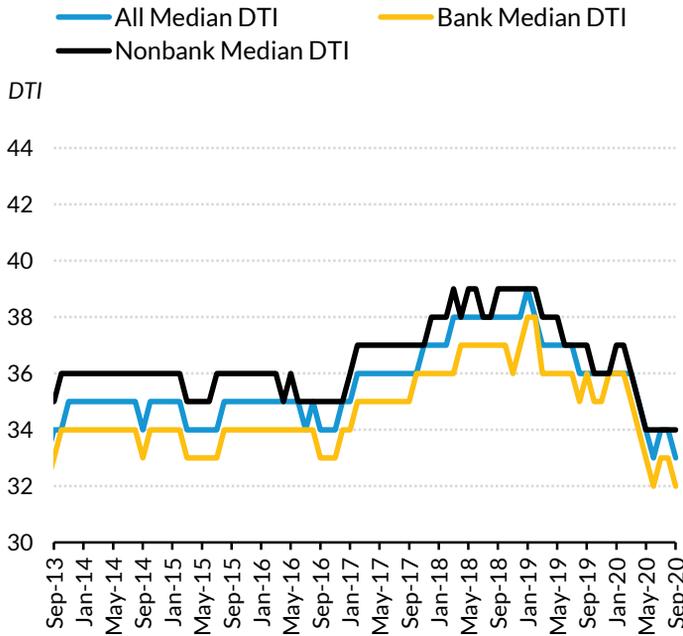
GSE LTV: Bank vs. Nonbank



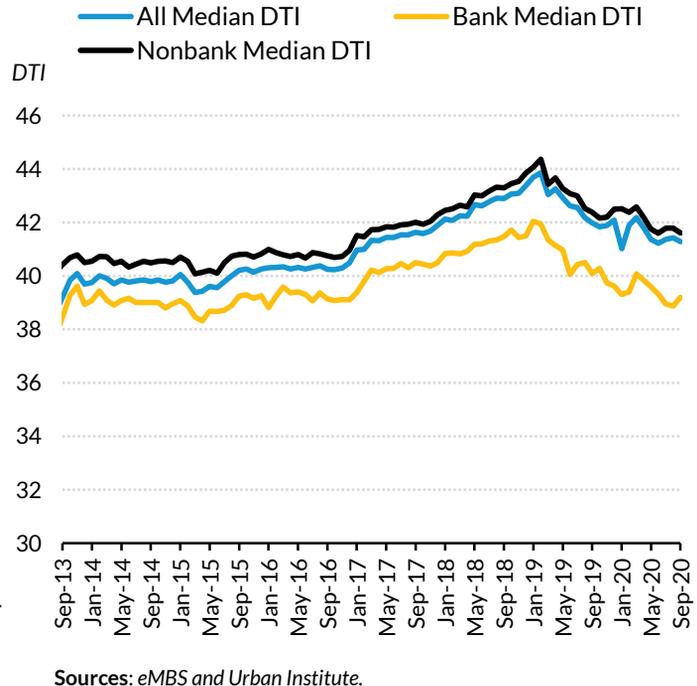
Ginnie Mae LTV: Bank vs. Nonbank



GSE DTI: Bank vs. Nonbank



Ginnie Mae DTI: Bank vs. Nonbank



MORTGAGE ORIGINATION PROJECTIONS

Fannie Mae, Freddie Mac and the MBA estimate 2020 origination volume to be between \$3.18 and \$4.08 trillion, higher than the \$2.17 to \$2.33 trillion in 2019. The increase in the 2020 origination volume is due to expectations of very strong refinance activity. All three groups expect the refinance share to be 9 to 17 percentage points higher than in 2019, based on continued low rates in the wake of COVID-19.

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
2019 Q1	359	350	325	34	35	30
2019 Q2	581	555	501	35	36	29
2019 Q3	752	695	651	50	47	42
2019 Q4	770	725	696	57	58	55
2020 Q1	789	670	563	63	60	52
2020 Q2	1148	1008	928	69	67	61
2020 Q3	1251	1114	860	63	60	50
2020 Q4	895	791	824	57	53	49
2016	2052	2125	1891	49	47	49
2017	1826	1810	1760	36	37	35
2018	1766	1700	1677	30	32	28
2019	2462	2432	2253	46	46	44
2020	4083	3582	3175	63	61	53
2021	2622	2685	2488	40	46	36

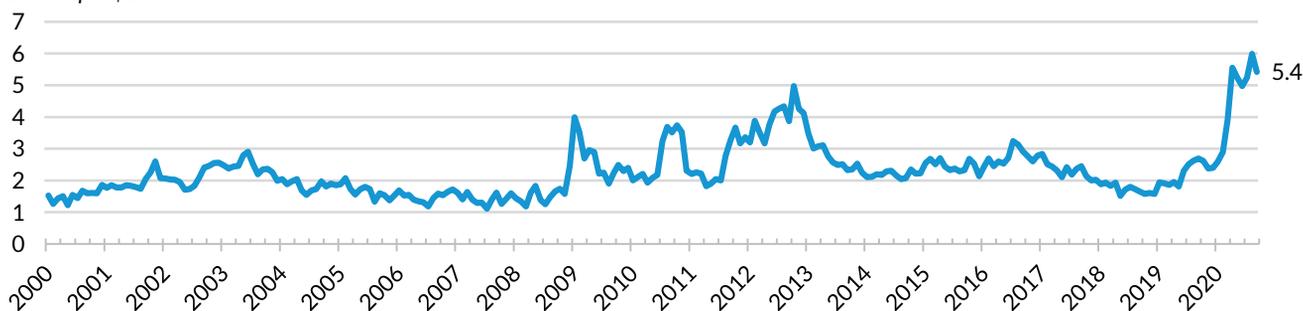
Sources: Fannie Mae, Freddie Mac, Mortgage Bankers Association and Urban Institute.

Note: Shaded boxes indicate forecasted figures. All figures are estimates for total single-family market. Regarding interest rates, the yearly averages for 2016, 2017, 2018 and 2019 were 3.8, 4.0, 4.6, and 3.9 percent. For 2020, the respective projections for Fannie, Freddie, and MBA are 3.1, 3.2, and 3.0 percent.

Originator Profitability and Unmeasured Costs

In September 2020, Originator Profitability and Unmeasured Costs (OPUC) stood at \$5.42 per \$100 loan, down slightly from last month's \$5.9, the highest level on record. 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 September 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 September 2020 was 2.7, 1.4 months lower than it was in September 2019 and a new record low. Strong demand for housing in recent years, fueled by low mortgage rates, has kept the months supply limited. Fannie Mae, Freddie Mac, the MBA, and the NAHB forecast 2020 housing starts to be 1.28 to 1.35 million units; these 2020 forecasts from Fannie Mae, Freddie Mac, and the MBA are above 2019 levels. Fannie Mae, Freddie Mac, and the MBA predict total home sales of 6.1 to 6.4 million units in 2020, above 2019 levels.

Months of Supply

Months of supply



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

September 2020

Housing Starts and Home Sales

Year	Housing Starts, thousands				Home Sales, thousands			
	Total, FNMA estimate	Total, FHLMC estimate	Total, MBA estimate	Total, NAHB estimate	Total, FNMA estimate	Total, FHLMC estimate	Total, MBA estimate	Total, NAHB estimate*
2016	1174	1170	1177	1177	6011	6010	6001	5385
2017	1203	1200	1208	1208	6123	6120	6158	5522
2018	1250	1250	1250	1250	5957	5960	5956	5357
2019	1290	1250	1295	1295	6023	6000	6016	5439
2020	1352	1280	1346	1343	6098	6200	6363	5767
2021	1433	N/A	1411	1306	6242	6100	7017	6097

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

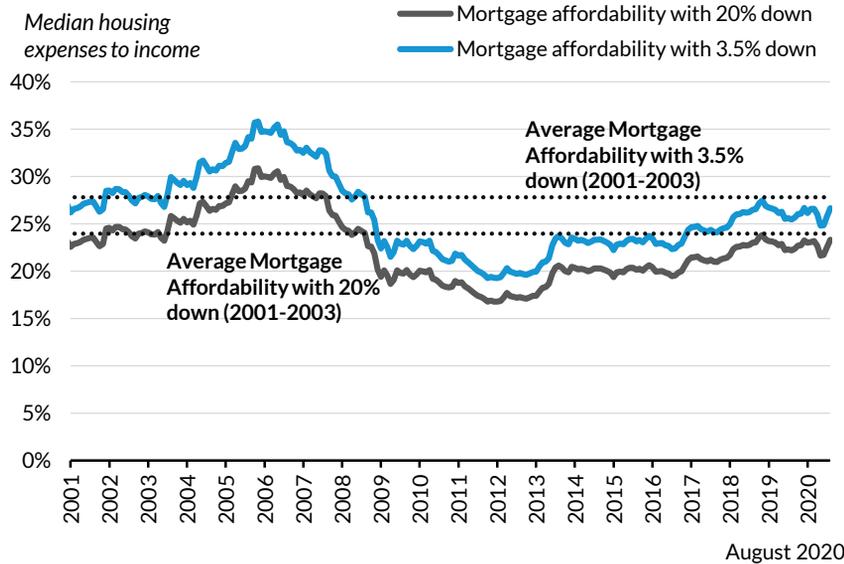
Note: Shaded boxes indicate forecasted figures; column labels indicate source of estimate. Freddie Mac home sales are now updated quarterly instead of monthly, with the last update in October 2020; Freddie also no longer provides housing starts forecasts, listed starts are as of June 2020. *NAHB home 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

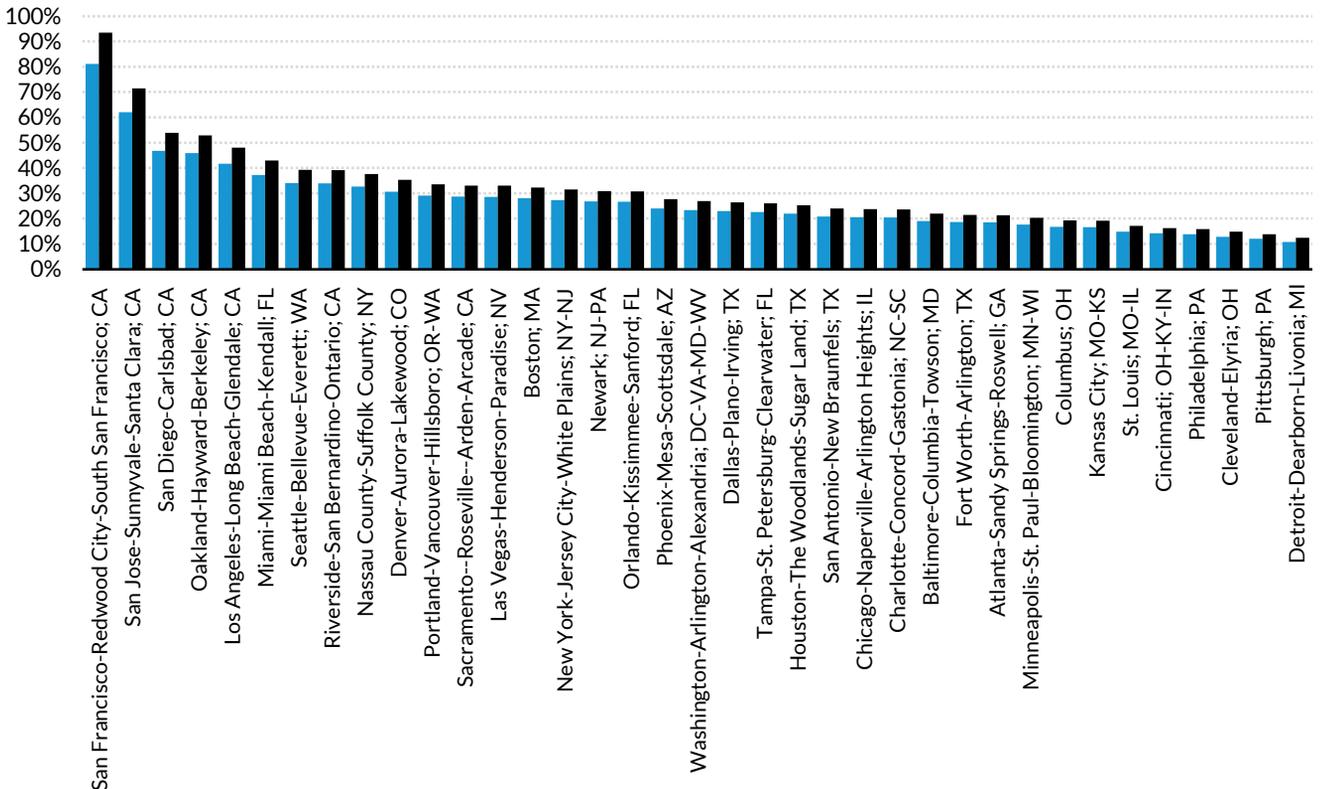
National Mortgage Affordability Over Time

Home prices remain affordable by historic standards, despite price increases over the last 8 years, as interest rates are now near generational lows. As of August 2020, with a 20 percent down payment, the share of median income needed for the monthly mortgage payment stood at 22.3 percent; with 3.5 down, it is 26.7 percent. Since February 2019, the median housing expenses to income ratio has been slightly lower than the 2001-2003 average. 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.

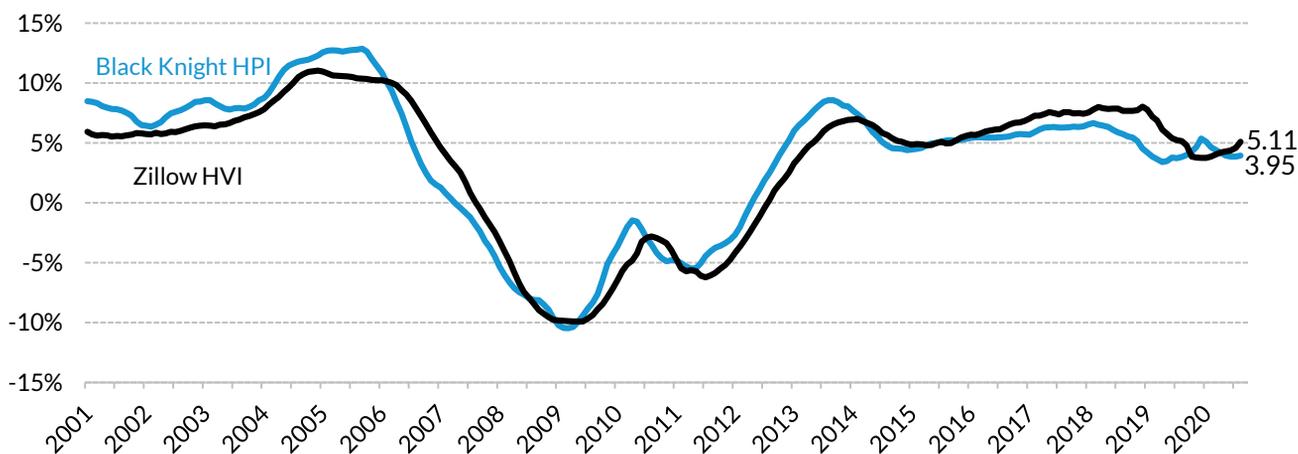
STATE OF THE MARKET

HOME PRICE INDICES

National Year-Over-Year HPI Growth

According to Black Knight's repeat sales index, year-over-year home price appreciation grew to 3.95 percent in August 2020, compared to 3.87 percent last month. Year-over-year home price appreciation as measured by Zillow's hedonic index was 5.11 percent in August 2020, up from 4.59 in July. 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 August 2020.

Changes in Black Knight HPI for Top MSAs

After rising 59.8 percent from the trough, national house prices are now 19.4 percent higher than pre-crisis peak levels. At the MSA level, eleven of the top 15 MSAs have exceeded their pre-crisis peak HPI: New York, NY; Los Angeles, CA; Atlanta, GA; Washington, DC; Houston, TX; Dallas, TX; Minneapolis, MN; Seattle, WA; Denver, CO; San Diego, CA; and Anaheim, CA. Four MSAs particularly hard hit by the boom and bust—Chicago, IL; Phoenix, AZ; Riverside, CA; and Baltimore, MD—are 6.8, 0.7, 6.1, and 5.6 percent, respectively, below peak values.

MSA	HPI changes (%)			% above peak
	2000 to peak	Peak to trough	Trough to current	
United States	75.0	-25.3	59.8	19.4
New York-Jersey City-White Plains, NY-NJ	127.9	-22.4	50.6	16.9
Los Angeles-Long Beach-Glendale, CA	179.8	-38.1	93.0	19.5
Chicago-Naperville-Arlington Heights, IL	67.0	-38.4	51.3	-6.8
Atlanta-Sandy Springs-Roswell, GA	32.5	-35.6	87.4	20.8
Washington-Arlington-Alexandria, DC-VA-MD-WV	149.3	-28.4	42.4	2.0
Houston-The Woodlands-Sugar Land, TX	29.4	-6.6	52.1	42.1
Phoenix-Mesa-Scottsdale, AZ	113.2	-51.1	103.2	-0.7
Riverside-San Bernardino-Ontario, CA	175.3	-51.7	94.3	-6.1
Dallas-Plano-Irving, TX	26.4	-7.2	72.3	59.9
Minneapolis-St. Paul-Bloomington, MN-WI	69.4	-30.4	67.8	16.7
Seattle-Bellevue-Everett, WA	90.5	-33.1	109.5	40.2
Denver-Aurora-Lakewood, CO	34.0	-12.1	96.7	72.9
Baltimore-Columbia-Towson, MD	123.1	-24.3	24.8	-5.6
San Diego-Carlsbad, CA	148.4	-37.5	84.0	15.0
Anaheim-Santa Ana-Irvine, CA	163.3	-35.3	69.6	9.7

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

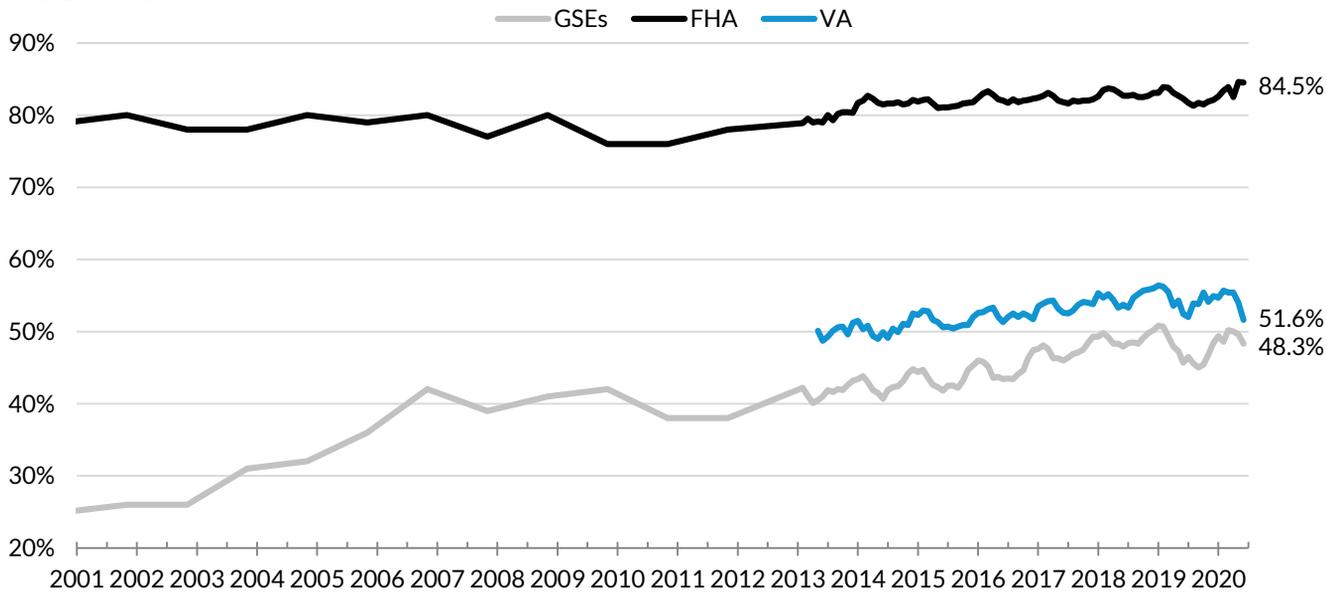
Note: This table includes the largest 15 Metropolitan areas by mortgage count.

STATE OF THE MARKET

FIRST-TIME HOMEBUYERS

First-Time Homebuyer Share

In August 2020, the FTHB share for FHA, which has always been more focused on first time homebuyers, was 84.5 percent. The FTHB share of VA lending declined in August to 51.6 percent. The GSE FTHB share in August was slightly down from July to 48.3 percent. The bottom table shows that based on mortgages originated in August 2020, the average FTHB was more likely than an average repeat buyer to take out a smaller loan, have a lower credit score, and higher LTV, thus paying a higher interest rate.



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

August 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 (\$)	280,254	308,432	232,688	252,123	263,606	301,087
Credit Score	749	759	680	681	725	749
LTV (%)	88	80	96	95	91	82
DTI (%)	34	35	43	44	37	36
Loan Rate (%)	3.19	3.12	3.28	3.22	3.22	3.13

Sources: eMBS and Urban Institute.

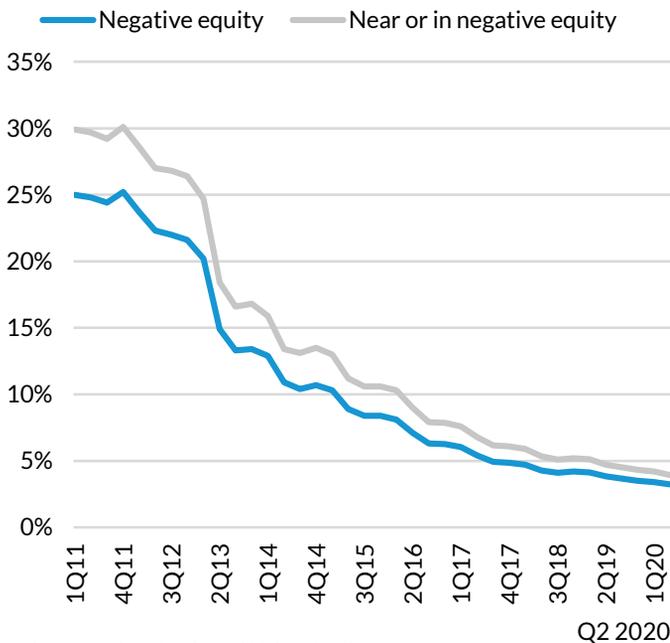
Note: Based on owner-occupied purchase mortgages originated in August 2020.

STATE OF THE MARKET

DELINQUENCIES AND LOSS MITIGATION ACTIVITY

Loans in and near negative equity continued to decline in Q2 2020; 3.2 percent now have negative equity, an additional 0.7 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 spiked significantly in Q2 2020, to 4.26 percent. This number includes loans where borrowers have missed their payments, including loans in COVID-19 forbearance. New loan modifications and liquidations (bottom) declined from 2010 to Q3, 2019, the last data available. Over the period Q3 2007-Q3, 2019, total loan modifications (HAMP and proprietary) are roughly equal to total liquidations. Hope Now reports show 8,644,182 borrowers received a modification from Q3 2007 to Q3 2019, compared with 8,871,863 liquidations in the same period.

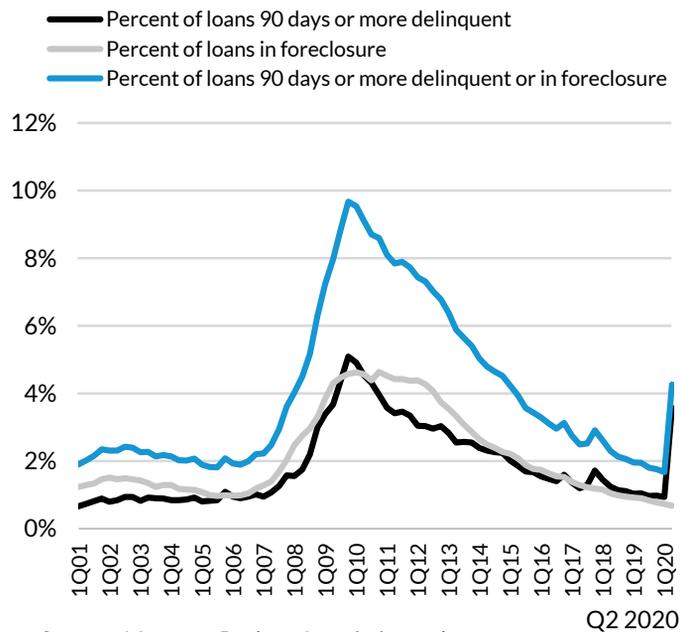
Negative Equity Share



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 September 2020.

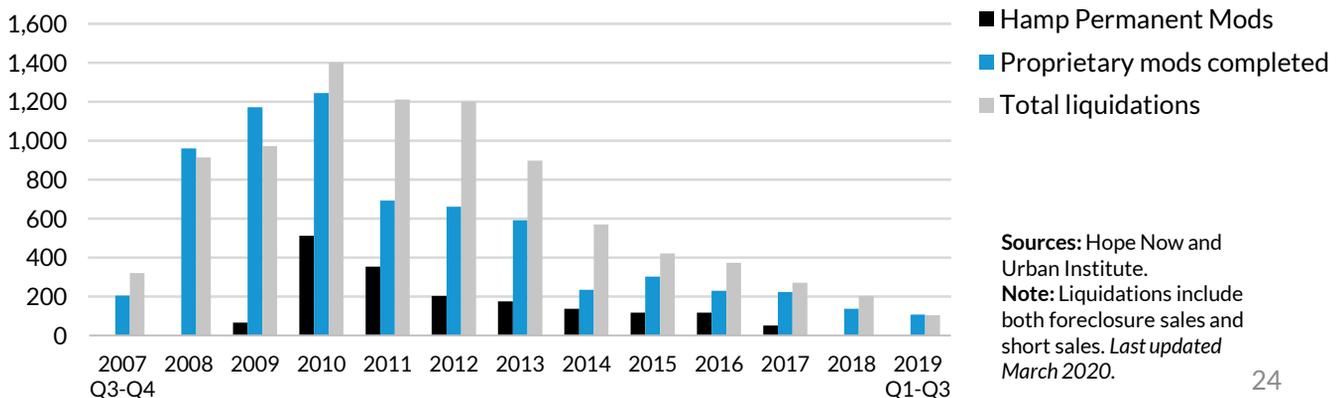
Loans in Serious Delinquency/Foreclosure



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

Loan Modifications and Liquidations

Number of loans (thousands)



Sources: Hope Now and Urban Institute.

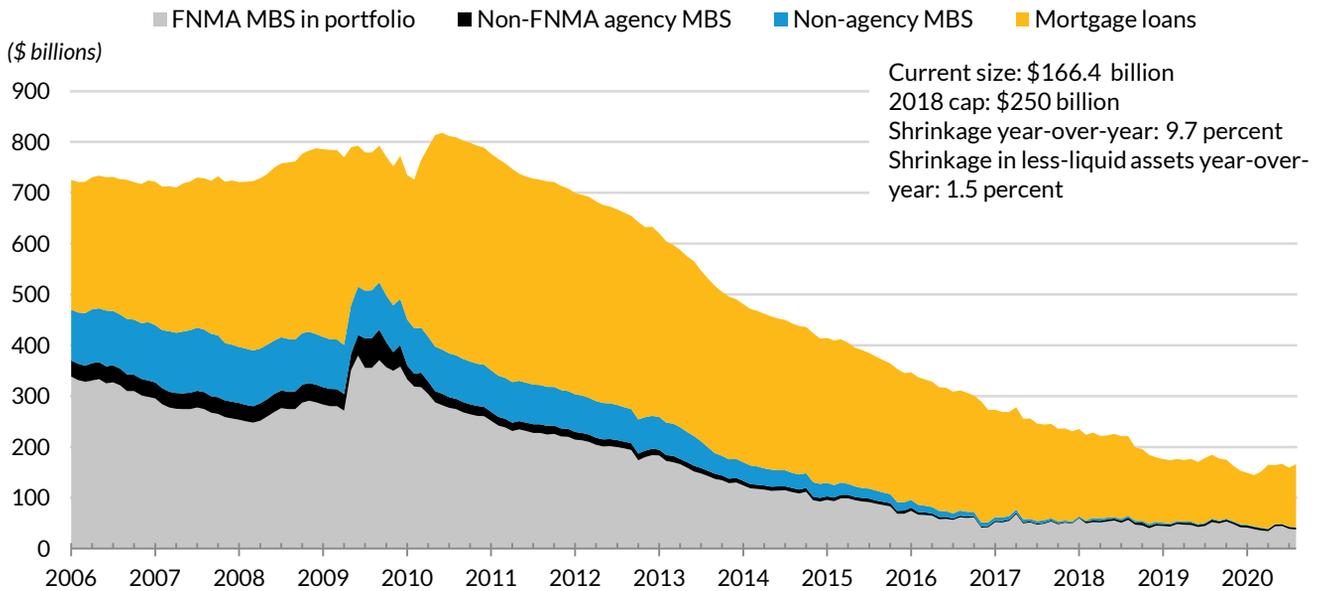
Note: Liquidations include both foreclosure sales and short sales. Last updated March 2020.

GSES UNDER CONSERVATORSHIP

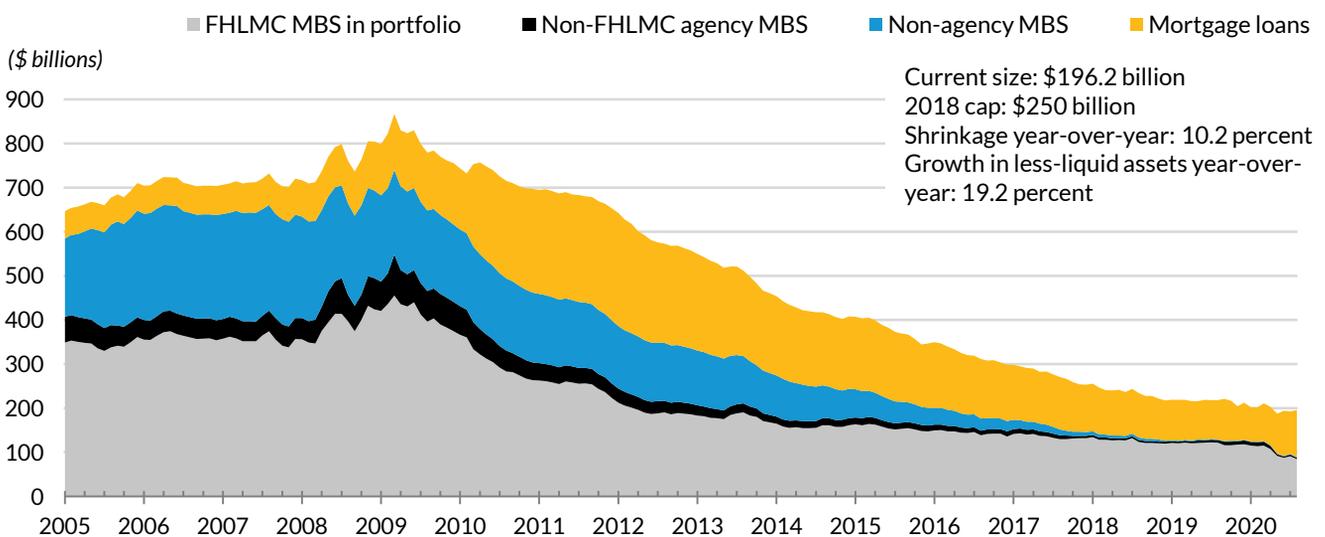
GSE PORTFOLIO WIND-DOWN

Even though the Fannie Mae and Freddie Mac portfolios are well below the \$250 billion size they were required to reach by year-end 2018, the portfolios have continued to shrink. From August 2019 to August 2020, the Fannie portfolio contracted by 9.7 percent, and the Freddie portfolio contracted by 10.2 percent. Within the portfolio, Fannie Mae held their less liquid assets (mortgage loans, non-agency MBS), relatively constant from the year prior, while Freddie Mac increased theirs. This reflects 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



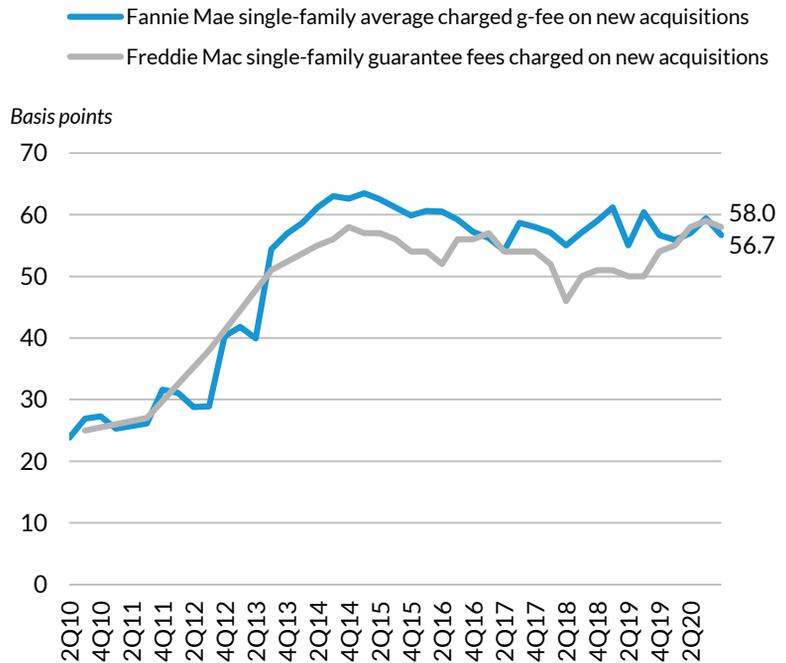
GSES UNDER CONSERVATORSHIP

EFFECTIVE GUARANTEE FEES

Guarantee Fees Charged on New Acquisitions

Fannie Mae's average g-fees charged on new acquisitions fell from 59.4 bps in Q1 2020 to 56.7 bps in Q2 2020.

Freddie's also fell slightly from 59.0 bps to 58.0 bps. The gap between the two g-fees was 1.3 bps in Q2 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.



Sources: Fannie Mae, Freddie Mae and Urban Institute.
Last updated August 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. FHFA's 2020 scorecard requires the GSEs to transfer a significant amount of credit risk to private markets. This is a departure from the 2019 scorecard, which required risk transfer specifically on 90 percent of new acquisitions. Fannie Mae's CAS issuances since inception total \$1.65 trillion; Freddie's STACR totals \$1.66 trillion. Since the COVID-19 induced spread widening in March 2020, Freddie Mac has issued five 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
January 2019	CAS 2019 - R01	\$28,000	\$960	3.4
February 2019	CAS 2019 - R02	\$27,000	\$1,000	3.7
April 2019	CAS 2019 - R03	\$21,000	\$857	4.1
June 2019	CAS 2019 - R04	\$25,000	\$1,000	4.0
July 2019	CAS 2019 - R05	\$24,000	\$993	4.1
October 2019	CAS 2019 - R06	\$33,000	\$1,300	3.9
October 2019	CAS 2019 - R07	\$26,600	\$998	3.8
November 2019	CAS 2019 - HRP1	\$106,800	\$963	0.9
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
January 2019	STACR Series 2019 – DNA1	\$24,600	\$714	2.9
February 2019	STACR Series 2019 – HQA1	\$20,760	\$640	3.1
March 2019	STACR Series 2019 – DNA2	\$20,500	\$608	3.0
May 2019	STACR Series 2019 – HQA2	\$19,500	\$615	3.2
May 2019	STACR Series 2019 – FTR1	\$44,590	\$140	0.3
June 2019	STACR Series 2019 – HRP1	\$5,782	\$281	4.9
July 2019	STACR Series 2019 – DNA3	\$25,533	\$756	3.0
August 2019	STACR Series 2019 – FTR2	\$11,511	\$284	2.5
September 2019	STACR Series 2019 – HQA3	\$19,609	\$626	3.2
October 2019	STACR Series 2019 – DNA4	\$20,550	\$589	2.9
November 2019	STACR Series 2019 – HQA4	\$13,399	\$432	3.2
December 2019	STACR Series 2019 – FTR3	\$22,508	\$151	0.7
December 2019	STACR Series 2019 – FTR4	\$22,263	\$111	0.5
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	\$43,410	\$1,086	2.5
Total		\$1,657,009	\$44,412	2.7

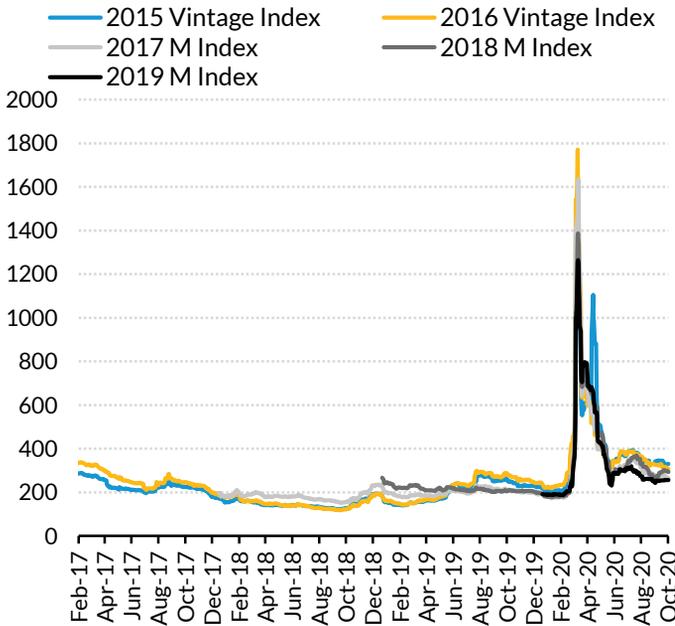
Sources: Fannie Mae, Freddie Mac and Urban Institute. Note: Classes A-H, M-1H, M-2H, and B-H are reference tranches only. These classes are not issued or sold. The risk is retained by Fannie Mae and Freddie Mac. "CE" = credit enhancement.

GSES UNDER CONSERVATORSHIP

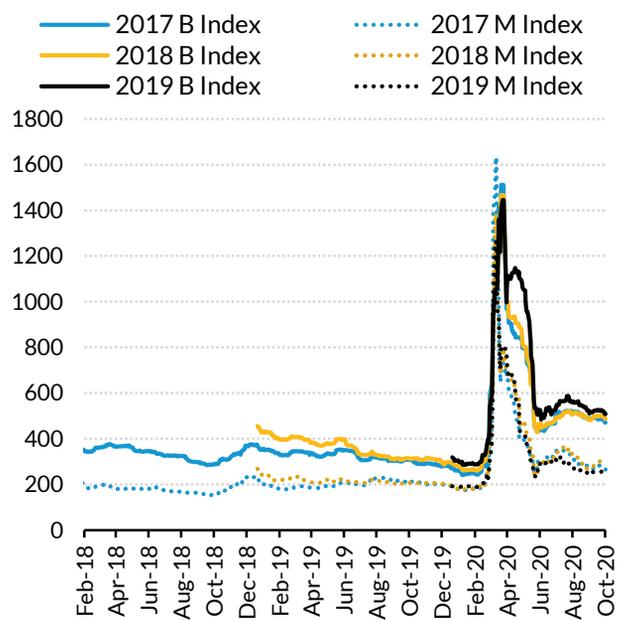
GSE RISK-SHARING INDICES

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.

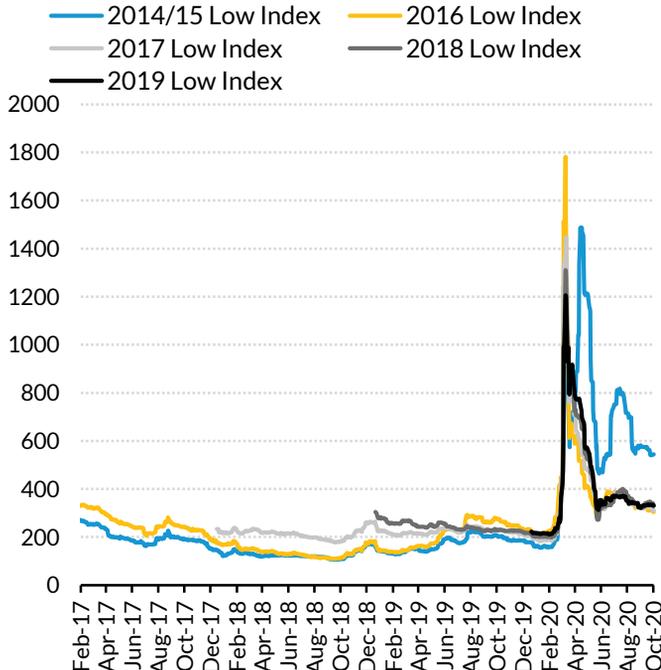
By Vintage



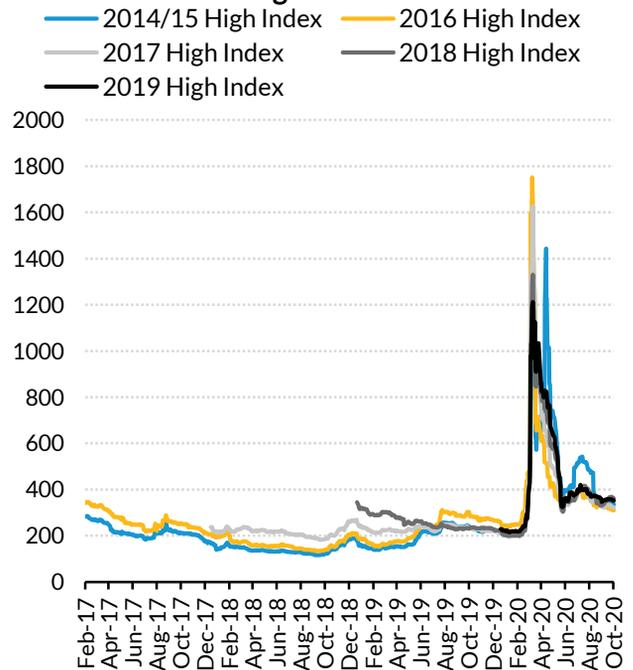
2017 and 2018 Indices



Low Indices



High Indices

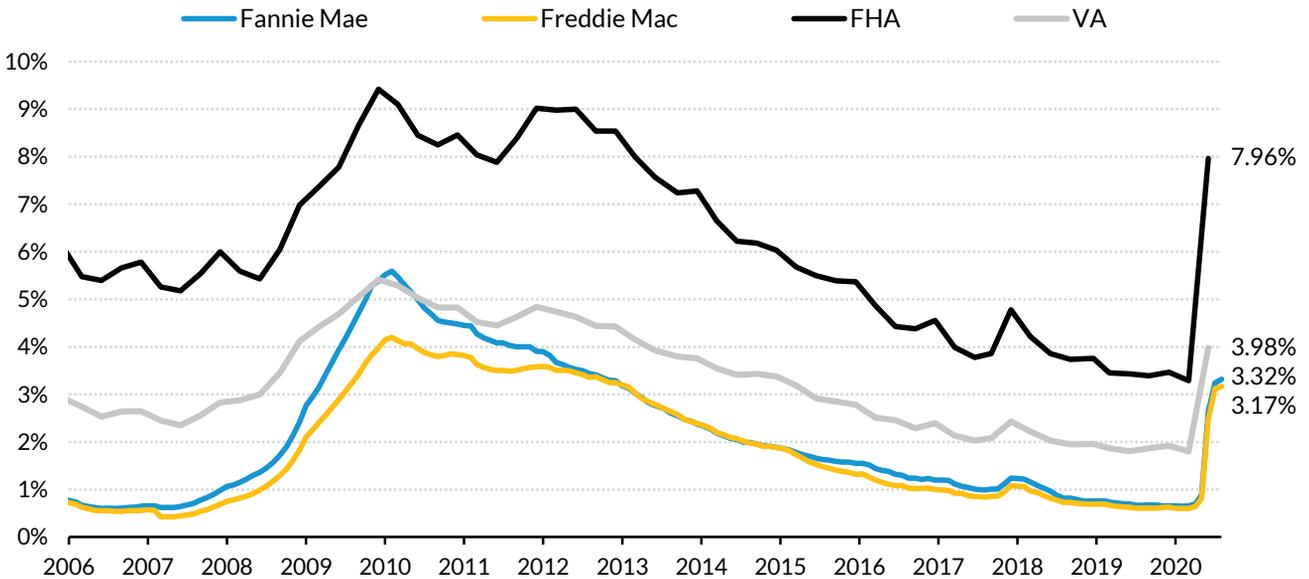


Sources: Vista Data Services and Urban Institute.
 Note: Data as of October 15, 2020.

GSES UNDER CONSERVATORSHIP SERIOUS DELINQUENCY RATES

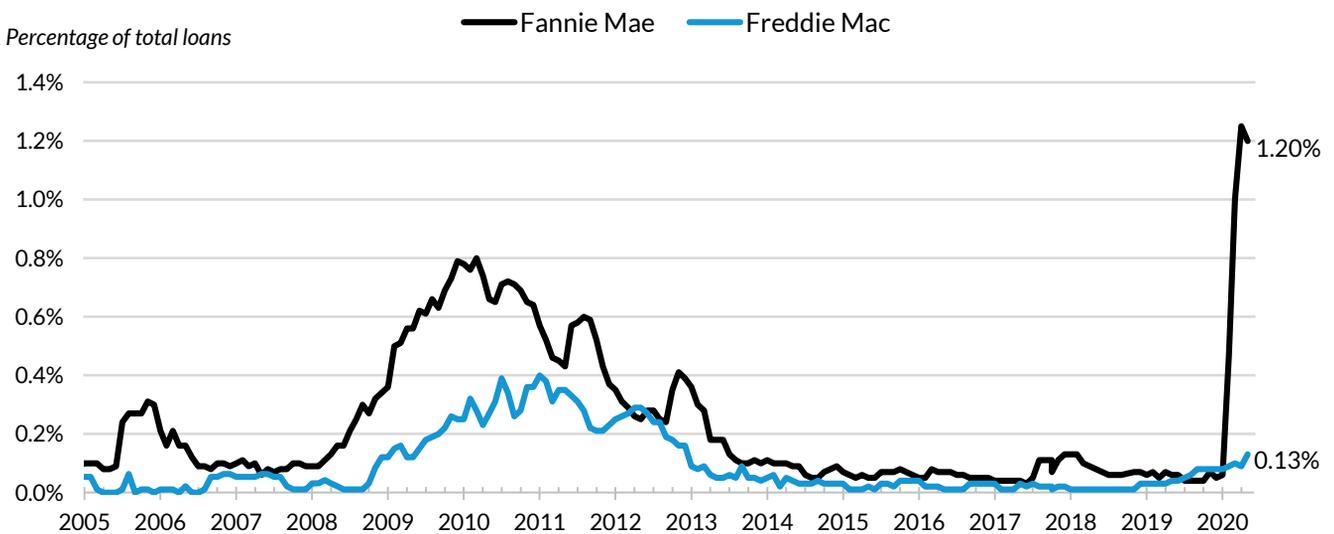
Serious delinquency rates for single-family GSE loans have grown since the start of the pandemic; GSE data is shown through August, FHA and VA data through June. Note that loans that are in forbearance are counted as delinquent for the purpose of measuring delinquency rates. Even so, these delinquency levels are mostly lower than 2009-2011. Fannie multifamily delinquencies declined very slightly to 1.20 percent in August; Freddie multifamily delinquencies increased very slightly to 0.13 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 June 2020. GSE delinquencies are reported monthly, last updated August 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.

August 2020

AGENCY ISSUANCE

AGENCY GROSS AND

NET ISSUANCE

Agency gross issuance was \$2.54 trillion through the first nine months of 2020, more than the volume for full year 2019, or any other full 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 \$422.2 billion in the first nine months of 2020, up 97.0 percent from the same period in 2019.

Agency Gross Issuance

Agency Net Issuance

Issuance Year	GSEs	Ginnie Mae	Total	Issuance Year	GSEs	Ginnie Mae	Total
2001	\$885.1	\$171.5	\$1,056.6	2001	\$368.40	-\$9.90	\$358.50
2002	\$1,238.9	\$169.0	\$1,407.9	2002	\$357.20	-\$51.20	\$306.10
2003	\$1,874.9	\$213.1	\$2,088.0	2003	\$334.90	-\$77.60	\$257.30
2004	\$872.6	\$119.2	\$991.9	2004	\$82.50	-\$40.10	\$42.40
2005	\$894.0	\$81.4	\$975.3	2005	\$174.20	-\$42.20	\$132.00
2006	\$853.0	\$76.7	\$929.7	2006	\$313.60	\$0.20	\$313.80
2007	\$1,066.2	\$94.9	\$1,161.1	2007	\$514.90	\$30.90	\$545.70
2008	\$911.4	\$267.6	\$1,179.0	2008	\$314.80	\$196.40	\$511.30
2009	\$1,280.0	\$451.3	\$1,731.3	2009	\$250.60	\$257.40	\$508.00
2010	\$1,003.5	\$390.7	\$1,394.3	2010	-\$303.20	\$198.30	-\$105.00
2011	\$879.3	\$315.3	\$1,194.7	2011	-\$128.40	\$149.60	\$21.20
2012	\$1,288.8	\$405.0	\$1,693.8	2012	-\$42.40	\$119.10	\$76.80
2013	\$1,176.6	\$393.6	\$1,570.1	2013	\$69.10	\$87.90	\$157.00
2014	\$650.9	\$296.3	\$947.2	2014	\$30.5	\$61.6	\$92.1
2015	\$845.7	\$436.3	\$1,282.0	2015	\$75.1	\$97.3	\$172.5
2016	\$991.6	\$508.2	\$1,499.8	2016	\$127.4	\$125.8	\$253.1
2017	\$877.3	\$455.6	\$1,332.9	2017	\$168.5	\$131.3	\$299.7
2018	\$795.0	\$400.6	\$1,195.3	2018	\$149.4	\$112.0	\$261.5
2019	\$1,042.6	\$508.6	\$1,551.2	2019	\$197.8	\$95.7	\$293.5
2020 YTD	\$1,599.1	\$553.3	\$2,537.9	2020 YTD	\$399.9	\$22.3	\$422.2
2020 YTD % Change YOY	129.1%	61.2%	143.7%	2020 YTD % Change YOY	181.5%	-69.2%	97.0%
2020 Ann.	\$2,132.1	\$737.7	\$3,383.9	2020 Ann.	\$533.3	\$29.7	\$563.0

Sources: eMBS and Urban Institute.

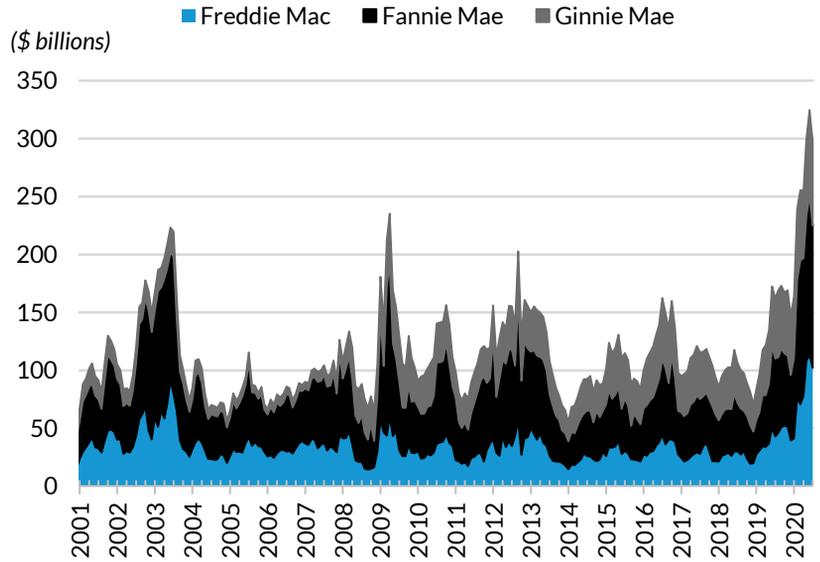
Note: Dollar amounts are in billions. Data as of September 2020.

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 24.3 percent in September 2020; the drop reflects the more robust ramp up in GSE refinances relative to Ginnie Mae refinances.

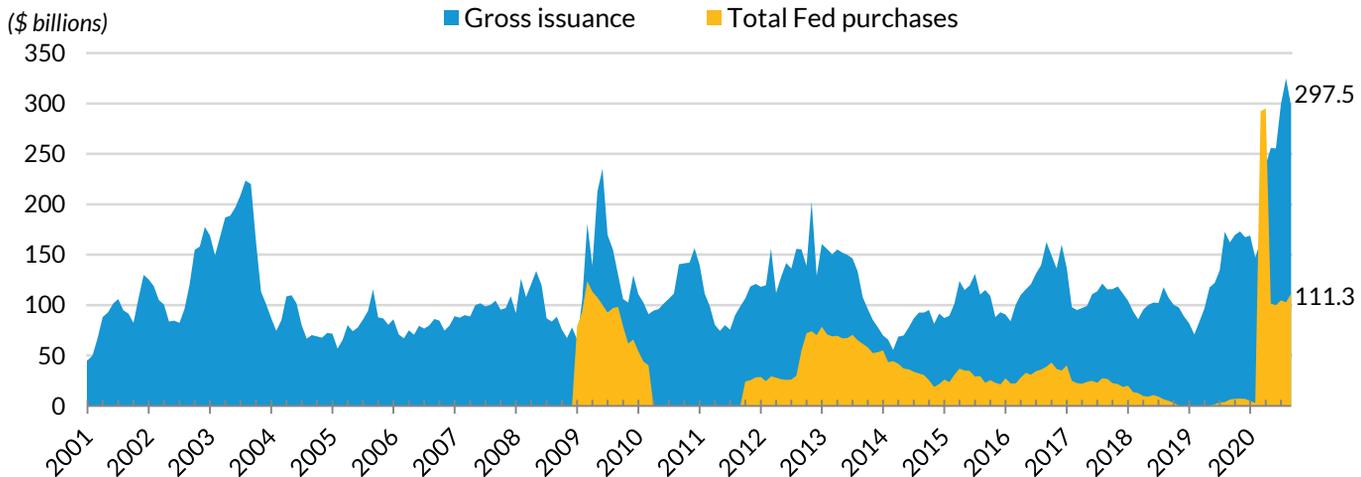


Sources: eMBS, Federal Reserve Bank of New York, and Urban Institute.

September 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-\$104 billion per month in May, June, July, and August. In September, Fed purchases were up slightly at \$111.3 billion, 37 percent of monthly issuance. Prior to the COVID-19 intervention, the Fed was winding down its MBS portfolio from its 2014 prior peak.



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

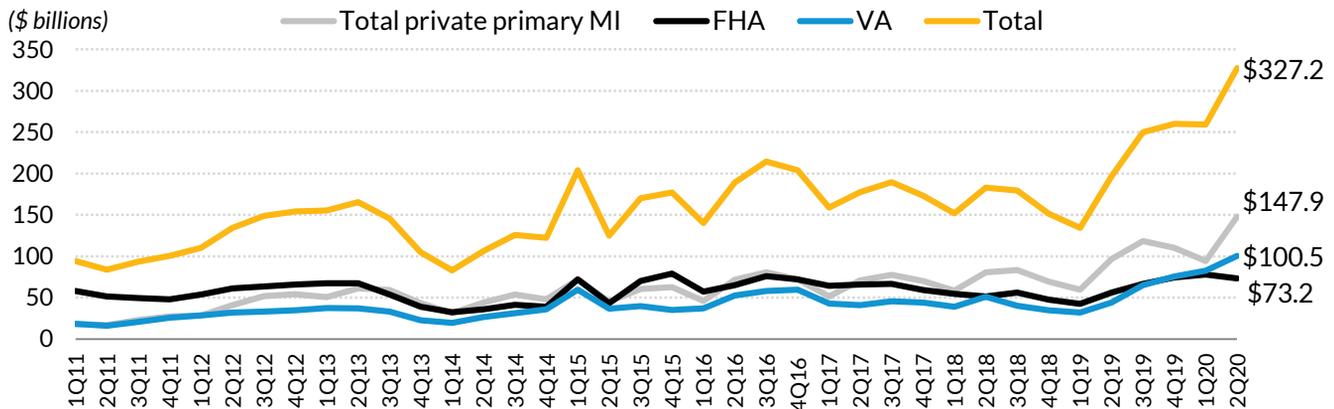
September 2020

AGENCY ISSUANCE

MORTGAGE INSURANCE ACTIVITY

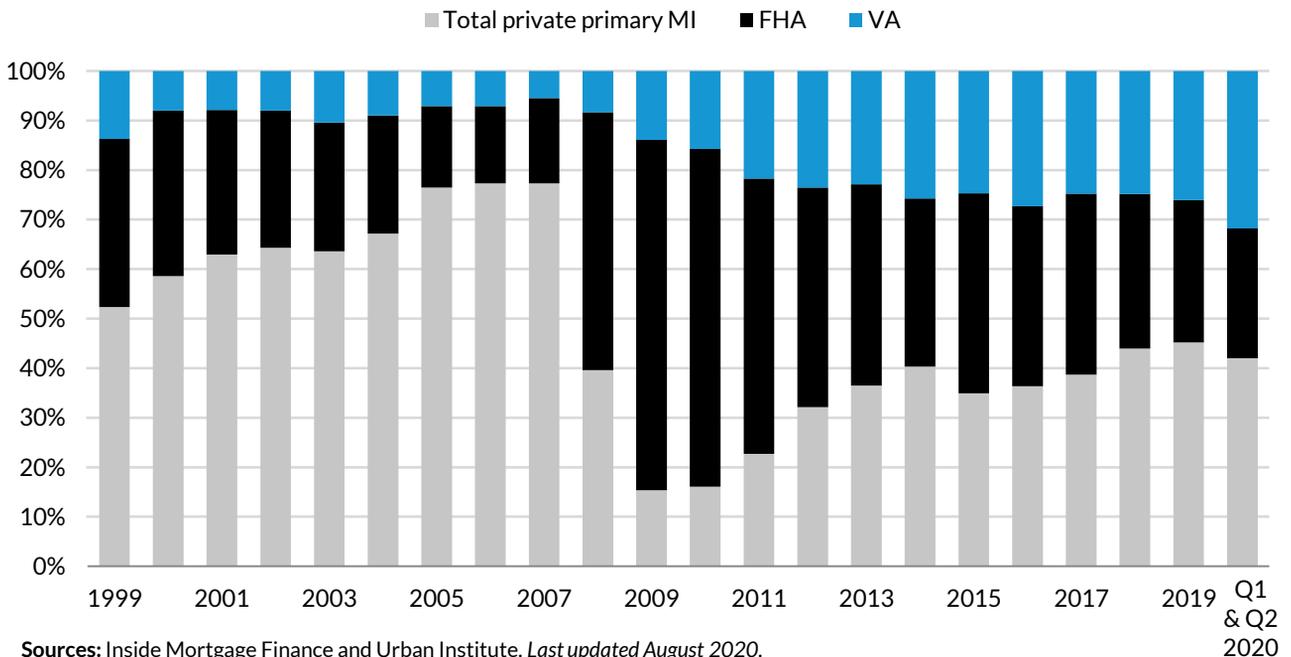
MI Activity

Mortgage insurance activity via the FHA, VA and private insurers increased from \$197 billion in Q2 2019 to \$327 billion in Q2 2020, a 57.4 percent increase. In the second quarter of 2020, private mortgage insurance written increased by \$51.3 billion, FHA increased by \$17.2 billion and VA increased by \$56.4 billion relative to Q2 2019. During this period, the VA share increased from 22.4 to 30.7 percent while the FHA share fell from 28.5 to 22.4 percent. The private mortgage insurers share also fell, from 49.1 to 45.2 percent compared to the same period a year ago.



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

MI Market Share



Sources: Inside Mortgage Finance and Urban Institute. Last updated August 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	2.89
FHA	3.18

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	\$1,230	\$1,230	\$1,230	\$1,230	\$1,230	\$1,230	\$1,230	\$1,230
PMI	\$1,469	\$1,407	\$1,371	\$1,285	\$1,241	\$1,204	\$1,163	\$1,139
PMI Advantage	-\$240	-\$177	-\$142	-\$55	-\$11	\$26	\$67	\$91

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 September 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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Date: August 10, 2020

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