

HOUSING FINANCE POLICY CENTER



HOUSING FINANCE AT A GLANCE

A MONTHLY CHARTBOOK

November 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.

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

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INTRODUCTION

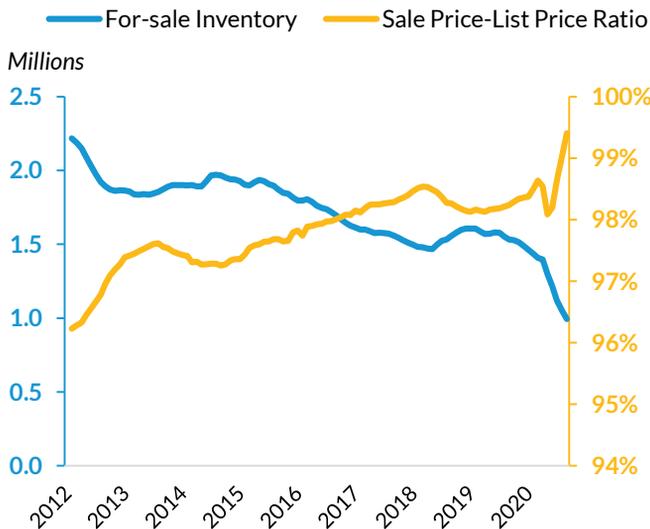
Housing Supply Falls to Record Low Benefitting Home Sellers

The months' supply of existing homes fell to an alarmingly low level of 2.5 months in October, and threatens to undermine the opportunity of homeownership for many households. The lack of homes alone makes homeownership difficult, but the lower supply also increases home prices, reducing affordability. One subtle reason that sales prices rise when supply is low, is that buyers must pay a higher price relative to the seller's asking price. This suggests that sellers are benefitting from today's low supply conditions. However, key supply and demand trends suggest that sellers' advantage could erode somewhat in the coming months.

The 2.5 months' supply of homes, reported by the National Association of Realtors (NAR), means that, at the current sales pace, the inventory of homes nationwide will be exhausted in less than 3 months. The recent decline in months' supply from 4.8 months in May partly reflects a rebound in home sales. After existing home sales volume fell to 3.91 million in May, it then rose by 75 percent to approximately 6.85 million by October. NAR reports, however, that the inventory of homes for sale in October was just 1.4 million, a series low.

Amid shrinking inventory, sales prices have risen. Since May, existing home inventory has fallen by 5.0 percent according to NAR, while sales prices have risen by 1.3 percent according to Urban Institute calculations of Black Knight data. Since January 2012, when housing market activity began to sustainably improve after the sharp decline in the wake of the Great Recession, the inventory of existing homes has shrunk by 47.4 percent while house prices have risen 56.4 percent.

Sale-List Price Ratio Climbs Amid Inventory Decline

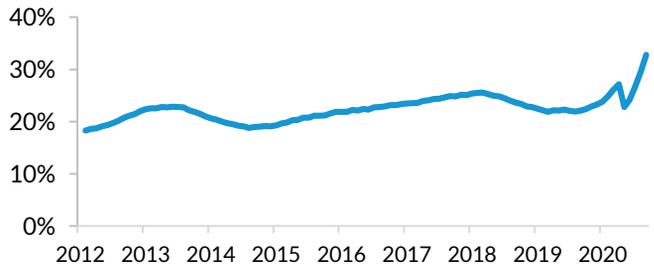


Source: Redfin.

While the increase in sales prices tells us that demand is high, the sales-price to list-price ratio suggests that buyers are eager to purchase homes. As the inventory of for-sale homes has declined since 2012, the ratio of the sales-price to the list-price has increased.

According to Redfin, the ratio of the sales-price to the list-price peaked in September 2020 at 99.4 percent, the latest month of data, a three-percentage point increase since February 2012, the first month of data. Inventory fell by 55 percent over this same period. In other words, as inventory has declined, the average homebuyer is paying a little closer to the sellers' asking price.

Share of Homes Sold Above List Price



Source: Redfin.

The increase in the ratio of the sales-price to the list-price partly reflects a larger percentage of buyers paying a sales price that exceeds the seller's list price. As inventory has declined since 2012, the share of buyers paying a sales price above the buyers asking price increased from 18.3 percent to 32.8 percent in September.

The housing market is tilted toward the seller, according to the current data, but that could change. There was a sharp rebound in single-family housing starts in recent months, suggesting that more supply is forthcoming. Additionally, the pace of purchase mortgage applications has moderated in recent months as COVID infections soar and the NAR Housing Affordability Index has fallen from its year ago level. Although the market currently favors sellers their advantage could inch somewhat closer to balance in the near future.

INSIDE THIS ISSUE

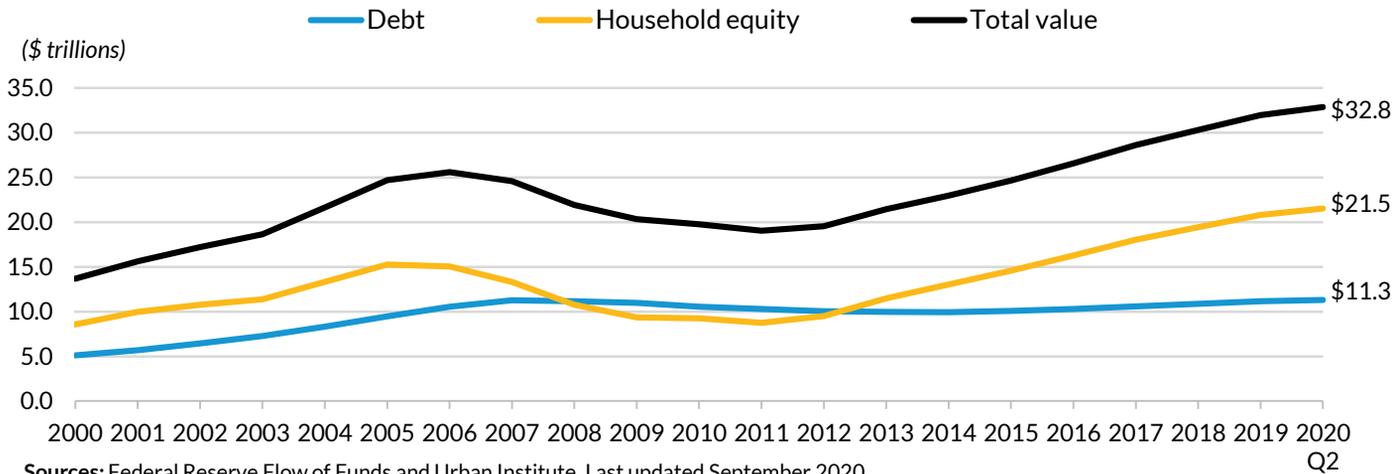
- Although year-to-date 2020 nonagency securitizations are down compared to 2019, there are clear signs of recovery. Securitization volumes in recent months have been highly comparable to the same months of last year (page 12).
- The serious delinquency rates for FHA and VA mortgages climbed higher in Q3 2020. FHA rose from 7.96 percent in Q2 to 10.76 percent in Q3. VA rose from 3.98 percent in Q2 to 5.77 percent in Q3 (page 29).
- VA's share of new mortgage insurance written increased to 31 percent in Q3 2020, the highest level in at least 21 years (page 32).

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.

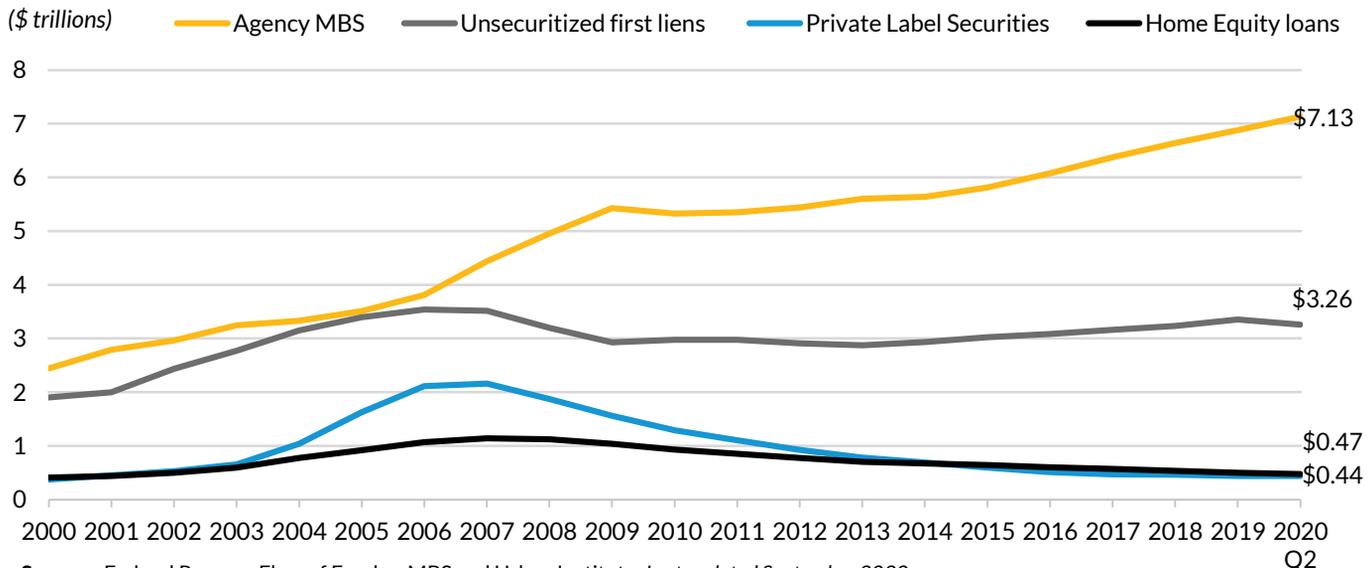
Value of the US Single Family Housing Market



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.

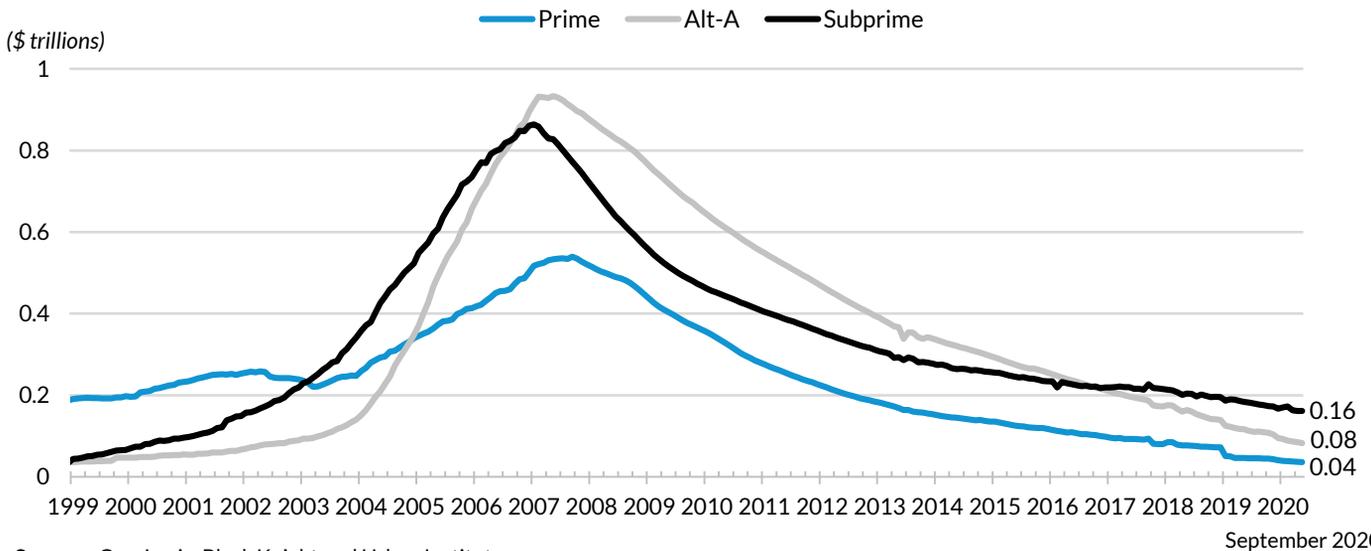
Note: Unsecuritized first liens includes loans held by commercial banks, GSEs, savings institutions, credit unions and other financial companies

OVERVIEW

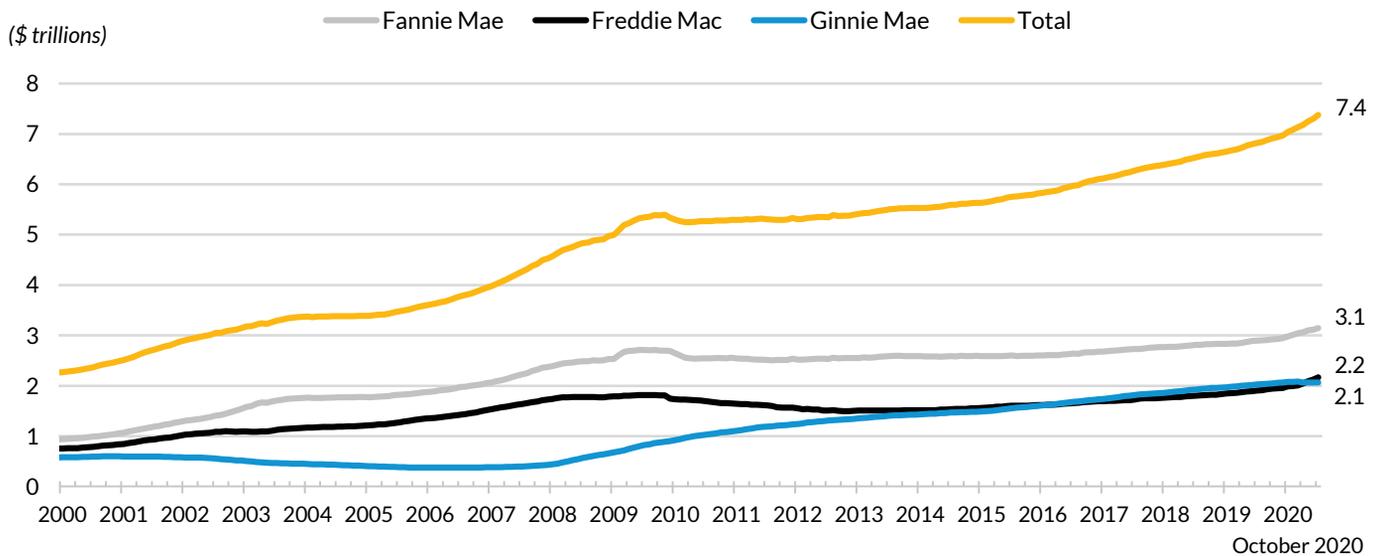
MARKET SIZE OVERVIEW

As of September 2020, our sample of first lien mortgage debt in the private-label securitization market totaled \$280 billion and was split among prime (12.9 percent), Alt-A (29.5 percent), and subprime (57.6 percent) loans. In October 2020, outstanding securities in the agency market totaled \$7.4 trillion, 42.6 percent of which was Fannie Mae, 29.4 percent Freddie Mac, and 28.0 percent Ginnie Mae.

Private-Label Securities by Product Type



Agency Mortgage-Backed Securities

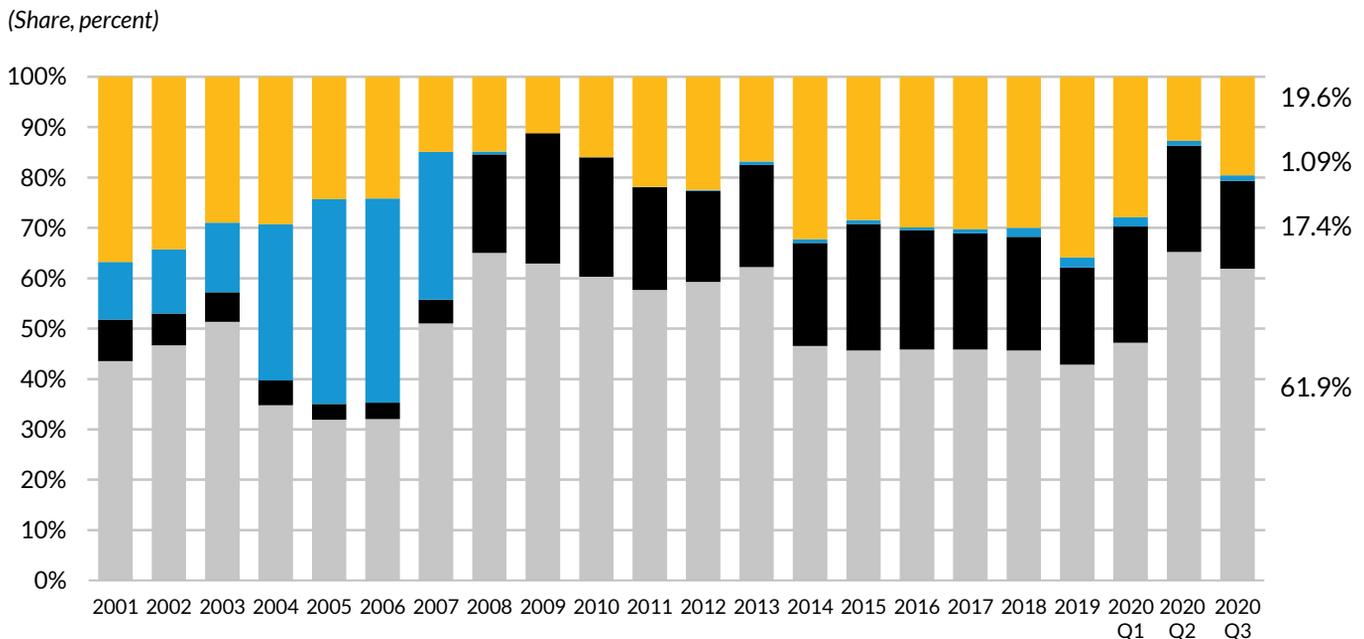
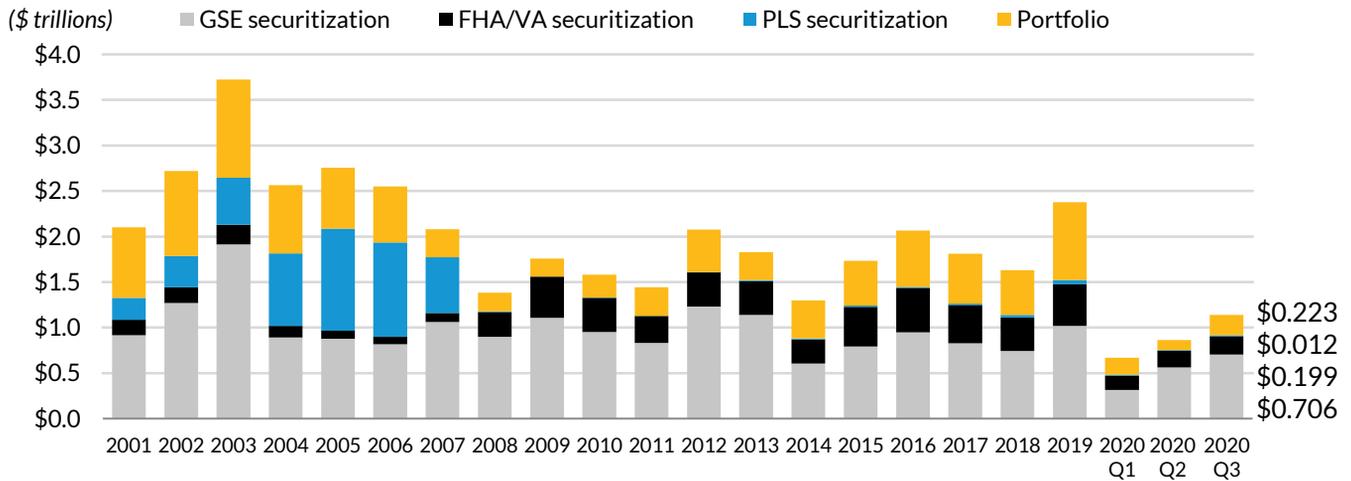


OVERVIEW

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.

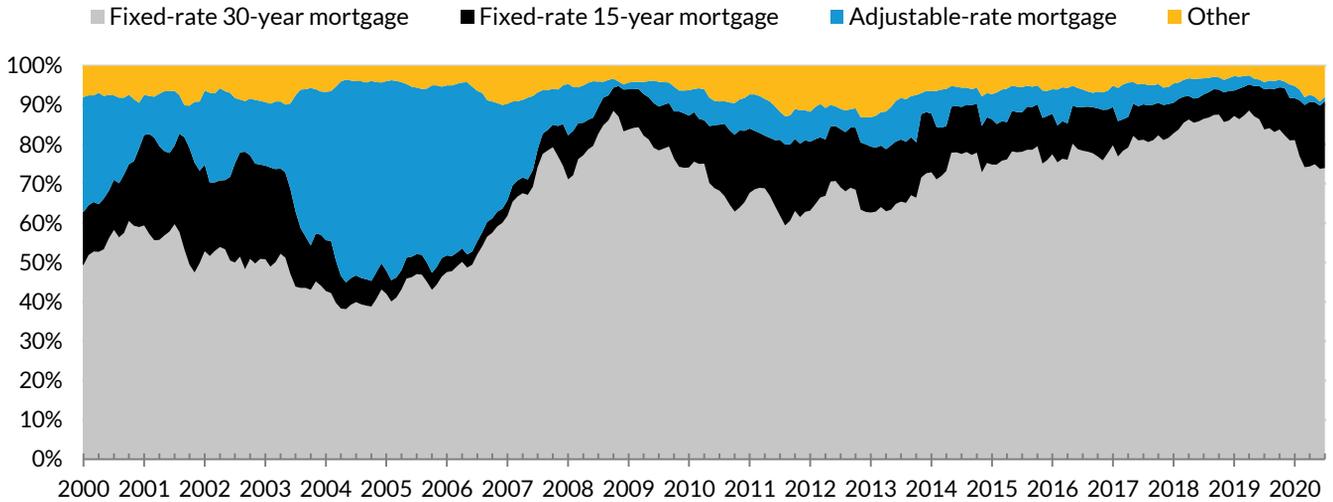


OVERVIEW

PRODUCT COMPOSITION AND REFINANCE SHARE

The 30-year fixed-rate mortgage continues to remain the bedrock of the US housing finance system, accounting for 74.0 percent of new originations in September 2020. The share of 15-year fixed-rate mortgages, predominantly a refinance product, was 17.0 percent of new originations in September 2020, as refinances continue to boom due to record low interest rates, up from 10.2 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 69 to 70 percent range, Ginnie Mae at 49.8 percent.

Product Composition

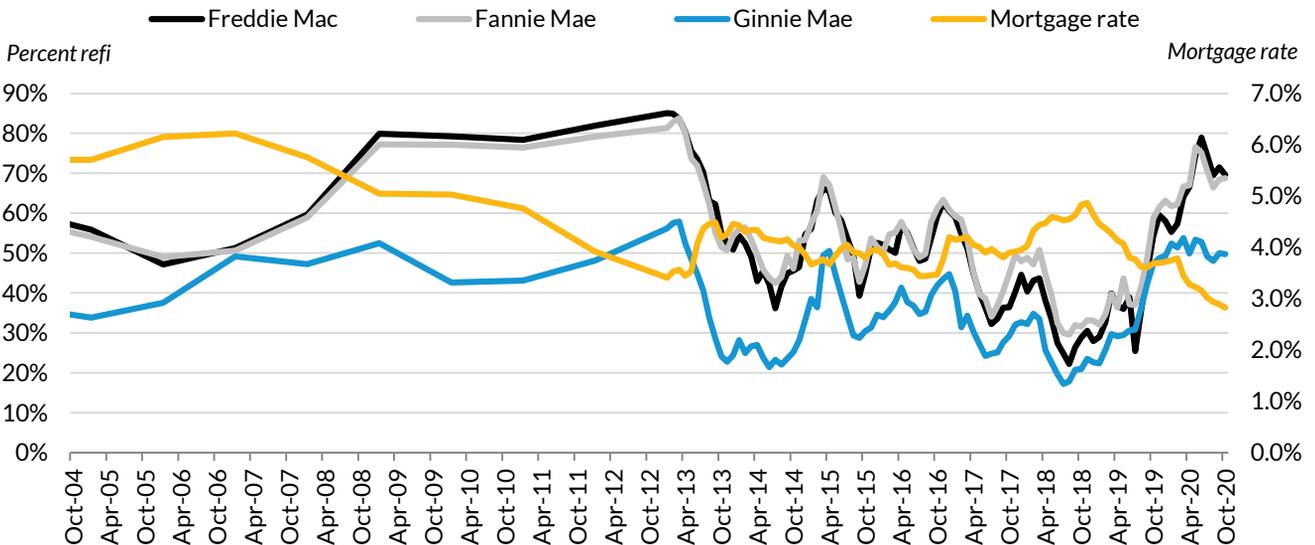


Sources: Black Knight, eMBS, HMDA, SIFMA and Urban Institute.

September 2020

Note: Includes purchase and refinance originations.

Percent Refi at Issuance



Sources: eMBS and Urban Institute.

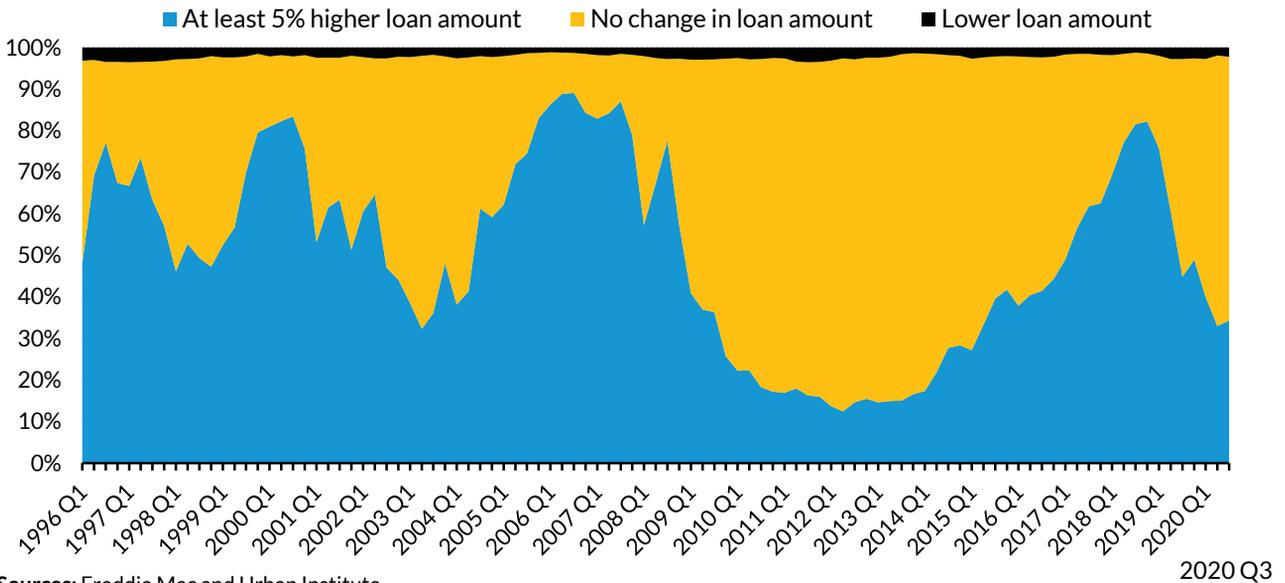
Note: Based on at-issuance balance. Figure based on data from October 2020.

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

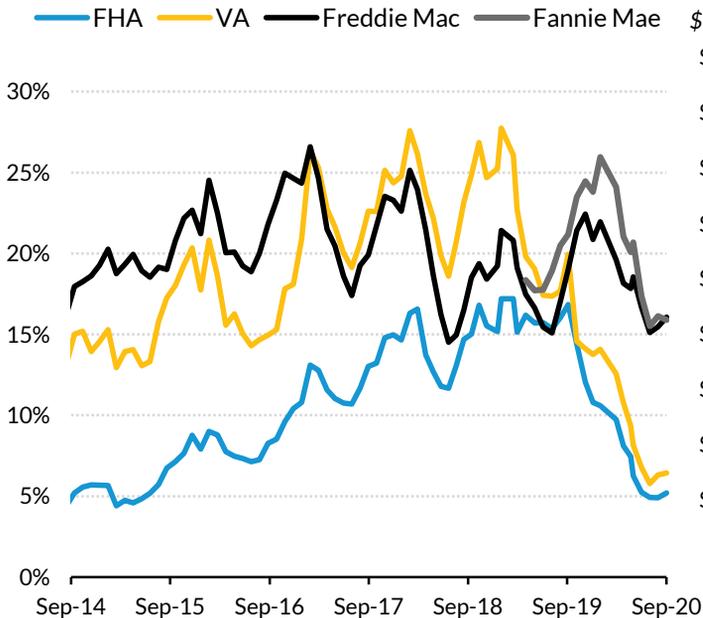


Sources: Freddie Mac and Urban Institute.

Note: Estimates include conventional mortgages only.

2020 Q3

Cash-out Refi Share of All Originations



Sources: eMBS and Urban Institute.

Note: Data as of September 2020.

Equity Take-Out from Conventional Mortgage Refinance Activity



Sources: Freddie Mac and Urban Institute.

Note: These quarterly estimates include conventional mortgages only.

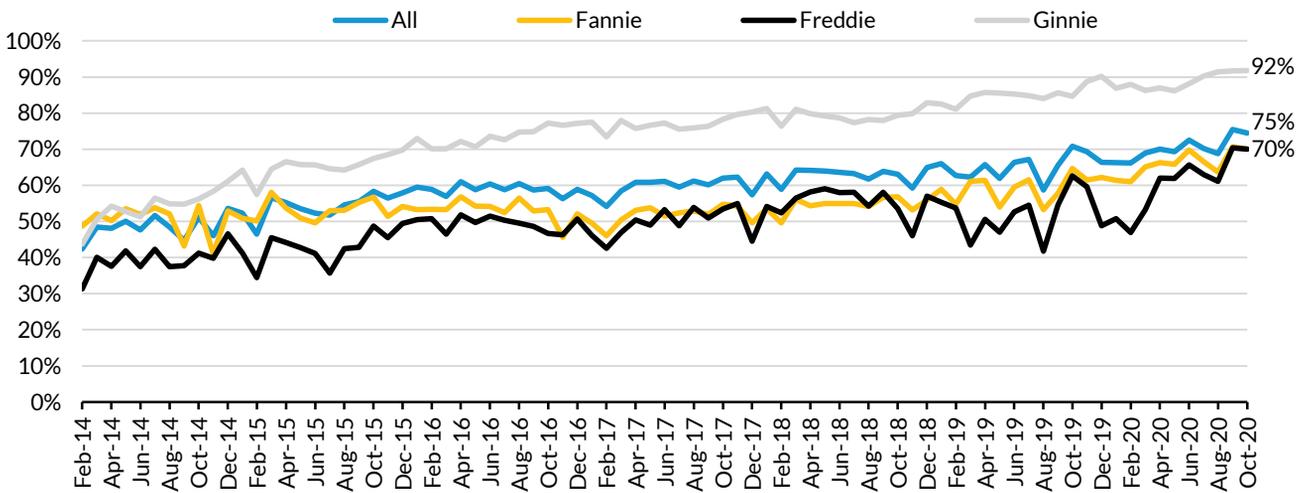
2020 Q3

OVERVIEW

AGENCY NONBANK ORIGINATION SHARE

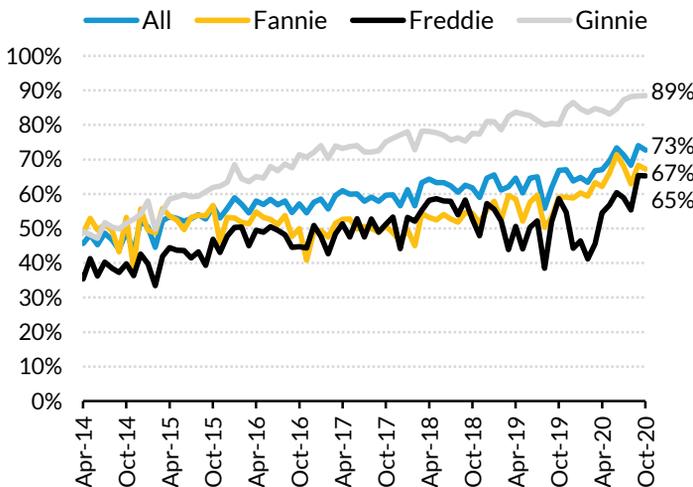
The nonbank share for agency originations has been rising steadily since 2013, standing at 75 percent in October 2020. The Ginnie Mae nonbank share has been consistently higher than the GSEs, remaining steady in October 2020 at 92 percent. Fannie and Freddie both had nonbank shares of 70 percent in October 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



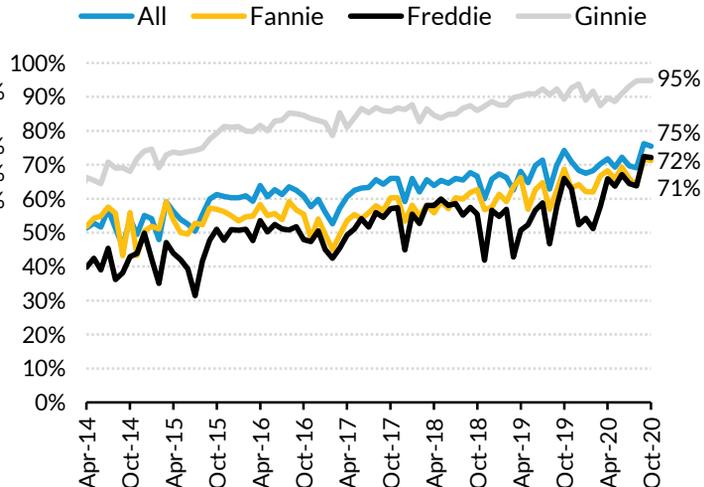
Sources: eMBS and Urban Institute.

Nonbank Origination Share: Purchase Loans



Sources: eMBS and Urban Institute.

Nonbank Origination Share: Refi Loans



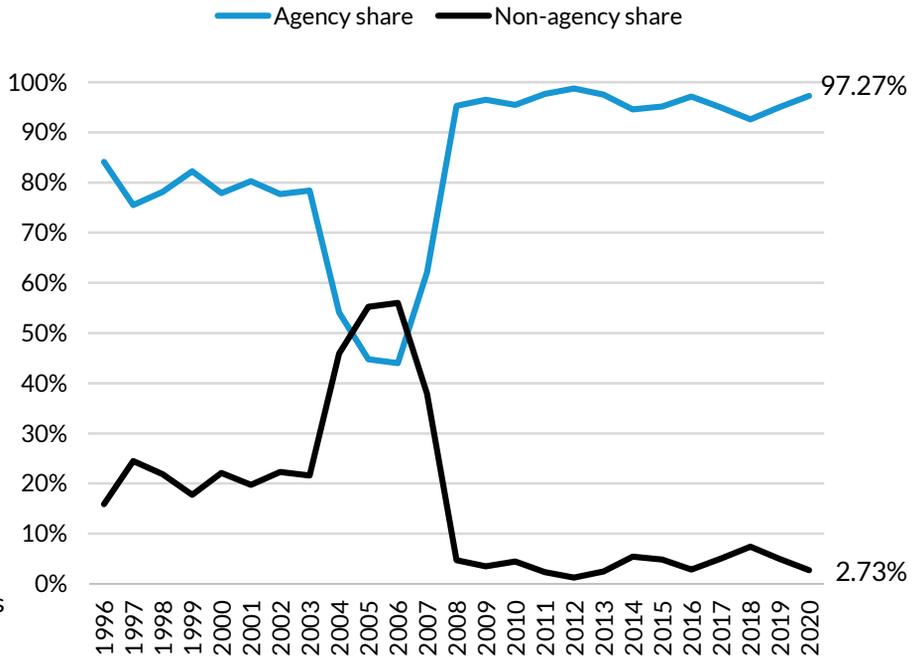
Sources: eMBS and Urban Institute.

OVERVIEW

SECURITIZATION VOLUME AND COMPOSITION

Agency/Non-Agency Share of Residential MBS Issuance

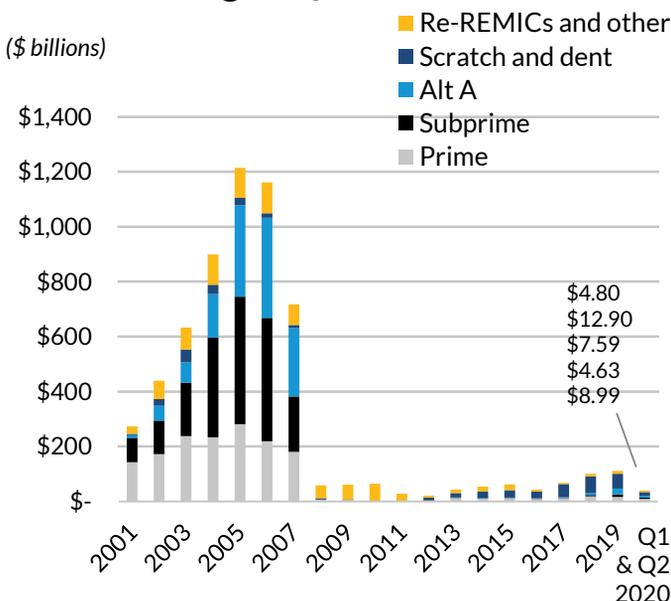
The non-agency share of mortgage securitizations increased gradually over the post-crisis years, from 1.83 percent in 2012 to 5.0 percent in 2019. Through October of 2020, the non-agency share was 2.73 percent; the sharp drop in 2020 reflects the fact that the non-agency market production has been low 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. Despite the fact that YTD issuance is down, there are signs of a rebound. Securitization volumes in the past three months have been highly comparable to the same months of last year. Non-agency securitizations continue to be tiny compared to pre-housing market crisis levels.



Sources: Inside Mortgage Finance and Urban Institute.

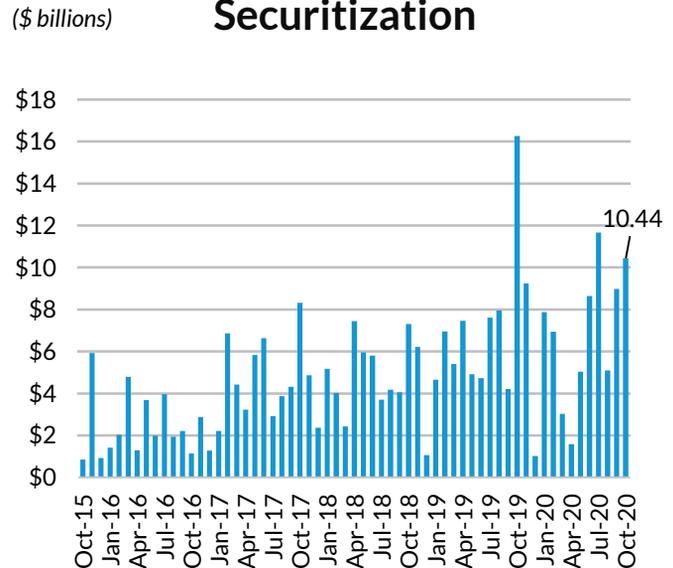
Note: Based on data from October 2020. Monthly non-agency volume is subject to revision.

Non-Agency MBS Issuance



Sources: Inside Mortgage Finance and Urban Institute.

Monthly Non-Agency Securitization



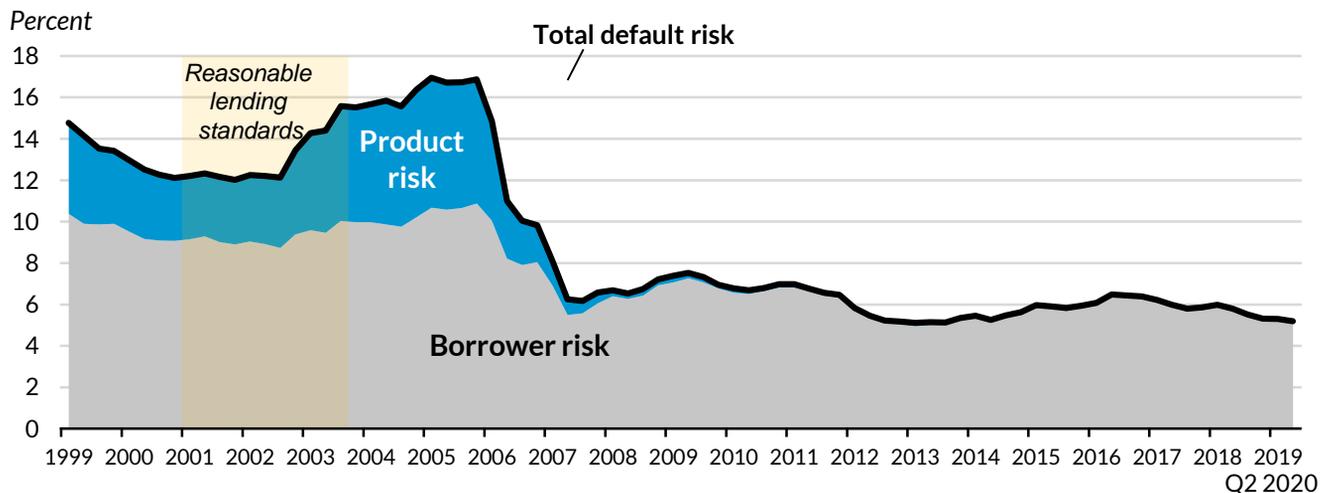
Sources: Inside Mortgage Finance and Urban Institute. 12

CREDIT BOX

HOUSING CREDIT AVAILABILITY INDEX

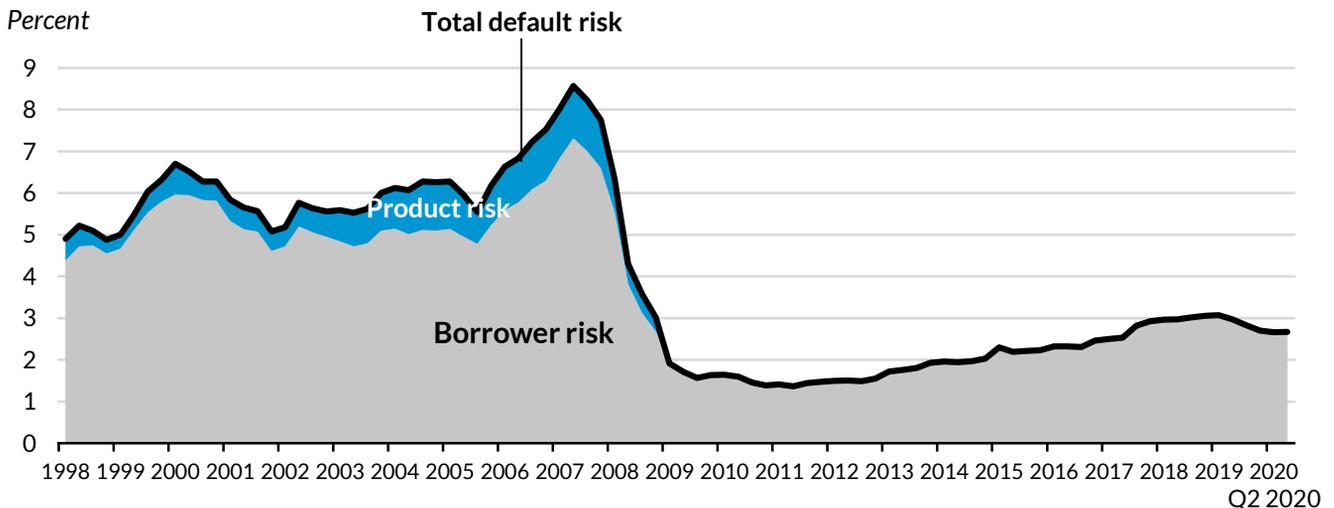
The Urban Institute's Housing Credit Availability Index (HCAI) assesses lenders' tolerance for both borrower risk and product risk, calculating the share of owner-occupied purchase loans that are likely to go 90+ days delinquent over the life of the loan. The HCAI stood at 5.2 percent in Q2 2020, down 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.



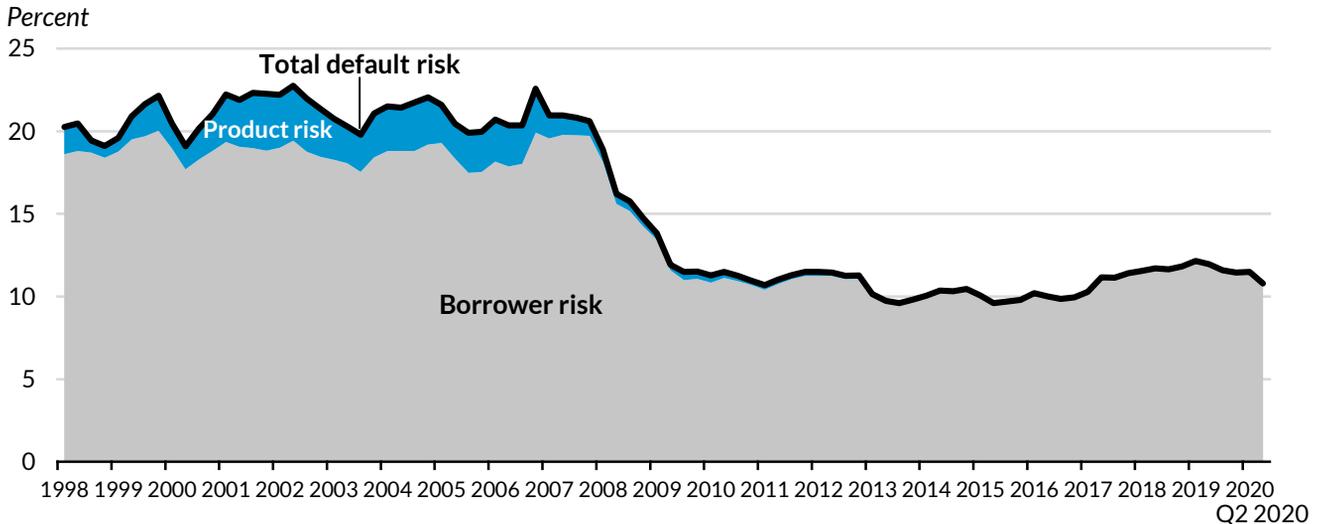
Sources: eMBS, CoreLogic, HMDA, IMF, and Urban Institute.

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

HOUSING CREDIT AVAILABILITY INDEX

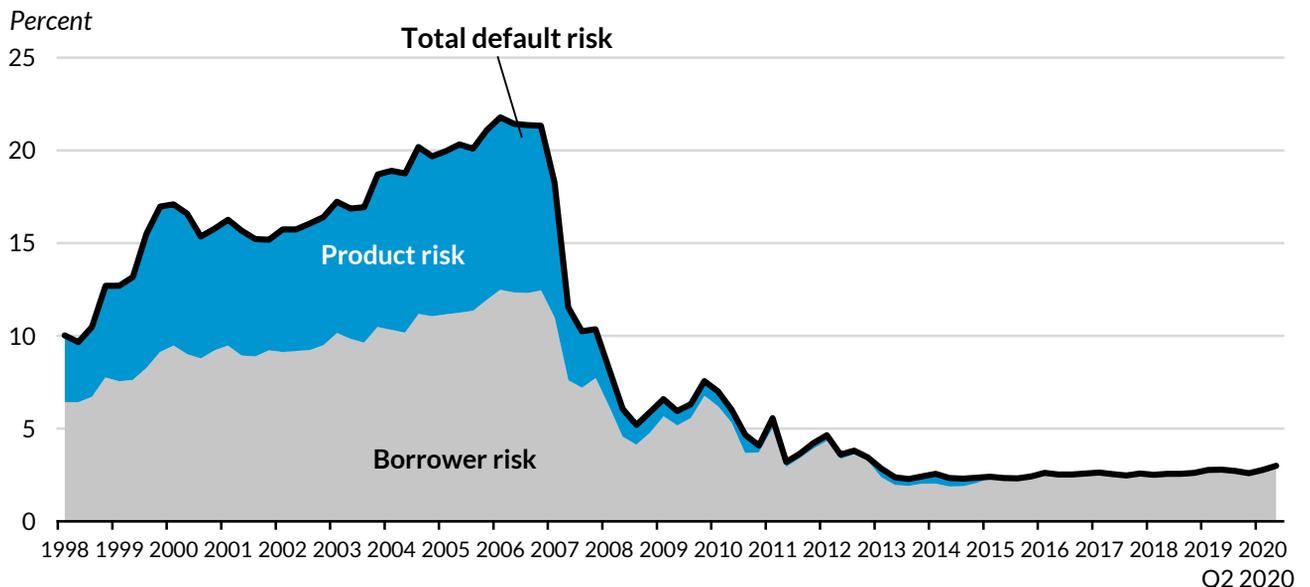
Government Channel

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.

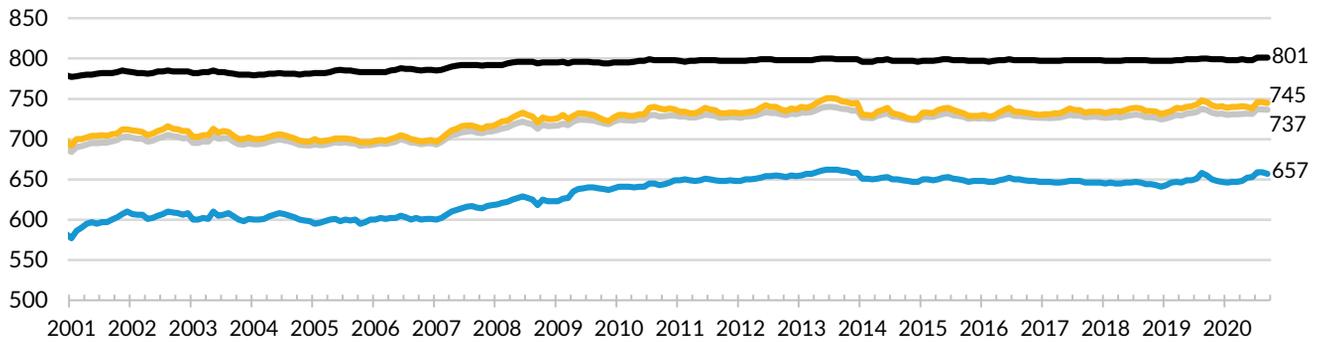
CREDIT AVAILABILITY FOR PURCHASE LOANS

Access to credit remains tight, especially for lower FICO borrowers. The median FICO for current purchase loans is about 45 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 September 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.

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

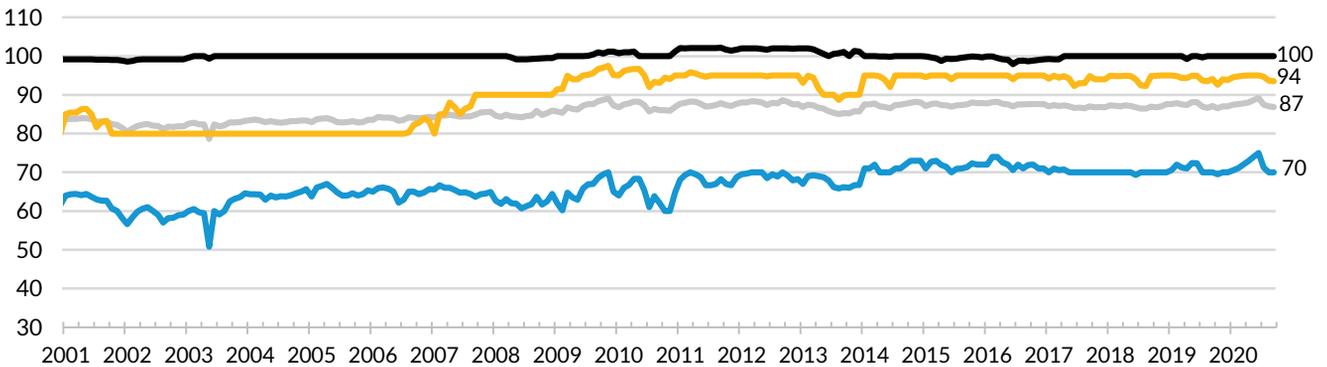
Borrower FICO Score at Origination

FICO Score



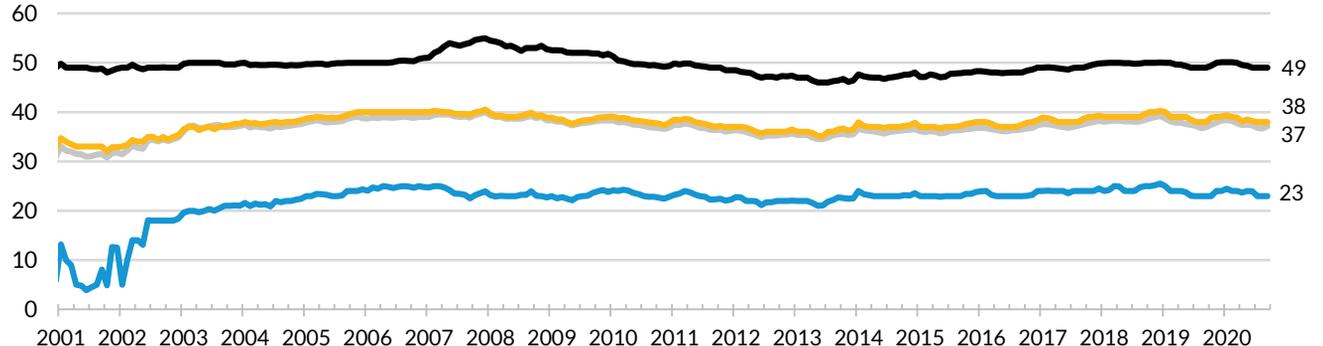
Combined LTV at Origination

LTV



DTI at Origination

DTI



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

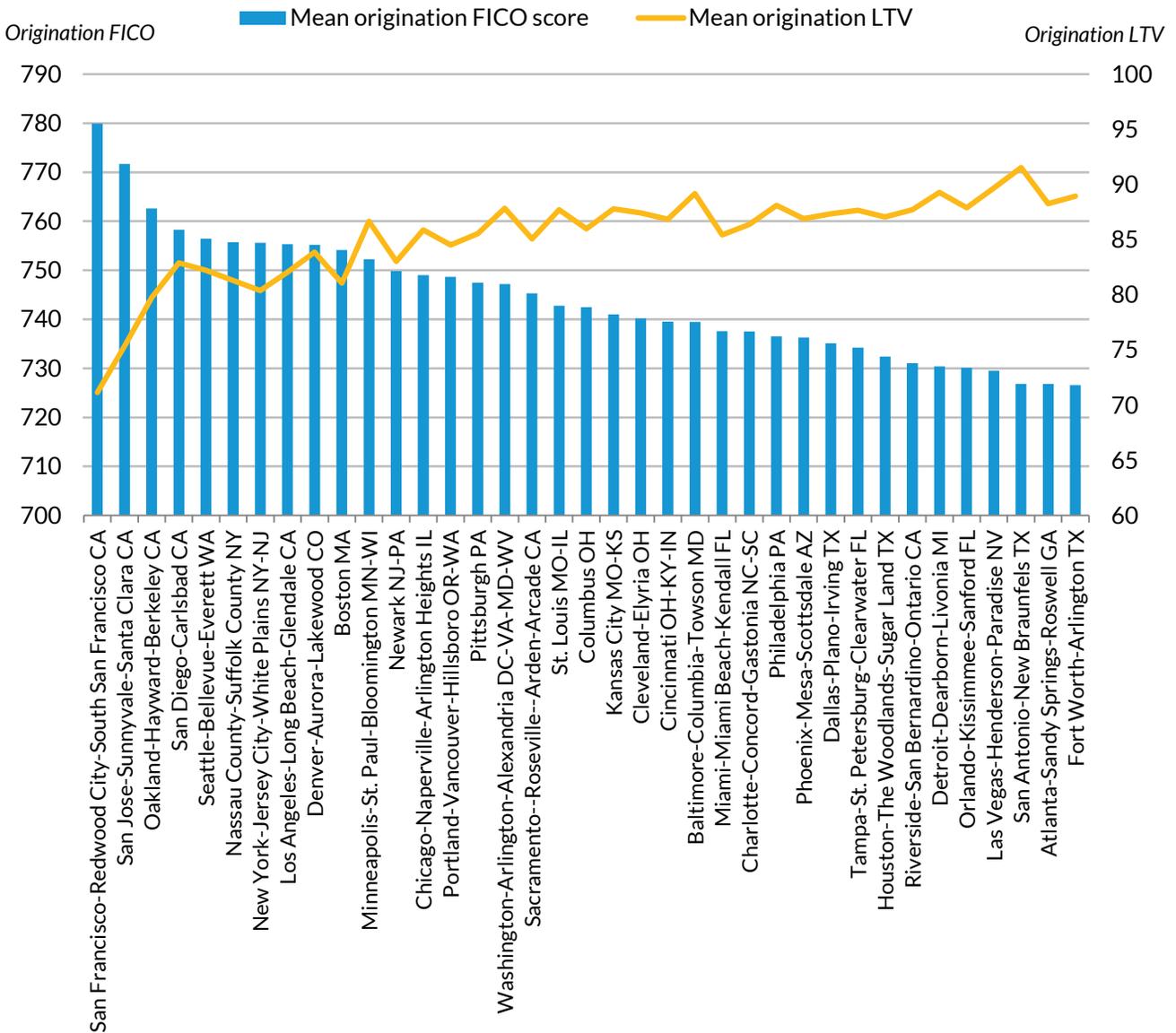
Note: Includes owner-occupied purchase loans only. DTI data prior to April 2018 is from CoreLogic; after that date, it is from Black Knight. Data as of September 2020.

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. 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.

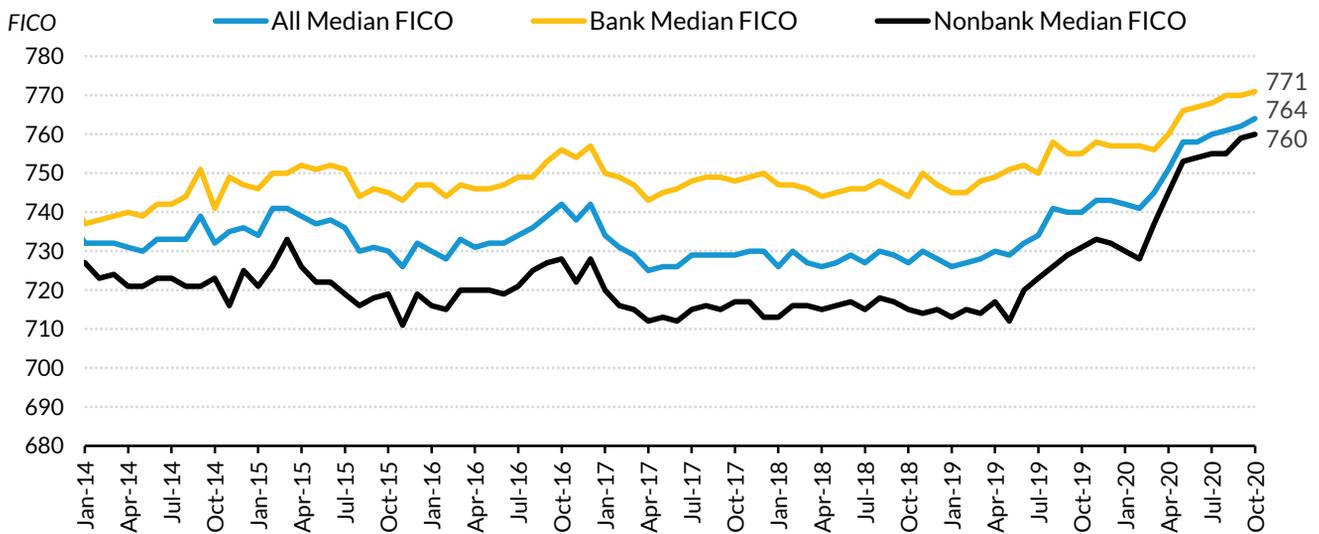
Note: Includes owner-occupied purchase loans only. Data as of September 2020.

CREDIT BOX

AGENCY NONBANK CREDIT BOX

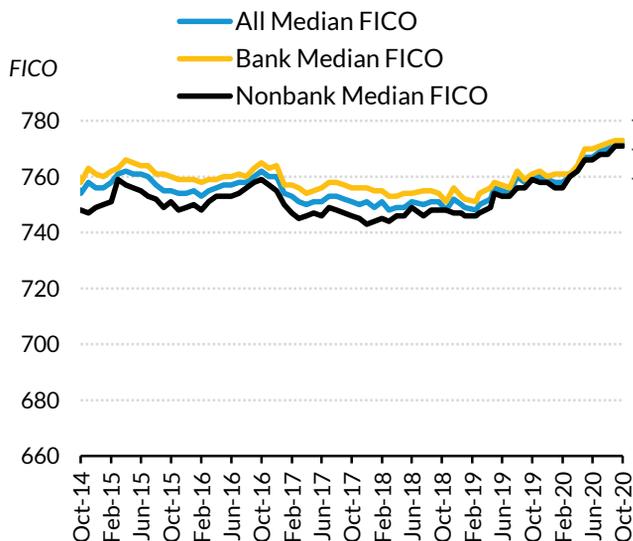
Nonbank originators have played a key role in expanding access to credit. In the GSE space, FICO scores for banks and nonbanks have nearly converged; the differential is much larger in the Ginnie Mae space. FICO scores for banks and nonbanks in both GSE and Ginnie Mae segments increased over the course of 2019 and the first ten months of 2020, due to increased refi activity; this activity is skewed toward higher FICO scores. This has been particularly pronounced the last eight months: March through October 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



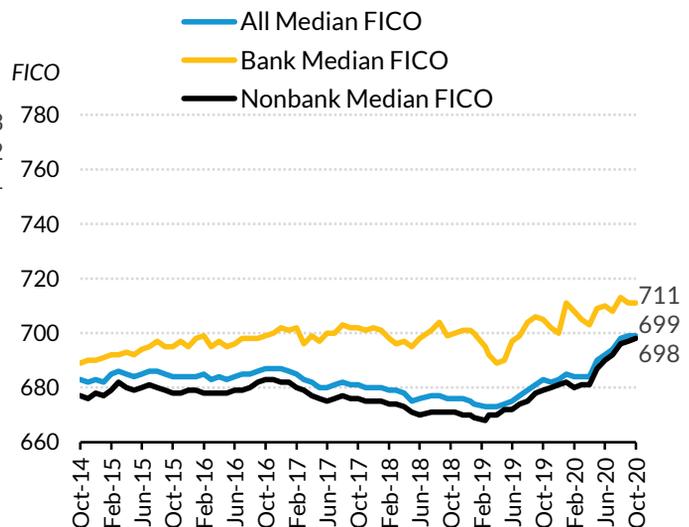
Sources: eMBS and Urban Institute.

GSE FICO: Bank vs. Nonbank



Sources: eMBS and Urban Institute.

Ginnie Mae FICO: Bank vs. Nonbank



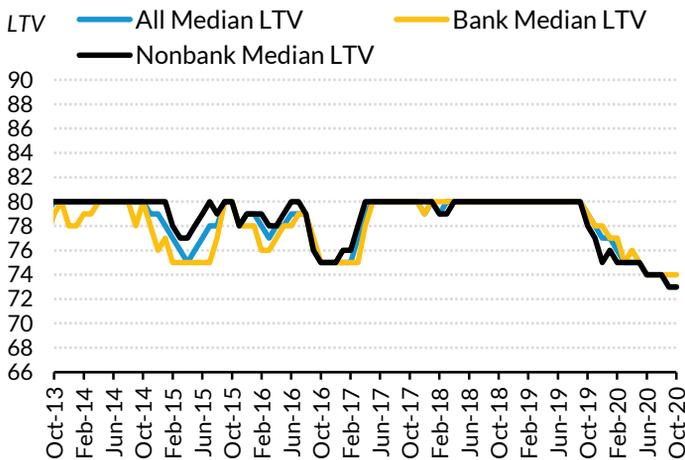
Sources: eMBS and Urban Institute.

CREDIT BOX

AGENCY NONBANK CREDIT BOX

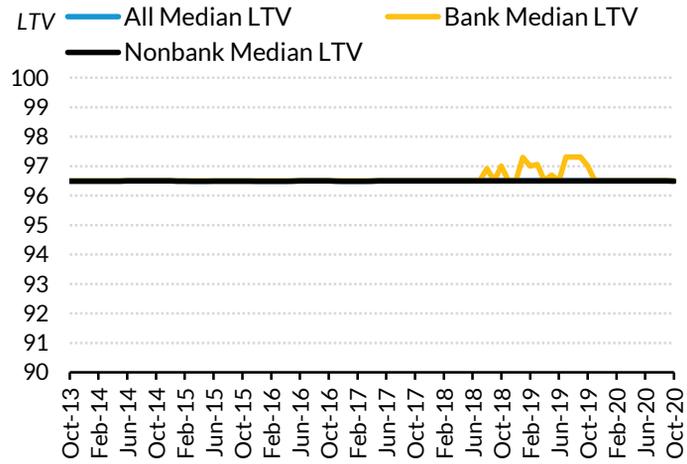
The median LTVs for nonbank and bank originations are comparable, while the median DTI for nonbank loans is higher than for bank loans, more so in the Ginnie Mae space. From early 2017 to early 2019, there was a sustained increase in DTIs, which has reversed beginning in the spring of 2019. This is true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



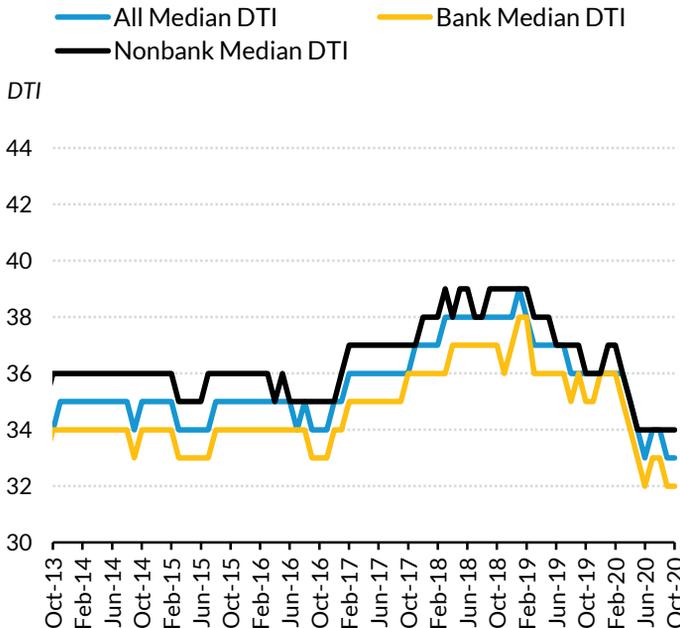
Sources: eMBS and Urban Institute.

Ginnie Mae LTV: Bank vs. Nonbank



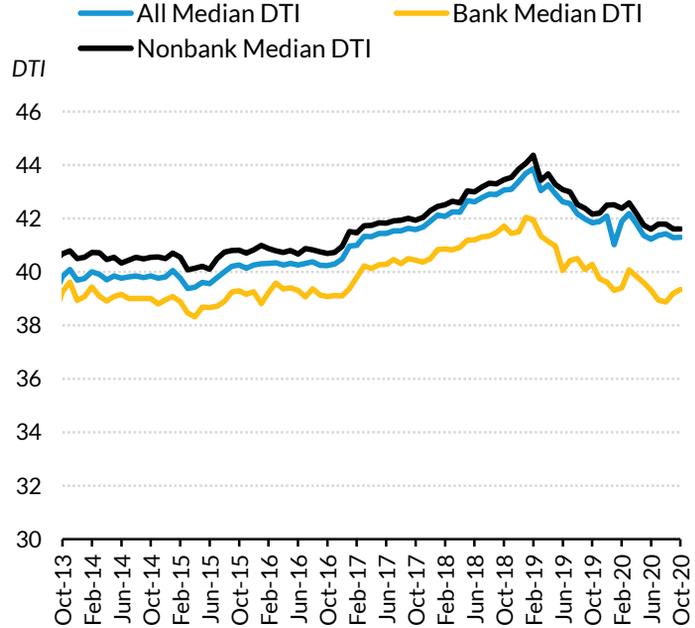
Sources: eMBS and Urban Institute.

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 2020 origination volume to be between \$3.39 and \$4.12 trillion, higher than the \$2.17 to \$2.33 trillion in 2019. These numbers put 2020 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 refinance share to be 12 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 | 361 | 325 | 34 | 35 | 30 |
| 2019 Q2 | 581 | 584 | 501 | 35 | 36 | 29 |
| 2019 Q3 | 752 | 734 | 651 | 50 | 49 | 42 |
| 2019 Q4 | 770 | 753 | 696 | 57 | 57 | 55 |
| 2020 Q1 | 788 | 670 | 563 | 63 | 60 | 52 |
| 2020 Q2 | 1106 | 1008 | 928 | 68 | 67 | 61 |
| 2020 Q3 | 1283 | 1114 | 962 | 63 | 60 | 55 |
| 2020 Q4 | 940 | 791 | 937 | 56 | 53 | 55 |
| 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 | 4117 | 3582 | 3390 | 63 | 61 | 56 |
| 2021 | 2721 | 2685 | 2561 | 41 | 46 | 36 |

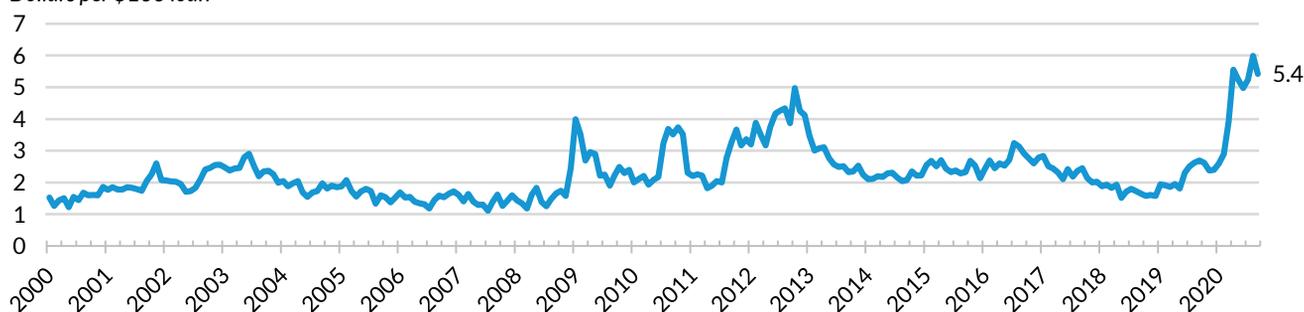
Sources: Fannie Mae, Freddie Mac, Mortgage Bankers Association and Urban Institute.

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 2.9 percent. Freddie Mac forecasts are now released quarterly, last updated October 2020.

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 October 2020 was 2.5, 1.4 months lower than it was in October 2019 and a new record low for the second 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 2020 housing starts to be 1.35 to 1.36 million units; these 2020 forecasts from are above 2019 levels. Fannie Mae, Freddie Mac, and the MBA predict total home sales of 6.2 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 October 2020.

October 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* |
| 2016 | 1174 | 1177 | 1177 | 6011 | 6010 | 6001 | 5385 |
| 2017 | 1203 | 1208 | 1208 | 6123 | 6120 | 6158 | 5522 |
| 2018 | 1250 | 1250 | 1250 | 5957 | 5960 | 5956 | 5357 |
| 2019 | 1290 | 1295 | 1295 | 6023 | 6000 | 6016 | 5439 |
| 2020 | 1355 | 1363 | 1356 | 6365 | 6200 | 6423 | 5769 |
| 2021 | 1467 | 1473 | 1321 | 6413 | 6100 | 7168 | 6078 |

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

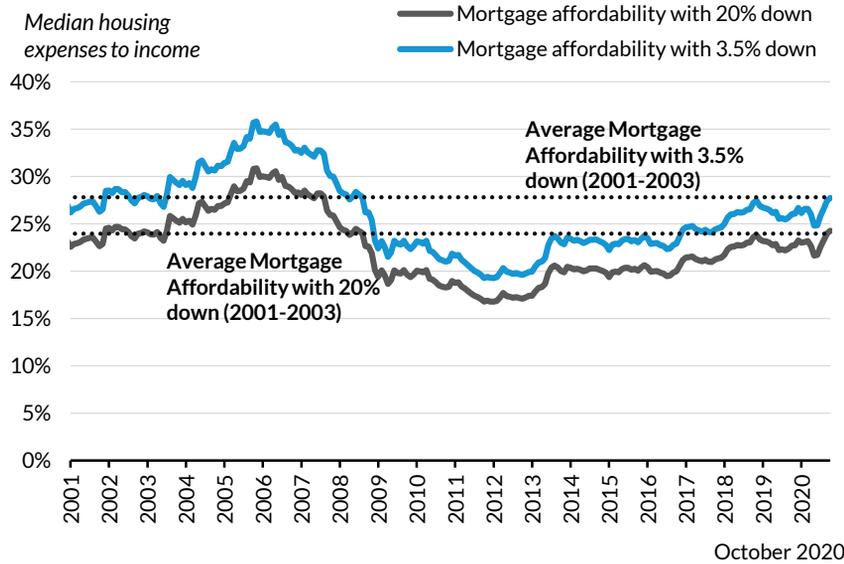
Note: Shaded boxes indicate forecasted figures; column labels indicate source of estimate. Freddie Mac home sales are now updated quarterly instead of monthly, with the last update in October 2020. *NAHB home sales estimate is for single-family structures only, it excludes condos and co-ops. Other figures include all single-family sales.

STATE OF THE MARKET

HOUSING AFFORDABILITY

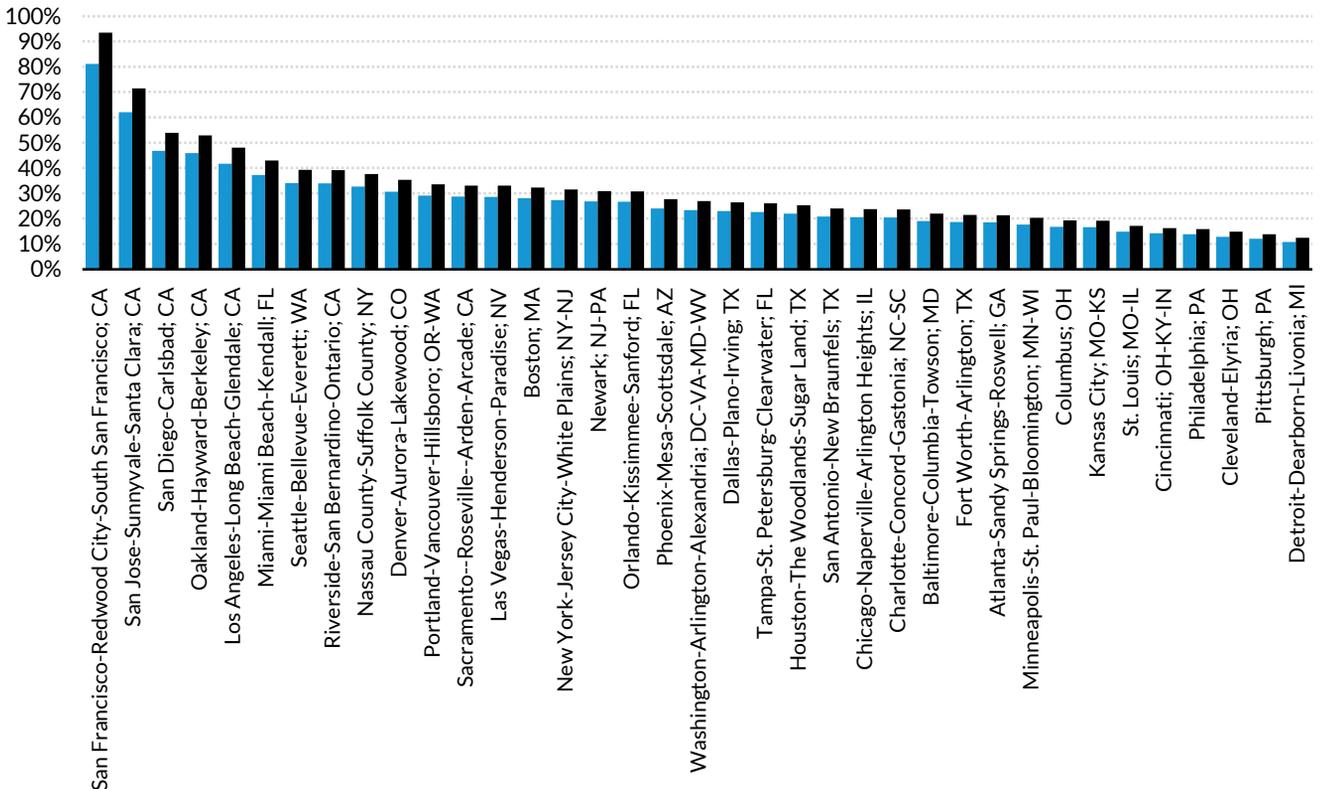
National Mortgage Affordability Over Time

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 October 2020, with a 20 percent down payment, the share of median income needed for the monthly mortgage payment stood at 24.3 percent; with 3.5 down, it is 27.7 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.

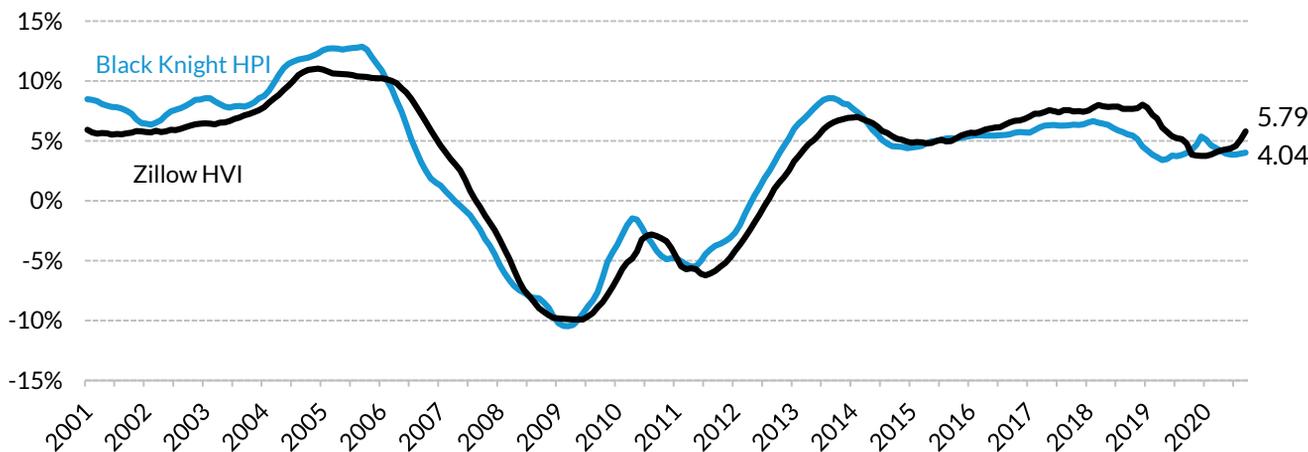
STATE OF THE MARKET

HOME PRICE INDICES

National Year-Over-Year HPI Growth

According to Black Knight's repeat sales index, year-over-year home price appreciation grew to 4.04 percent in September 2020, compared to 3.95 percent last month. Year-over-year home price appreciation as measured by Zillow's hedonic index was 5.79 percent in September 2020, up from 5.11 in August. 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 September 2020.

Changes in Black Knight HPI for Top MSAs

After rising 59.9 percent from the trough, national house prices are now 19.6 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 8.6, 4.7, and 5.5 percent, respectively, below peak values.

| MSA | HPI changes (%) | | | % above peak |
|--|-----------------|----------------|-------------------|--------------|
| | 2000 to peak | Peak to trough | Trough to current | |
| United States | 74.9 | -25.2 | 59.9 | 19.6 |
| New York-Jersey City-White Plains, NY-NJ | 127.7 | -22.5 | 50.4 | 16.6 |
| Los Angeles-Long Beach-Glendale, CA | 179.4 | -38.1 | 95.7 | 21.1 |
| Chicago-Naperville-Arlington Heights, IL | 67.2 | -38.4 | 48.5 | -8.6 |
| Atlanta-Sandy Springs-Roswell, GA | 32.3 | -35.0 | 85.9 | 20.8 |
| Washington-Arlington-Alexandria, DC-VA-MD-WV | 149.0 | -28.3 | 43.0 | 2.4 |
| Houston-The Woodlands-Sugar Land, TX | 29.2 | -6.6 | 52.2 | 42.1 |
| Phoenix-Mesa-Scottsdale, AZ | 113.1 | -51.0 | 108.5 | 2.1 |
| Riverside-San Bernardino-Ontario, CA | 174.5 | -51.6 | 97.0 | -4.7 |
| Dallas-Plano-Irving, TX | 26.3 | -7.3 | 71.9 | 59.4 |
| Minneapolis-St. Paul-Bloomington, MN-WI | 69.2 | -30.6 | 67.1 | 16.0 |
| Seattle-Bellevue-Everett, WA | 90.3 | -33.1 | 114.0 | 43.1 |
| Denver-Aurora-Lakewood, CO | 34.1 | -12.2 | 97.7 | 73.5 |
| Baltimore-Columbia-Towson, MD | 123.2 | -24.4 | 24.9 | -5.5 |
| San Diego-Carlsbad, CA | 148.1 | -37.4 | 85.6 | 16.1 |
| Anaheim-Santa Ana-Irvine, CA | 163.2 | -35.2 | 70.9 | 10.7 |

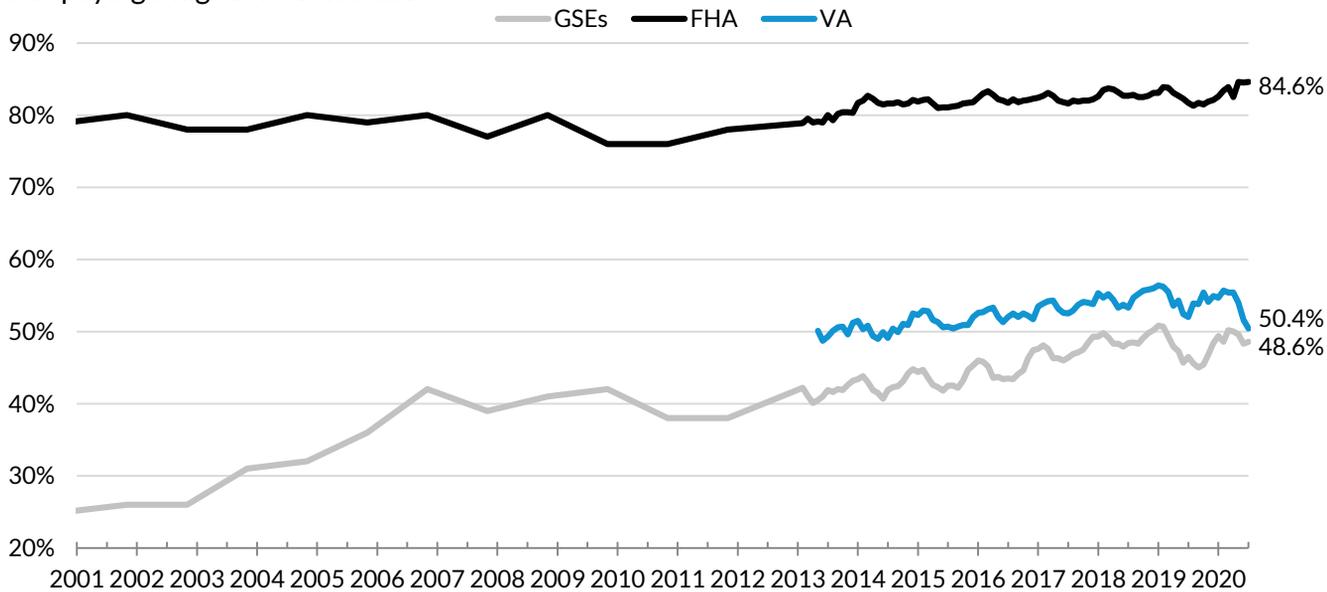
Sources: Black Knight HPI and Urban Institute. Data as of September 2020.
 Note: This table includes the largest 15 Metropolitan areas by mortgage count.

STATE OF THE MARKET

FIRST-TIME HOMEBUYERS

First-Time Homebuyer Share

In September 2020, the FTHB share for FHA, which has always been more focused on first time homebuyers, was 84.6 percent. The FTHB share of VA lending declined in September to 50.4 percent. The GSE FTHB share in September was slightly up from August, at 48.6 percent. The bottom table shows that based on mortgages originated in September 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.

September 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 (\$) | 286,787 | 311,373 | 235,119 | 253,022 | 269,047 | 303,760 |
| Credit Score | 749 | 760 | 679 | 680 | 725 | 749 |
| LTV (%) | 88 | 79 | 96 | 94 | 90 | 81 |
| DTI (%) | 34 | 35 | 43 | 44 | 37 | 36 |
| Loan Rate (%) | 3.04 | 2.97 | 3.12 | 3.06 | 3.06 | 2.98 |

Sources: eMBS and Urban Institute.

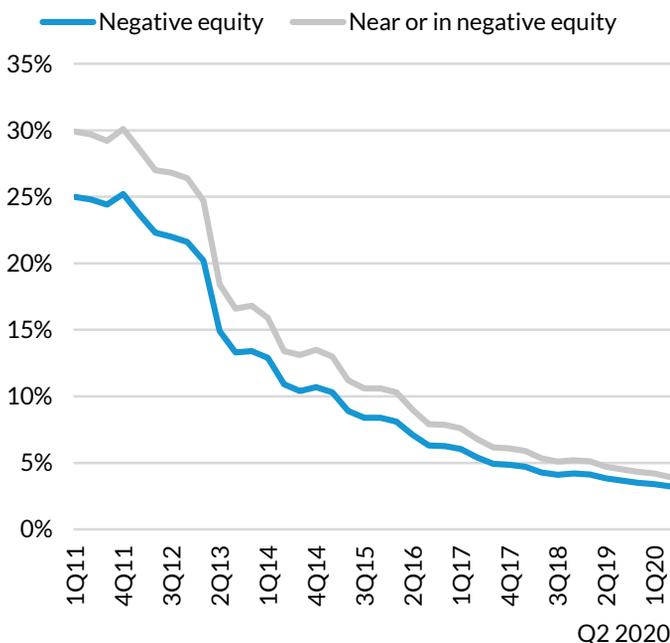
Note: Based on owner-occupied purchase mortgages originated in September 2020.

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 rose in Q3 2020, to 5.16 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.

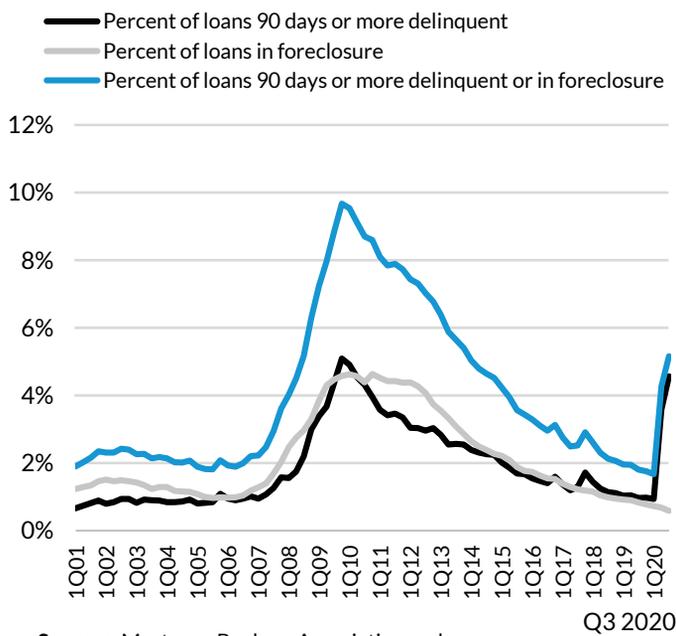
Negative Equity Share



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.

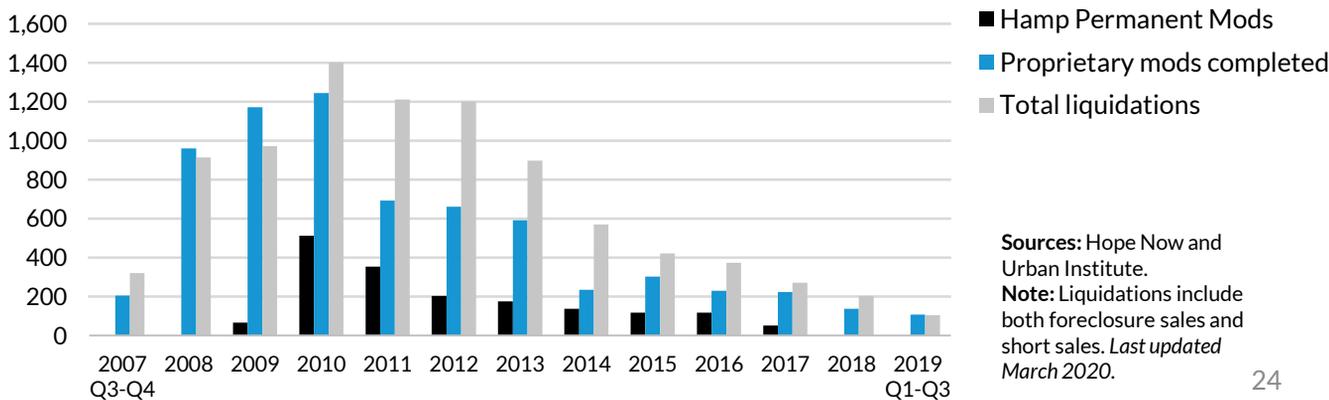
Loans in Serious Delinquency/Foreclosure



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

Loan Modifications and Liquidations

Number of loans (thousands)



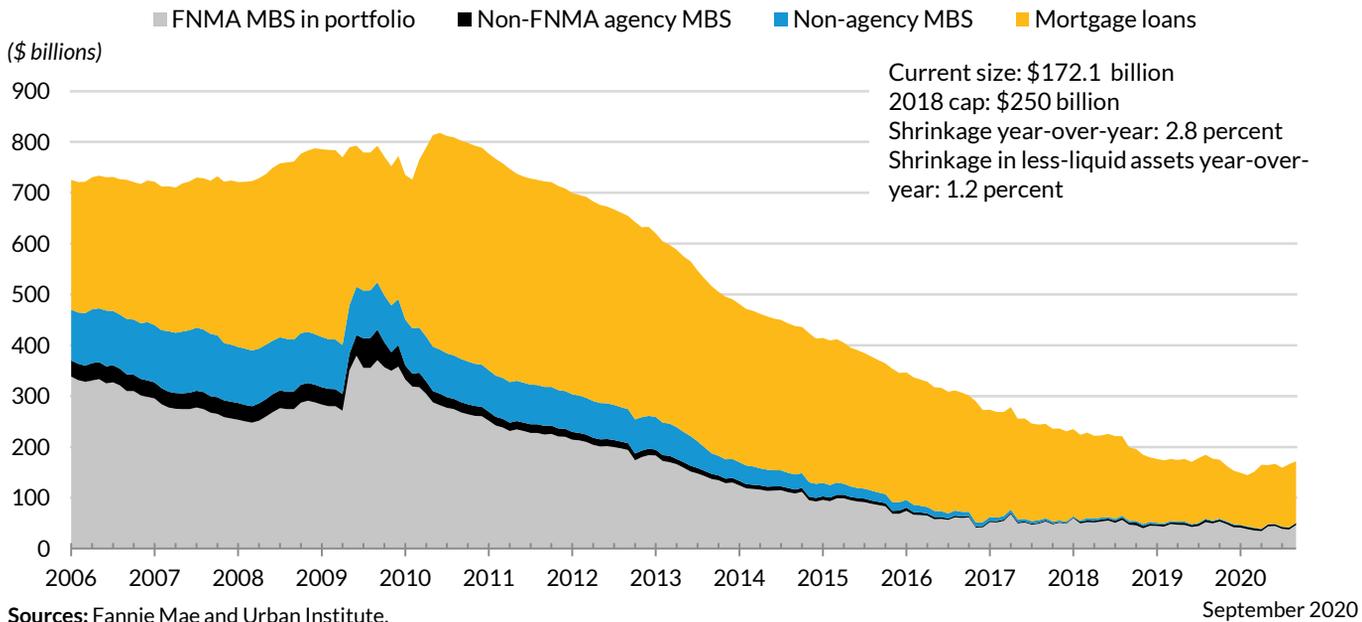
Sources: Hope Now and Urban Institute. Note: Liquidations include both foreclosure sales and short sales. Last updated March 2020.

GSES UNDER CONSERVATORSHIP

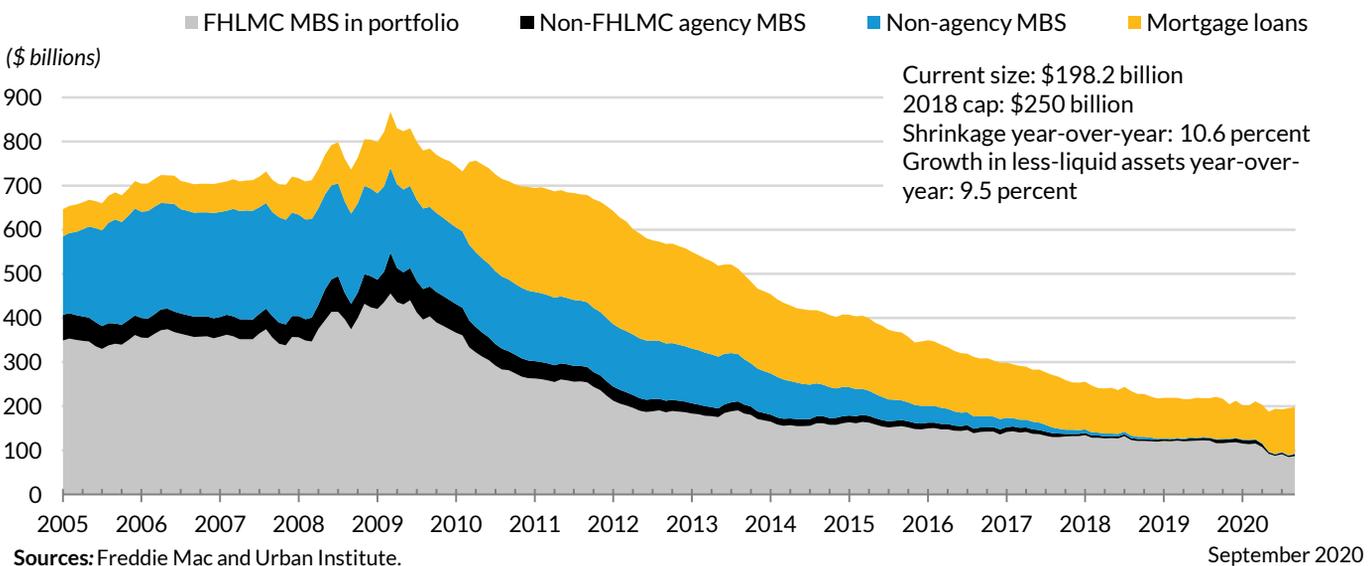
GSE PORTFOLIO WIND-DOWN

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 September 2019 to September 2020, the Fannie portfolio contracted by 2.8 percent, and the Freddie portfolio contracted by 10.6 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



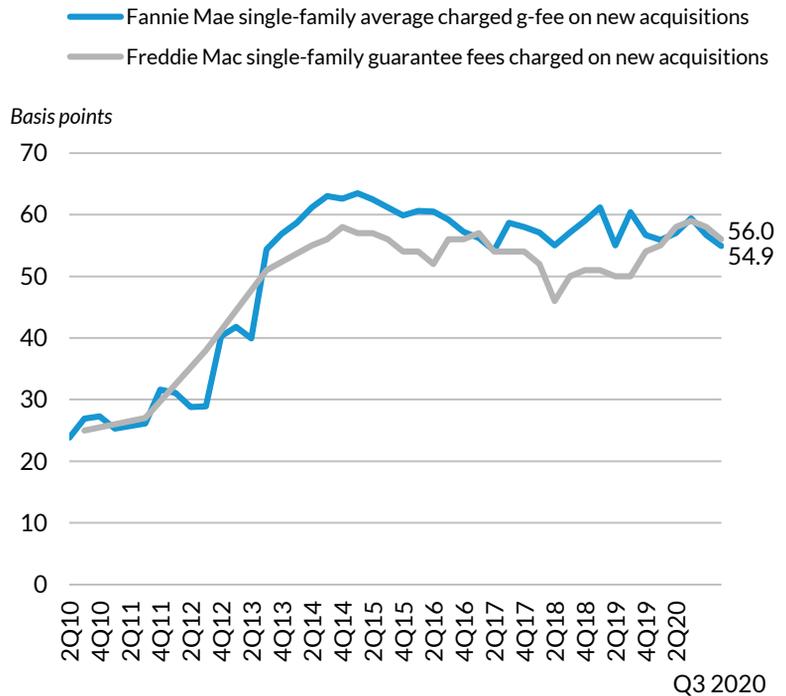
GSES UNDER CONSERVATORSHIP

EFFECTIVE GUARANTEE FEES

Guarantee Fees Charged on New Acquisitions

Fannie Mae's average g-fees charged on new acquisitions fell from 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.



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. 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 \$1.70 trillion. Since the COVID-19 induced spread widening in March 2020, Freddie Mac has issued six 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 | \$43,406 | \$1,086 | 2.5 |
| November 2020 | STACR Series 2020 - HQA5 | \$42,257 | \$1,080 | 2.6 |
| Total | | \$1,699,262 | \$45,492 | 2.7 |

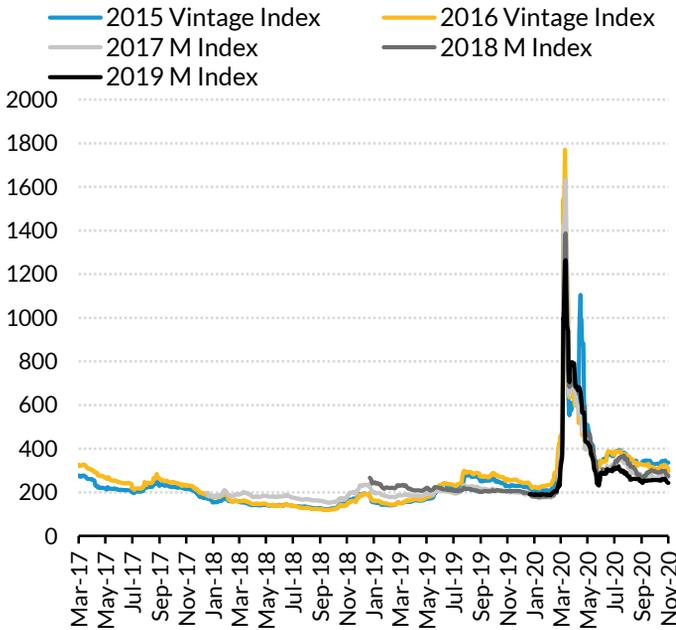
Sources: Fannie Mae, Freddie Mac and Urban Institute. Note: Classes A-H, M-1H, M-2H, and B-H are reference tranches only. These classes are not issued or sold. The risk is retained by Fannie Mae and Freddie Mac. "CE" = credit enhancement.

GSES UNDER CONSERVATORSHIP

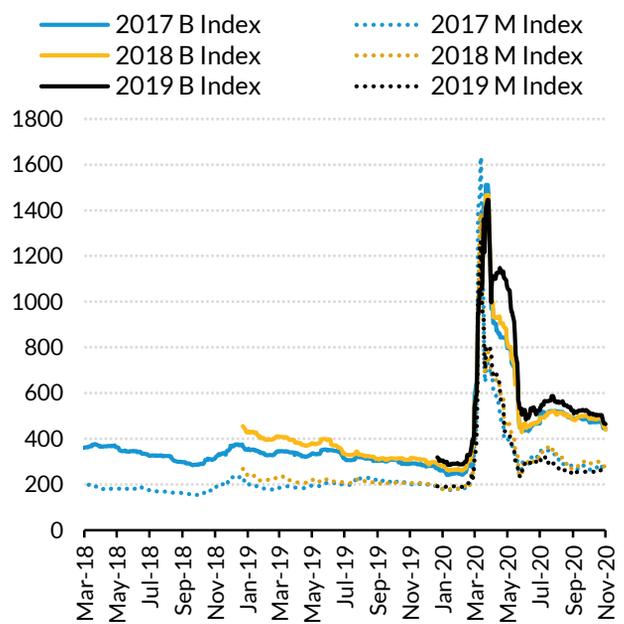
GSE RISK-SHARING INDICES

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.

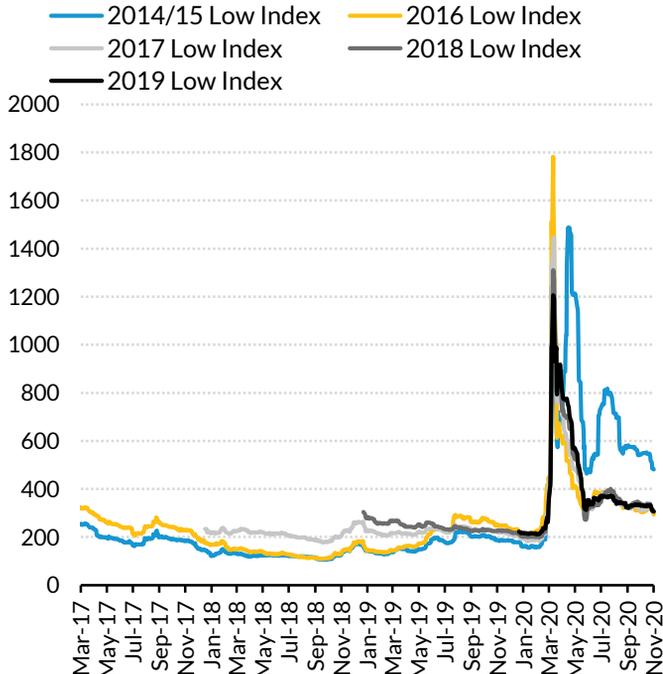
By Vintage



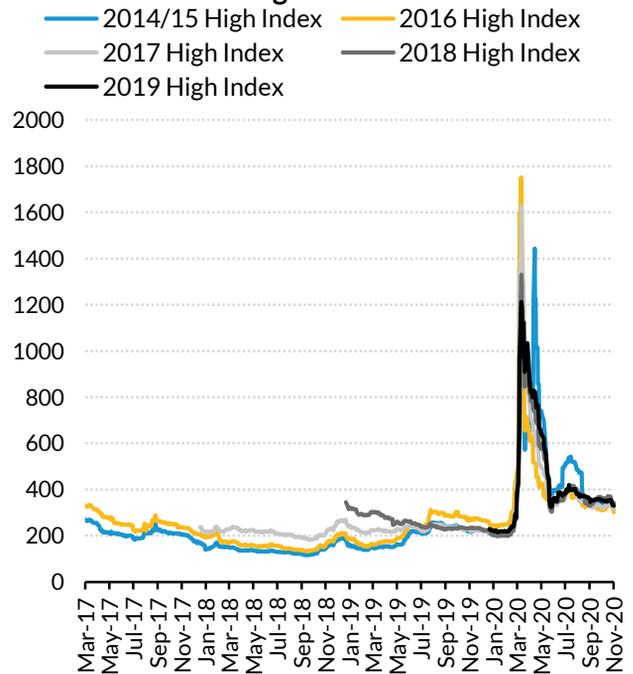
2017 and 2018 Indices



Low Indices



High Indices



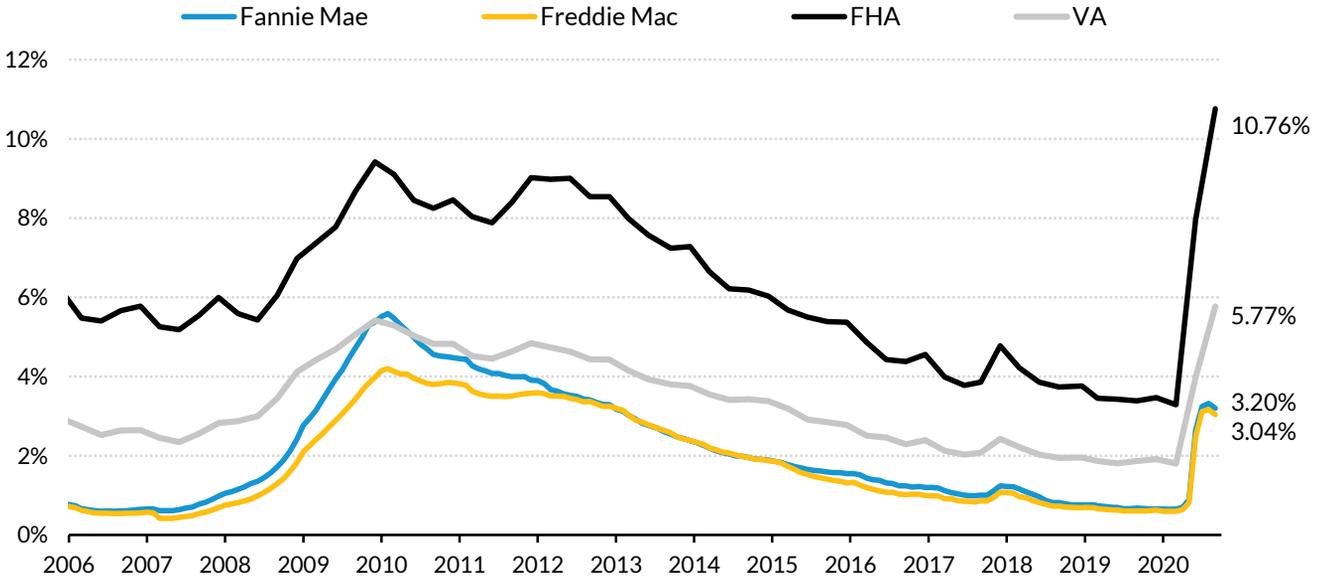
Sources: Vista Data Services and Urban Institute.
 Note: Data as of November 13, 2020.

GSES UNDER CONSERVATORSHIP

SERIOUS DELINQUENCY RATES

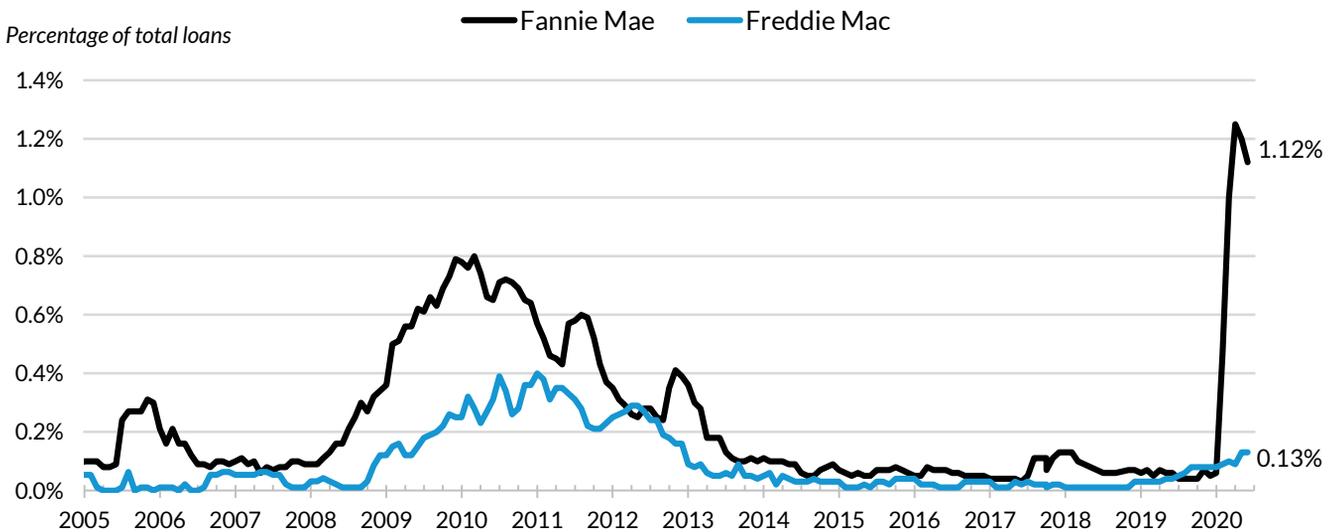
Serious delinquency rates for single-family GSE loans both decreased slightly in September 2020, for the first time since the start of the pandemic. On the other hand, in Q3 2020, serious delinquency rates for FHA and VA loans increased significantly, both rising above their previous highs from the housing crisis. Note that loans that are in forbearance are counted as delinquent for the purpose of measuring delinquency rates. Fannie multifamily delinquencies declined to 1.12 percent in September; Freddie multifamily delinquencies remained constant at 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 November 2020. GSE delinquencies are reported monthly, last updated September 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.

September 2020

AGENCY ISSUANCE

AGENCY GROSS AND

NET ISSUANCE

Agency gross issuance was \$3.02 trillion through the first ten 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 \$499.8 billion in the first ten months of 2020, up 107.6 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 | \$1,866.1 | \$626.0 | \$3,019.9 | 2020 YTD | \$477.1 | \$22.7 | \$499.8 |
| 2020 YTD % Change YOY | 130.6% | 55.9% | 149.4% | 2020 YTD % Change YOY | 204.7% | -73.1% | 107.6% |
| 2020 Ann. | \$2,239.4 | \$751.1 | \$3,623.8 | 2020 Ann. | \$572.6 | \$27.2 | \$599.8 |

Sources: eMBS and Urban Institute.

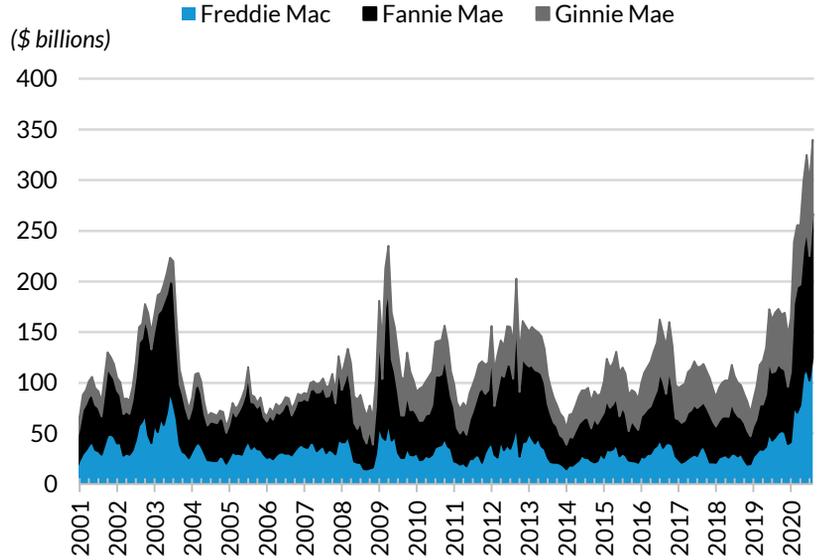
Note: Dollar amounts are in billions. Data as of October 2020.

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

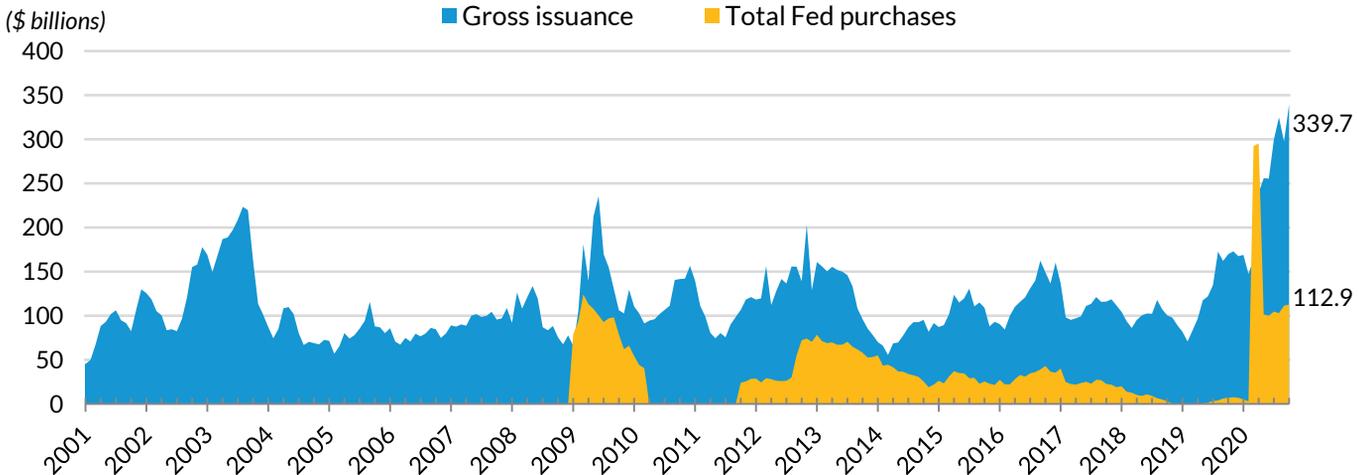


Sources: eMBS, Federal Reserve Bank of New York, and Urban Institute.

October 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 through August. In September and October, Fed purchases were up slightly at \$111.3 and \$112.9 billion, respectively. October Fed purchases totaled 33 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.

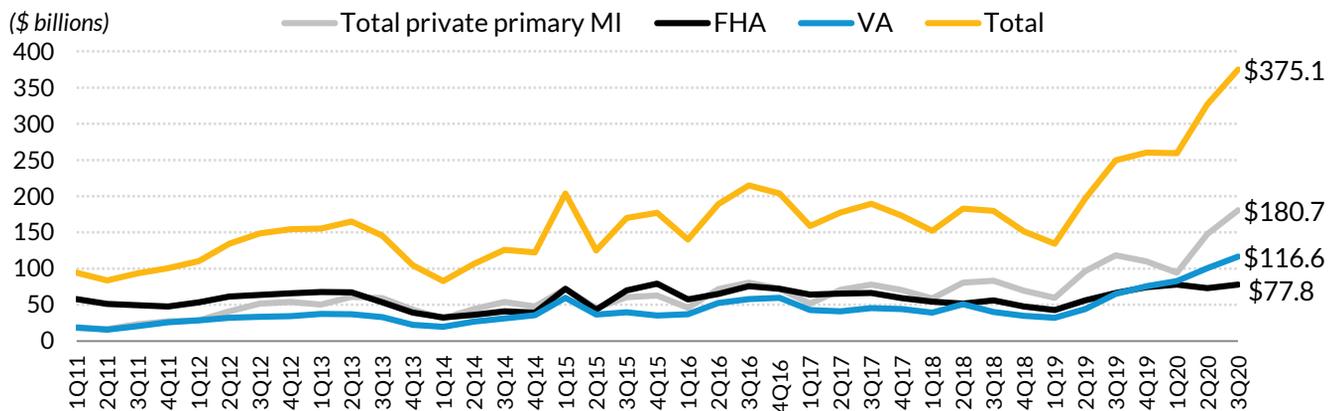
October 2020

AGENCY ISSUANCE

MORTGAGE INSURANCE ACTIVITY

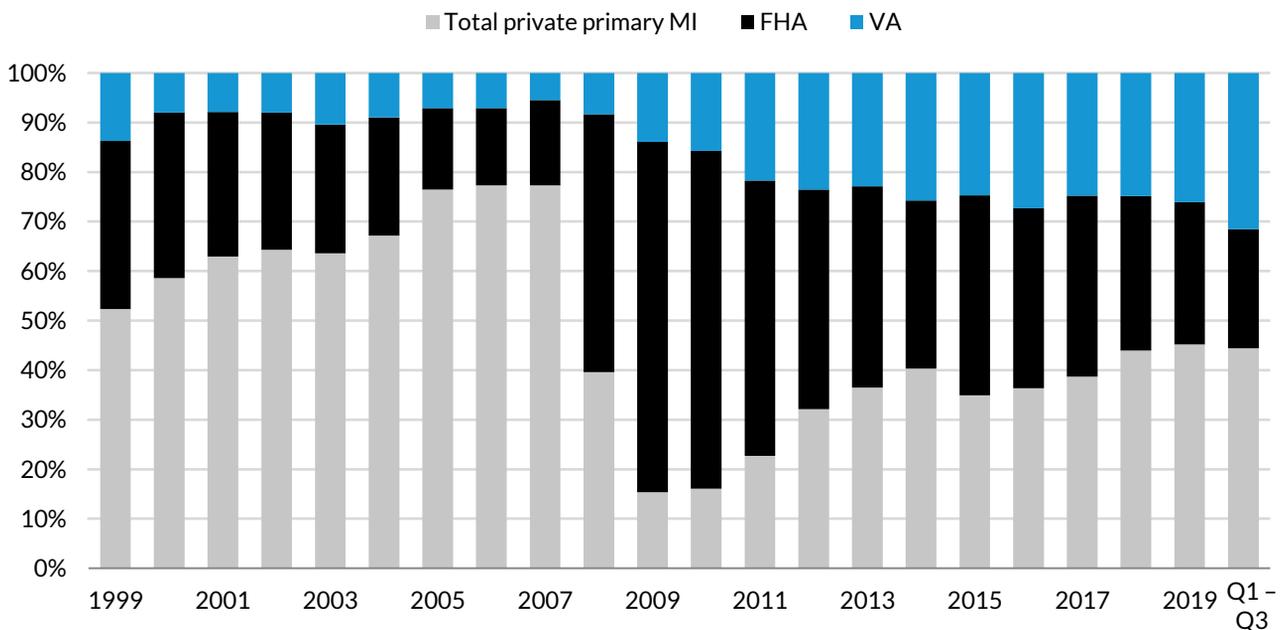
MI Activity

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 | 2.83 |
| FHA | 3.12 |

| 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 | \$1,222 | \$1,222 | \$1,222 | \$1,222 | \$1,222 | \$1,222 | \$1,222 | \$1,222 |
| PMI | \$1,461 | \$1,399 | \$1,364 | \$1,277 | \$1,233 | \$1,196 | \$1,155 | \$1,131 |
| PMI Advantage | -\$240 | -\$177 | -\$142 | -\$56 | -\$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 October 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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