HOUSING FINANCE POLICY CENTER



A MONTHLY CHARTBOOK

April 2021



ABOUT THE CHARTBOOK

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

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

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

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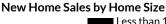
Publications and Events

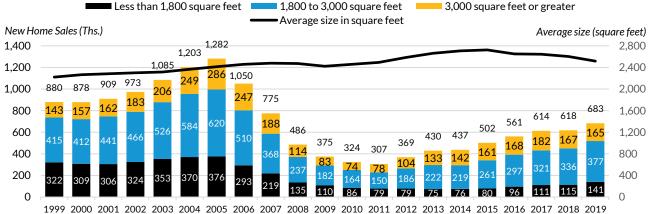
INTRODUCTION

Sales of Newly Built Smaller Homes Have Grown, But Higher Costs Hamper Affordability

The housing market has been increasingly challenged by the low share of more affordable homes. Low mortgage rates, strong stock market gains, and limited existing home inventory have propelled home prices higher. As of March, the months' supply of existing homes (shown on page 20 of this chart book) at 2.1 near its series low of 1.9 months reached back in January. In other words, at the current pace of sales, 6.01 million in March, the existing for-sale inventory would be exhausted a little after Memorial Day.

Although the average size of a new home has fallen amid more starter homes built and sold, the gains to affordability have been offset by a stronger increase in the price per square foot of a new home. Between 2016 and 2019, the average size of a new home sold fell by 7.6 percent to 2,518 square feet. But over this same period, the average price per square foot grew by 19 percent to \$119. As a result, new home prices continue to climb, even if at a slightly slower pace.



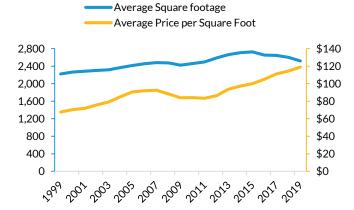


Source: The US Census Bureau and the Department of Housing and Urban Development.

Can new home sales help bridge this gap? The new home market has been concentrated in increasingly larger and more expensive homes. Despite a brief decline in the average size of a new home sold between 2008 and 2009 amid the housing bust, the average size of a new home largely expanded over the 1999 to 2015 period, from 2,221 feet to 2,724 feet reflecting a growing share of larger new homes, those 1,800 square feet or greater.

However, in recent years, the average size of a new home has declined. The decrease in the typical size of a new home is due to a small but growing share of new home sales under 1800 square feet. Since 2015, sales of smaller new homes increased by 76 percent as compared with a 36 percent increase in new home sales overall. In response, smaller homes saw their share of all new home sales increase from 16 percent to 21 percent.

Average Square Feet and Price Per Square Foot of a New Home



Source: The US Census Bureau and the Department of Housing and Urban Development.

Although the inclusion of the latest amenities into a new home, an attractive aspect for new home buyers, keeps new home prices high, this analysis still conveys two broad ways to improve affordability of newly constructed homes. The first is to build smaller homes and the second is to reduce costs.

The evidence suggests that more smaller homes are slowly being built. However, resource costs continue to plague builders. And the source of these costs remains varied, complicating the policy response. Many builders continue to report tight labor conditions while lumber prices have soared. Relying more on modular and panelized housing could help to reduce these inputs in the building process. Even if new building technologies were to be relied on more heavily, the shortage would not disappear entirely, as a number of factors including high land costs, regulatory constraints on both permitting and building design, financing and delivery challenges may be adding costs and keeping new home sales from still being a significant source of affordable housing.

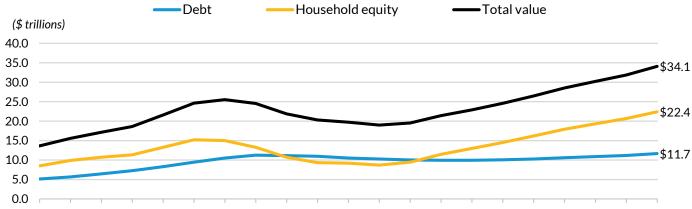
INSIDE THIS ISSUE

- Home price appreciation is more robust than it has been at any time since 2006, per both Black Knight's repeat sales index and Zillow's hedonic index (Page 22).
- Originator Profitability and Unmeasured Costs (OPUC) dropped significantly from \$4.33 per \$100 loan in February 2021 to \$3.40 in March, as rates have started rising from record lows (Page 19).
- Agency gross issuance was \$983.4 billion for the first three months of 2021, more than double the volume in the same period of 2020 (Page 30).

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. Mortgage debt outstanding increased slightly from \$11.5 trillion in Q3 2020 to \$11.7 trillion in Q4 2020 while total household equity increased from \$21.7 trillion to \$22.4 trillion. The total value of the housing market reached \$34.1 trillion in Q4 2020, 33.5 percent higher than the precrisis peak in 2006. Agency MBS account for 64.5 percent of the total mortgage debt outstanding, private-label securities make up 3.5 percent, and unsecuritized first liens make up 28.2 percent. Home equity loans comprise the remaining 3.8 percent of the total.

Value of the US Single Family Housing Market

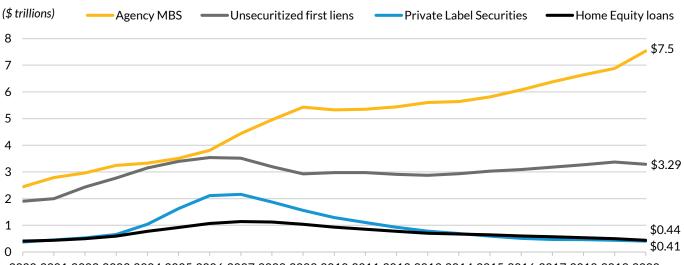


2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

Sources: Federal Reserve Flow of Funds and Urban Institute. Last updated March 2021.

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



2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020

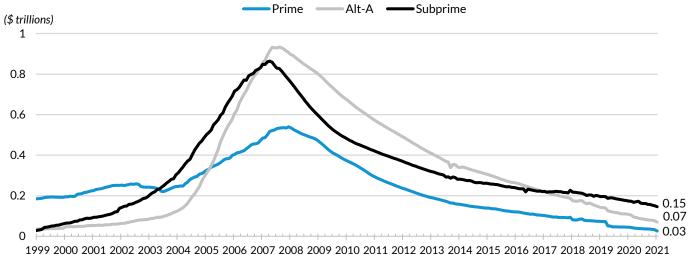
Sources: Federal Reserve Flow of Funds, eMBS and Urban Institute, Last updated March 2021,

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

MARKET SIZE OVERVIEW

As of February 2021, our sample of first lien mortgage debt in the private-label securitization market totaled \$242 billion and was split among prime (10.7 percent), Alt-A (29.0 percent), and subprime (60.3 percent) loans. In March 2021, outstanding securities in the agency market totaled \$7.7 trillion, 42.4 percent of which was Fannie Mae, 31.0 percent Freddie Mac, and 26.6 percent Ginnie Mae.

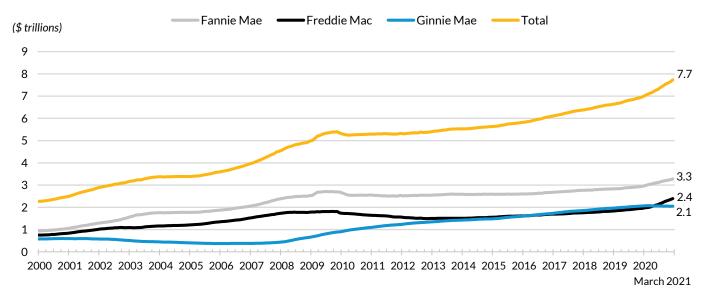
Private-Label Securities by Product Type



February 2021

Sources: CoreLogic, Black Knight and Urban Institute.

Agency Mortgage-Backed Securities

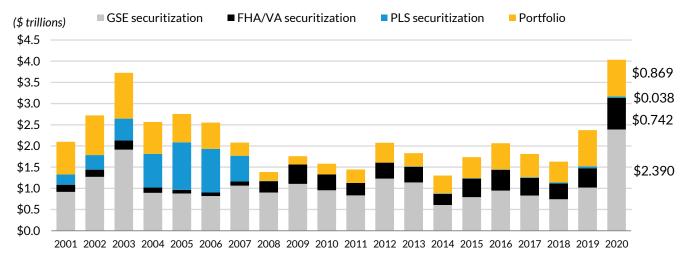


Sources: eMBS and Urban Institute.

ORIGINATION VOLUME AND COMPOSITION

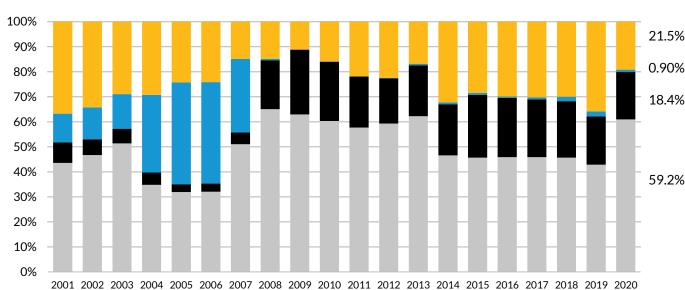
First Lien Origination Volume

2020 was a record year for first-lien originations with \$4.04 trillion in mortgages originated during the year. This number exceeds the 2003 volume of \$3.73 trillion, the previous record holder, by \$315 billion. The share of portfolio originations was 21.5 percent in 2020, a substantial decline from the 35.9 percent share in 2019. The 2020 GSE share was up significantly at 59.2 percent, compared to 42.9 percent in 2019. The FHA/VA share at the end of 2020 was 18.4 percent, down one percentage point compared to last year. The PLS share was 0.9 percent in 2020, down from 1.9 percent one year ago, and a fraction of its share in the prebubble years. The smaller share of portfolio and PLS in 2020 reflects the impact of COVID-19, which made it difficult to originate mortgages without government support. The higher GSE share reflects the large amount of refinances done through this channel. 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 February 2021.

(Share, percent)

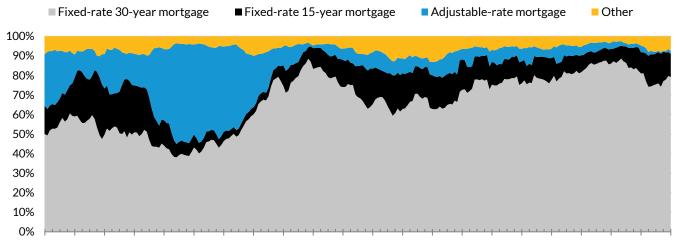


Sources: Inside Mortgage Finance and Urban Institute. Last updated February 2021.

PRODUCT COMPOSITION AND REFINANCE SHARE

The 30-year fixed-rate mortgage continues to remain the bedrock of the US housing finance system, accounting for 79.2 percent of new originations in February 2021. The share of 15-year fixed-rate mortgages, predominantly a refinance product, was 11.9 percent of new originations in February 2021. The ARM share accounted for 1.3 percent of new originations. Since late 2018, while there has been some month-to-month variation, the refinance share (bottom chart) has generally grown for both the GSEs and for Ginnie Mae as interest rates have dropped. The GSE refi shares are in the 78 to 80 percent range; the Ginnie Mae refi share was 60.2 percent in March 2021.

Product Composition

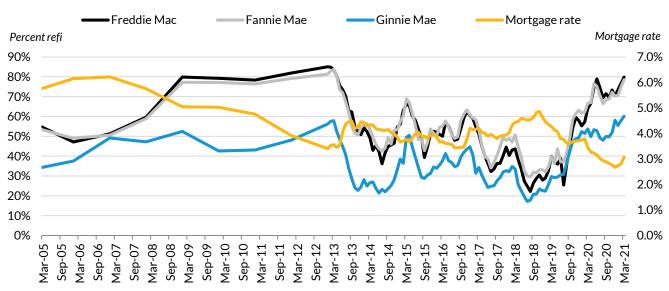


2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021

Sources: Black Knight, eMBS, HMDA, SIFMA and Urban Institute. **Note**: Includes purchase and refinance originations.

February 2021

Percent Refi at Issuance



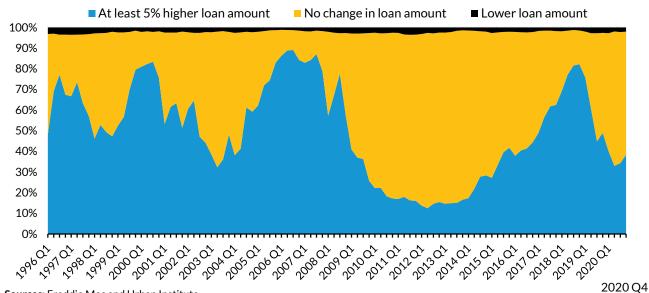
Sources: eMBS and Urban Institute.

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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 Q4 showed a slight uptick to 38 percent, from 34 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.

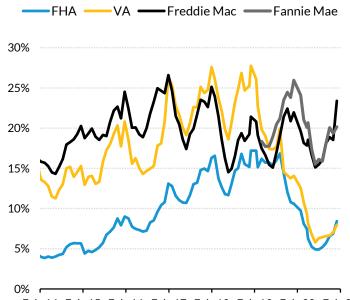
Loan Amount after Refinancing



Sources: Freddie Mac and Urban Institute.

Note: Estimates include conventional mortgages only.

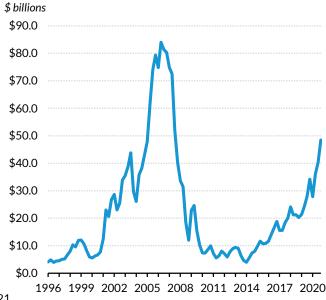
Cash-out Refi Share of All Originations



Feb-14 Feb-15 Feb-16 Feb-17 Feb-18 Feb-19 Feb-20 Feb-21

Sources: eMBS and Urban Institute. **Note**: Data as of February 2021.

Equity Take-Out from Conventional Mortgage Refinance Activity



Sources: Freddie Mac and Urban Institute. **Note:** These quarterly estimates include conventional

mortgages only.

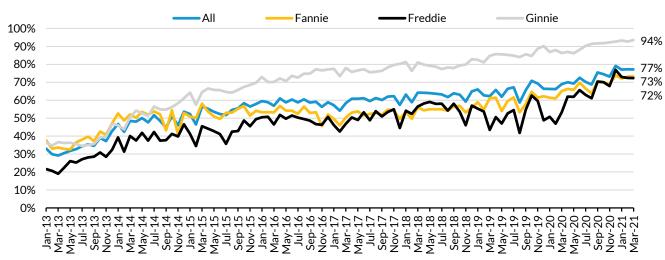
2020 Q4

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AGENCY NONBANK ORIGINATION SHARE

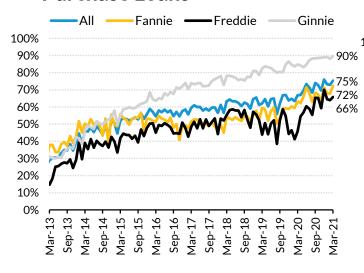
The nonbank share for agency originations has been rising steadily since 2013, standing at 77 percent in March 2021. The Ginnie Mae nonbank share has been consistently higher than the GSEs, increasing slightly in March 2021 to 94 percent. Fannie and Freddie had nonbank shares of 73 and 72 percent, respectively, in March 2021. 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



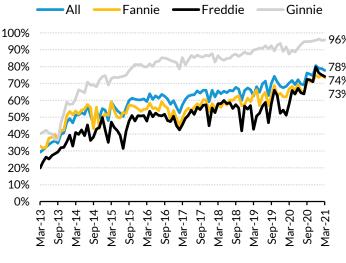
Sources: eMBS and Urban Institute.

Nonbank Origination Share: Purchase Loans



Sources: eMBS and Urban Institute.

Nonbank Origination Share: Refi Loans

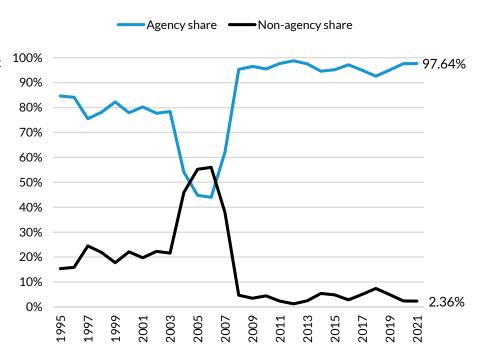


Sources: eMBS and Urban Institute.

SECURITIZATION VOLUME AND COMPOSITION

Agency/Non-Agency Share of Residential MBS Issuance

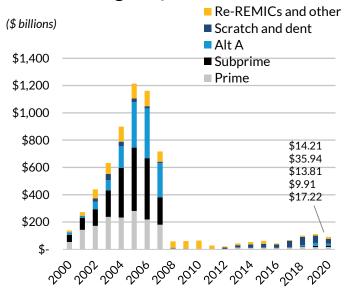
The non-agency share of mortgage securitizations increased gradually over the post-crisis years, from 1.83 percent in 2012 to 5.0 percent in 2019. In 2020, the non-agency share dropped to 2.44 percent, and as of March 2021, it stood at 2.36 percent. The sharp drop in 2020, and continuing into 2021, reflects less non-agency production due to dislocations caused by COVID-19. Non-agency securitization volume totaled \$91.09 billion in 2020, a decrease relative to the \$111.52 billion total from 2019, while agency securitizations rose considerably. Non-agency securitizations continue to be tiny compared to pre-housing market crisis levels.



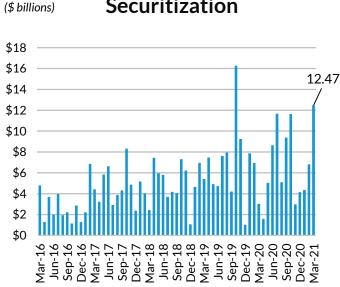
Sources: Inside Mortgage Finance and Urban Institute.

Note: Based on data from March 2021. Monthly non-agency volume is subject to revision.

Non-Agency MBS Issuance



Monthly Non-Agency Securitization

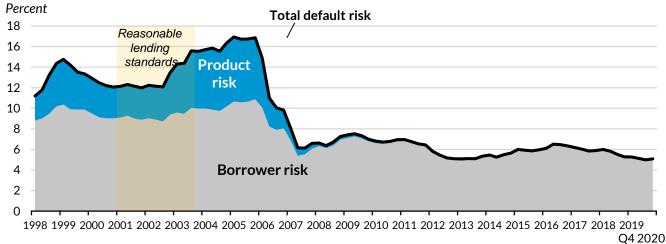


Sources: Inside Mortgage Finance and Urban Institute.

HOUSING CREDIT AVAILABILITY INDEX

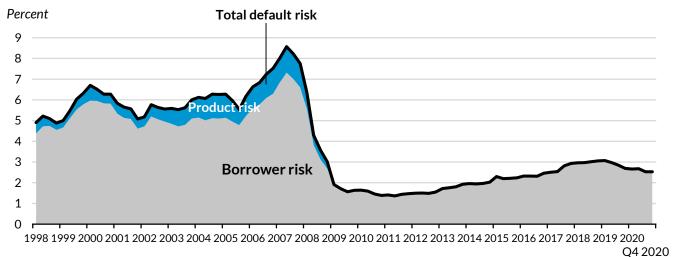
The Urban Institute's Housing Credit Availability Index (HCAI) assesses lenders' tolerance for both borrower risk and product risk, calculating the share of owner-occupied purchase loans that are likely to go 90+ days delinquent over the life of the loan. The HCAI stood at 5.1 percent in Q4 2020, up slightly from a historic low in Q3 of just below 5.0 percent. Note that we updated the methodology as of Q2 2020, see new methodology here. Credit loosening from Q3 to Q4 2020 was led by increased borrower default risk among government channel originations, as well as a shift in market composition, with the GSE channel making up a smaller portion of total purchase originations. More information about the HCAI is available here.

All Channels



GSE Channel

The trend toward greater credit availability in the GSE channel began in Q2 2011. From Q2 2011 to Q1 2020, the total risk taken by the GSE channel had nearly doubled, from 1.4 percent to 2.7 percent. This is still very modest by pre-crisis standards. However, over the past year credit availability has trended down, standing at 2.5 percent in Q4 2020, the result of accelerated tightening throughout 2020 induced by market conditions due to COVID-19.



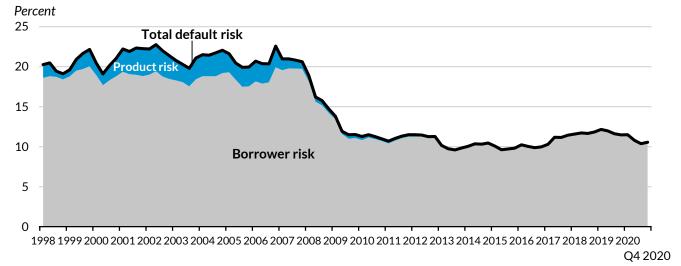
Sources: eMBS, CoreLogic, HMDA, IMF, and Urban Institute.

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

CREDIT BOX HOUSING CREDIT AVAILABILITY INDEX

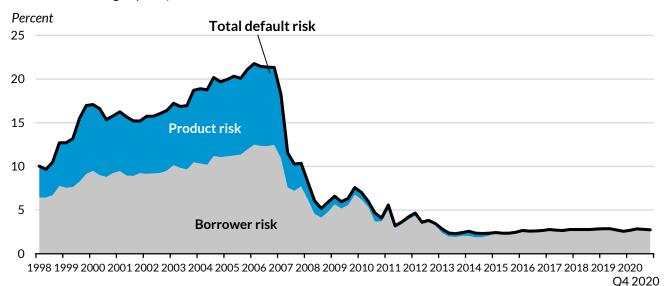
Government Channel

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 for above that number for three years. In the eleven quarters from Q4 2016 to Q1 2019, the risk in the government channel increased significantly from 9.9 to 12.1 percent but has since receded. The government channel reduced risk in quarters two and three of 2020, declining to 10.4 percent in Q3 but increased risk in Q4 to 10.6 percent; 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 FVR and GSE channels during the bubble. After the crisis, the channel's product and borrower risks dropped sharply. The numbers have stabilized since 2013, with product risk well below 0.5 percent and total risk largely in the range of 2.3-3.0 percent; it was 2.7 percent in Q4 2020. It is important to realize 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. The PP share increased slightly in Q4 but remains a shadow of what it once was.

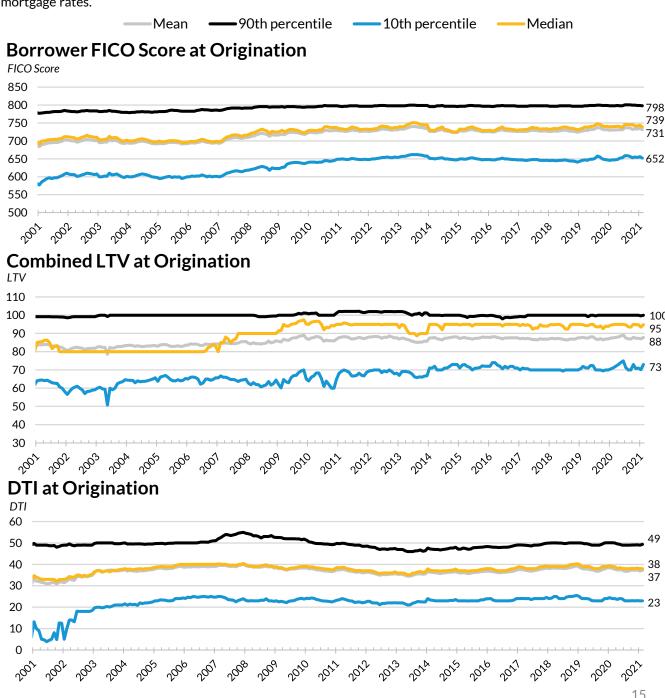


Sources: eMBS, CoreLogic, HMDA, IMF, and Urban Institute.

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

CREDIT AVAILABILITY FOR PURCHASE LOANS

Access to credit remains tight, especially for lower FICO borrowers. The median FICO for current purchase loans is about 31 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 652 in February 2021, which is high compared to low-600s pre-bubble. The median LTV at origination of 95 percent also remains high, reflecting the rise of FHA and VA lending. Origination DTIs trended lower over the course of 2020 and early 2021, reflecting the sharp decline in mortgage rates.

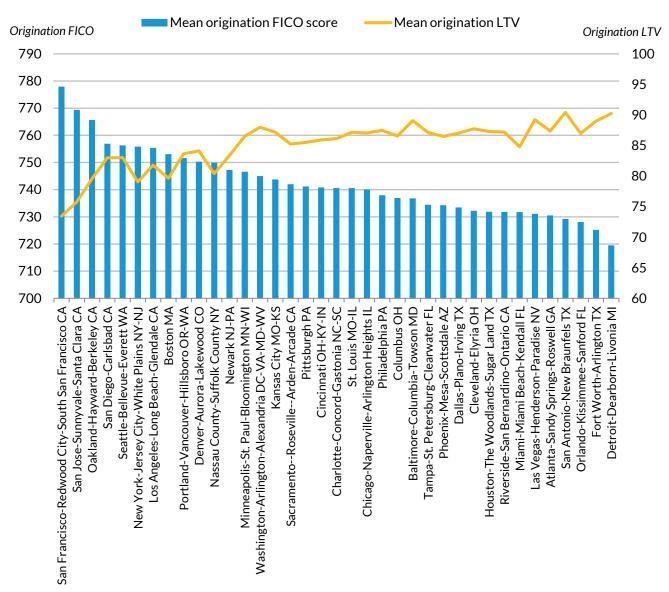


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CREDIT AVAILABILITY BY MSA FOR PURCHASE LOANS

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 778 in February 2021. Across all MSAs, lower average FICO scores tend to be correlated with high average LTVs, as these MSAs rely heavily on FHA/VA financing.

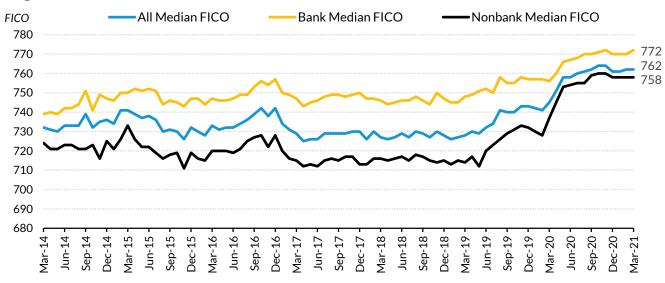
Origination FICO and LTV



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 larger in the Ginnie Mae space. FICO scores for banks and nonbanks in both GSE and Ginnie Mae segments increased increased during the Q1 2019 to Q1 2021 period, due to increased refi activity; this activity is skewed toward higher FICO scores. Note that there has been a sharp cut-back in FHA lending by banks post-2008. As pointed out on page 11, banks now comprise only about 6 percent of Ginnie Mae originations.

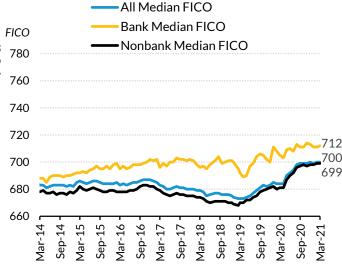
Agency FICO: Bank vs. Nonbank



Sources: eMBS and Urban Institute.

GSE FICO: Bank vs. Nonbank

Ginnie Mae FICO: Bank vs. Nonbank



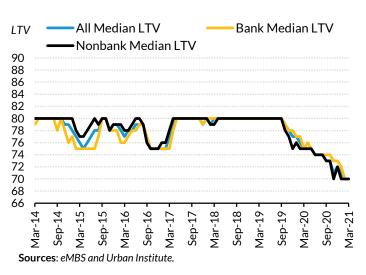
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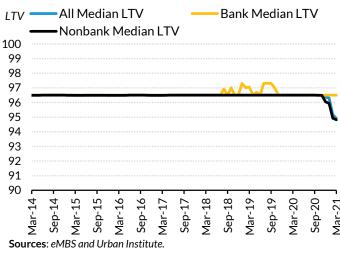
AGENCY NONBANK CREDIT BOX

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 the 2019 through early 2020 timeframe, DTIs fell as borrower payments declined relative to incomes.

GSE LTV: Bank vs. Nonbank

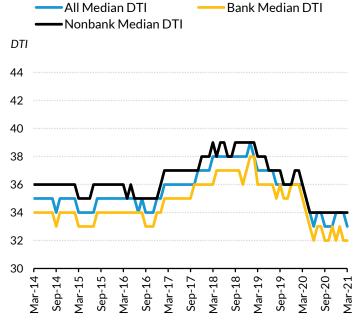
Ginnie Mae LTV: Bank vs. Nonbank

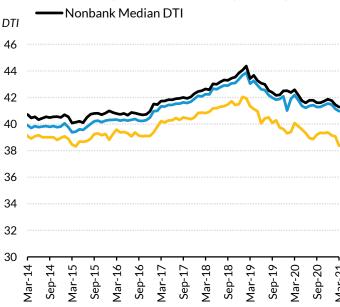




GSE DTI: Bank vs. Nonbank

Ginnie Mae DTI: Bank vs. Nonbank ——All Median DTI ——Bank Median DTI





Sources: eMBS and Urban Institute.

Sources: *eMBS* and *Urban* Institute.

STATE OF THE MARKET MORTGAGE ORIGINATION PROJECTIONS

Fannie Mae, Freddie Mac and the MBA estimate 2021 origination volume to be between \$3.28 and \$4.00 trillion, lower than the \$3.83 to \$4.54 trillion in 2020. 2020 was the highest origination year in the 21st century; page 8 top provides the longer historical time series. The very robust 2020 origination volume is due to very strong refinance activity. All three groups expect the 2021 refinance share to be 11 to 14 percentage points lower than in 2020.

Total Originations and Refinance Shares

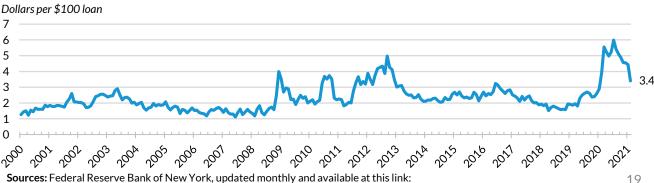
	Or	iginations (\$ billior	Refi Share (percent)			
Period	Total, FNMA estimate	Total, FHLMC estimate	Total, MBA estimate	FNMA estimate	FHLMC estimate	MBA estimate
2020 Q1	752	675	563	61	60	52
2020 Q2	1096	975	928	68	68	61
2020 Q3	1346	1140	1076	62	64	59
2020 Q4	1342	1250	1261	64	68	62
2021 Q1	1234	1090	1094	71	69	69
2021 Q2	1146	964	974	53	51	50
2021 Q3	868	797	638	39	44	29
2021 Q4	750	629	578	39	36	24
2017	1826	1810	1760	36	37	35
2018	1766	1700	1677	30	32	28
2019	2462	2432	2253	46	46	44
2020	4536	4040	3828	64	66	59
2021	3998	3480	3284	53	52	48
2022	2987	2394	2313	37	32	23

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

Note: Shaded boxes indicate forecasted figures. All figures are estimates for total single-family market. Regarding interest rates, the yearly averages for 2017, 2018, 2019 and 2020 were 4.0, 4.6, 3.9, and 3.0 percent. For 2021, the respective projections for Fannie, Freddie, and MBA are 3.2, 3.2, and 3.7 percent. Freddie Mac forecasts are now released quarterly, last updated April 2021.

Originator Profitability and Unmeasured Costs

In March 2021, Originator Profitability and Unmeasured Costs (OPUC) stood at \$3.40 per \$100 loan, down from last month's \$4.33. 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.



http://www.ny.frb.org/research/epr/2013/1113fust.html and Urban Institute. Last updated March 2021.

HOUSING SUPPLY

Months of supply in March 2021 was 2.1, 1.3 months lower than it was in March 2020 and up only slightly from the record low of 1.9 in January 2021. Strong demand for housing in recent years, fueled by low mortgage rates, has kept the months supply limited. Fannie Mae, the MBA, and the NAHB forecast 2021 housing starts to be 1.43 to 1.62 million units; these 2021 forecasts are above 2020 levels. Fannie Mae, Freddie Mac, and the MBA predict total home sales of 6.86 to 7.28 million units in 2021, above 2020 levels.

Months of Supply



Source: National Association of Realtors and Urban Institute. Data as of March 2021.

Housing Starts and Home Sales

	Hou	using Starts, thousa	nds	Home Sales. thousands			
Year	Total, FNMA estimate	Total, MBA estimate	Total, NAHB estimate	Total, FNMA estimate	Total, FHLMC estimate	Total, MBA estimate	Total, NAHB estimate*
2017	1203	1208	1208	6123	6120	6158	5520
2018	1250	1250	1250	5957	5960	5956	5351
2019	1290	1295	1295	6023	6000	6016	5439
2020	1380	1395	1395	6460	6500	6491	5899
2021	1619	1595	1431	6860	7100	7282	6651
2022	1541	1626	1464	6493	6700	7454	6712

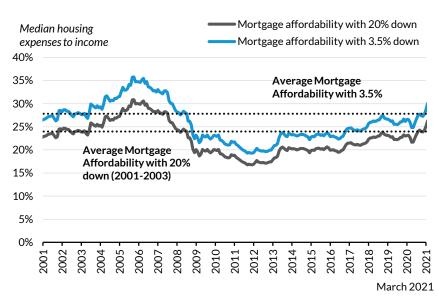
Sources: Mortgage Bankers Association, Fannie Mae, Freddie Mac, National Association of Home Builders and Urban Institute.

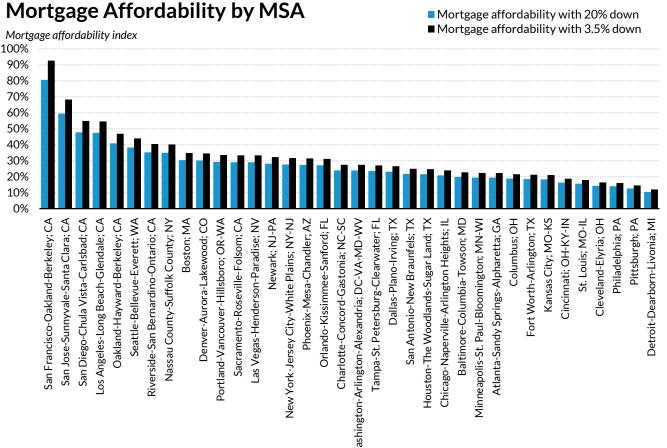
Note: Shaded boxes indicate forecasted figures; column labels indicate source of estimate. Freddie Mac home sales are now updated quarterly instead of monthly, with the last update in April 2021. *NAHB home sales estimate is for single-family structures only, it excludes condos and coops. Other figures 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 are near average affordability levels, as interest rates are now near generational lows. As of March 2021, with a 20 percent down payment, the share of median income needed for the monthly mortgage payment stood at 26.3 percent; with 3.5 down, it is 30.0 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.





 $\textbf{Sources:} \ National \ Association of \ Realtors, \ US \ Census \ Bureau, \ Current \ \ref{Survey}, \ American \ Community \ Survey, \ Moody's \ Analytics, \ Freddie \ Mac \ Primary \ Mortgage \ Market \ Survey, \ and \ the \ Urban \ Institute.$

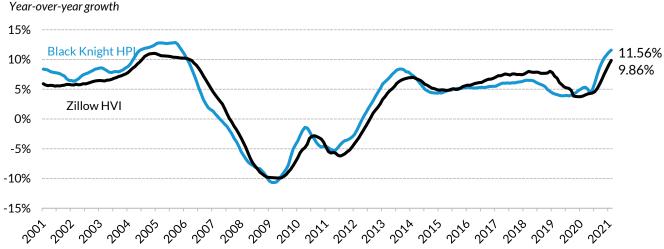
Note: Mortgage affordability is the share of median family income devoted to the monthly principal, interest, taxes, and insurance payment required to buy the median home at the Freddie Mac prevailing rate 2018 for a 30-year fixed-rate mortgage and property tax and insurance at 1.75 percent of the housing value. Data for the bottom chart as of Q3 2020.

STATE OF THE MARKET

HOME PRICE INDICES

National Year-Over-Year HPI Growth

According to Black Knight's updated repeat sales index, year-over-year home price appreciation increased to 11.56 percent in February 2021, compared to 11.23 percent the previous month. Year-over-year home price appreciation as measured by Zillow's hedonic index was 9.86 percent in February 2021, up from 9.12 in January. Although housing affordability remains constrained, especially at the lower end of the market, low rates serve as a partial offset.



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

Changes in Black Knight HPI for Top MSAs

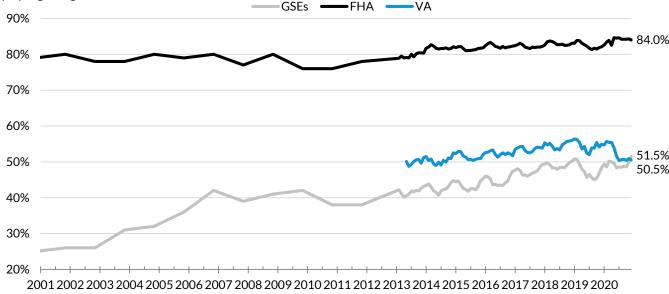
After rising 75.5 percent from the trough, national house prices are now 31.2 percent higher than pre-crisis peak levels. Fourteen of the top 15 MSAs have exceeded their pre-crisis peak HPI. Only Chicago, IL, an MSA particularly hard hit by the bust, is 3.3 percent below its prior peak.

		HPI changes (%)				
MSA	2000 to peak	Peak to trough	Trough to current	% above peak		
United States	74.9	-25.3	75.5	31.2		
New York-Jersey City-White Plains, NY-NJ	127.8	-22.5	58.0	22.5		
Los Angeles-Long Beach-Glendale, CA	179.2	-38.1	113.5	32.3		
Chicago-Naperville-Arlington Heights, IL	67.2	-38.5	57.3	-3.3		
Atlanta-Sandy Springs-Roswell, GA	32.3	-35.2	107.3	34.3		
Washington-Arlington-Alexandria, DC-VA-MD-WV	149.0	-28.5	54.9	10.8		
Houston-The Woodlands-Sugar Land, TX	29.4	-6.7	60.9	50.2		
Phoenix-Mesa-Scottsdale, AZ	113.3	-51.1	143.4	19.0		
Riverside-San Bernardino-Ontario, CA	174.5	-51.6	127.5	10.0		
Dallas-Plano-Irving, TX	26.5	-7.4	83.8	70.2		
Minneapolis-St. Paul-Bloomington, MN-WI	69.6	-30.9	79.4	23.9		
Seattle-Bellevue-Everett, WA	90.1	-33.2	145.8	64.2		
Denver-Aurora-Lakewood, CO	34.1	-12.4	121.2	93.8		
Baltimore-Columbia-Towson, MD	123.2	-24.5	38.1	4.3		
San Diego-Carlsbad, CA	148.1	-37.5	109.8	31.1		
Anaheim-Santa Ana-Irvine, CA	162.9	-35.2	88.0	21.9		

FIRST-TIME HOMEBUYERS

First-Time Homebuyer Share

In February 2021, the FTHB share for FHA, which has always been more focused on first time homebuyers, was 84.0 percent. The FTHB share of VA lending in February was 50.5 percent. The GSE FTHB share remained stable in February relative to January, at 51.5 percent. The bottom table shows that based on mortgages originated in February 2021, 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.

February 2021

Note: All series measure the first-time homebuyer share of purchase loans for principal residences.

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

	GSEs		FHA	4	GSEs and FHA		
Characteristics	First-time	Repeat	First-time	Repeat	First-time	Repeat	
Loan Amount (\$)	297,048	315,822	242,940	257,301	278,173	307,582	
Credit Score	747	756	678	676	723	745	
LTV (%)	88	80	95	94	90	82	
DTI (%)	34	35	43	44	37	37	
Loan Rate (%)	2.78	2.73	2.84	2.80	2.80	2.74	

Sources: eMBS and Urban Institute.

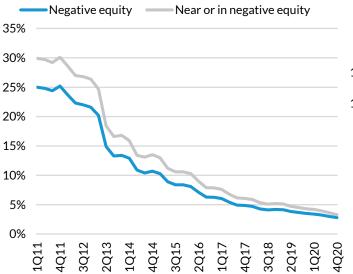
Note: Based on owner-occupied purchase mortgages originated in February 2021.

STATE OF THE MARKET

DELINQUENCIES AND LOSS MITIGATION ACTIVITY

Loans in and near negative equity continued to decline in Q4 2020; 2.8 percent now have negative equity, an additional 0.5 percent have less then 5 percent equity. Due to the effects of COVID-19, the share of loans that are 90 days or more delinquent or in foreclosure remained high in Q4 2020, at 5.03 percent. This number includes loans where borrowers have missed their payments, including loans in COVID-19 forbearance. The bottom chart shows the share of loans in forbearance according to the MBA Weekly Forbearance and Call Volume Survey, launched in March 2020. After peaking at 8.55 percent in early June, the total forbearance rate has declined to 4.50 percent as of April 11, 2021. GSE loans have consistently had the lowest forbearance rates, standing at 2.44 percent as of April. The most recent forbearance rate for Ginnie Mae loans was 6.16 percent; other (e.g., portfolio and PLS) loans had the highest forbearance rate at 8.34 percent.

Negative Equity Share



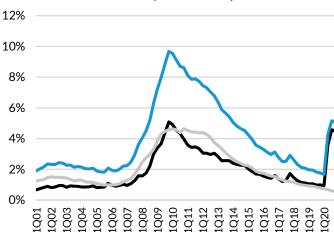
Sources: CoreLogic and Urban Institute.

Note: Loans with negative equity refer to loans above 100 percent LTV. Loans near negative equity refer to loans above 95 percent LTV. Last updated March 2021.

Loans in Serious Delinquency/Foreclosure

Percent of loans 90 days or more delinquent
Percent of loans in foreclosure

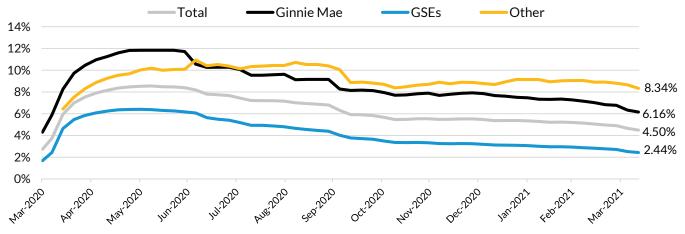
Percent of loans 90 days or more delinquent or in foreclosure



Sources: Mortgage Bankers Association and Urban Institute. *Last updated February* 2021.

Q4 2020

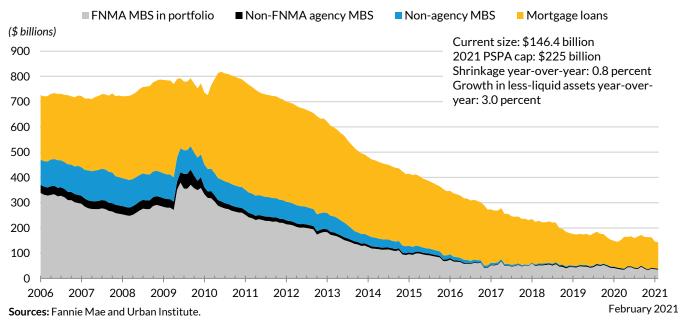
Forbearance Rates by Channel



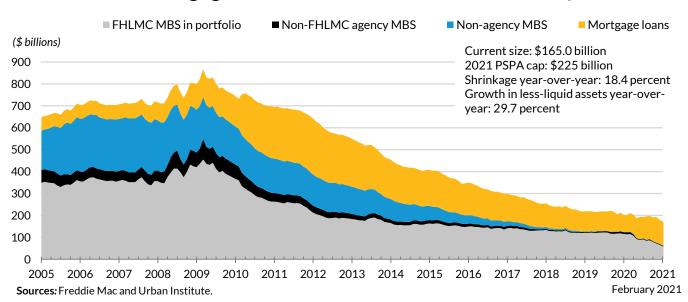
GSES UNDER CONSERVATORSHIP GSE PORTFOLIO WIND-DOWN

The Fannie Mae and Freddie Mac portfolios remain well below the \$250 billion size they were required to reach by year-end 2018, or the \$225 billion cap mandated in January 2021 by the new Preferred Stock Purchase Agreements (PSPAs). From February 2020 to February 2021, the Fannie portfolio contracted year-over-year by 0.8 percent, while the Freddie portfolio contracted by 18.4 percent. Within the portfolio, both Fannie Mae and Freddie Mac increased their less-liquid assets (mortgage loans, non-agency MBS), by 3.0 percent and 29.7 percent, respectively, over the same 12 month period. These changes reflect both a smaller overall portfolio and the increased need to hold loans in portfolio for loss mitigation purposes.

Fannie Mae Mortgage-Related Investment Portfolio Composition



Freddie Mac Mortgage-Related Investment Portfolio Composition



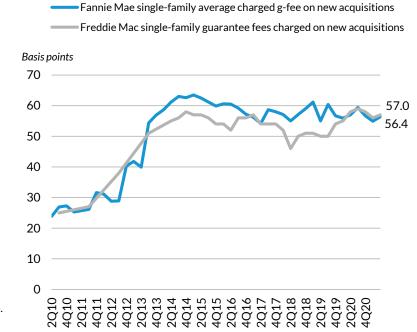
GSES UNDER CONSERVATORSHIP

EFFECTIVE GUARANTEE FEES

Guarantee Fees Charged on New Acquisitions

Fannie Mae and Freddie Mac's average g-fees charged have largely converged over the last year (since Q1 2020). Fannie Mae's average g-fees charged on new acquisitions increased from 54.9 bps in Q3 2020 to 56.4 bps in Q4 2020. Freddie's also increased from 56.0 bps to 57.0 bps. The gap between the two gfees was 0.6 bps in Q4 2020. Today's gfees are markedly higher than g-fee levels in 2011 and 2012, and have contributed to the GSEs' earnings; the bottom table shows Fannie Mae LLPAs, which are expressed as upfront charges. Note: The GSEs instituted a new LLPA of 50.0 basis points on most refinances, effective Dec 1, 2020.

Sources: Fannie Mae, Freddie Mae and Urban Institute. *Last updated February* 2021.



Fannie Mae Upfront Loan-Level Price Adjustments (LLPAs)

				LTV (%)					
Credit Score	≤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 (Cun	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 2021.*

GSES UNDER CONSERVATORSHIP GSE RISK-SHARING TRANSACTIONS

Fannie Mae and Freddie Mac have been laying off back-end credit risk through CAS and STACR deals and through reinsurance transactions. They have also done front-end transactions with originators and reinsurers, and experimented with deep mortgage insurance coverage with private mortgage insurers. Historically, the GSEs have transferred vast majority of their credit risk to private markets. Fannie Mae's CAS issuances since inception total \$1.65 trillion; Freddie's STACR totals \$1.91 trillion. Since the COVID-19 induced spread widening in March 2020, Freddie Mac has issued ten deals, while Fannie has issued none.

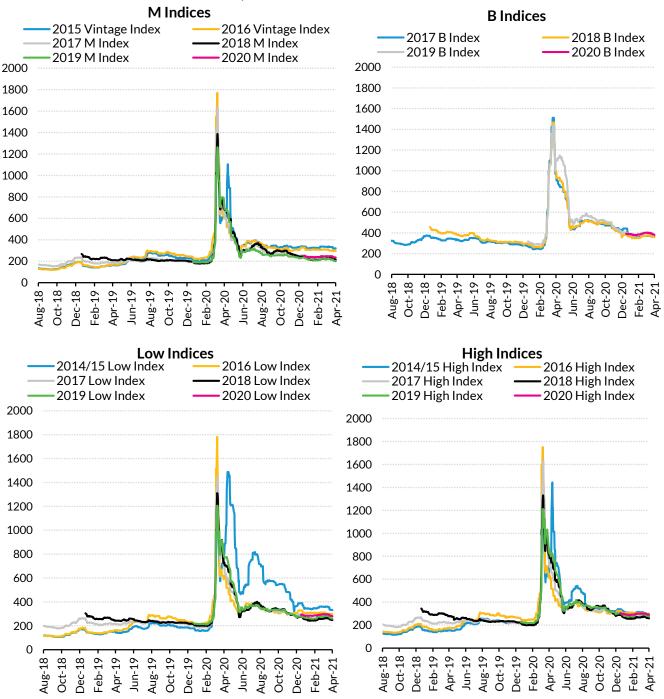
Fannie Mae – Connecticut Avenue Securities (CAS)						
Date	Transaction	Reference Pool Size (\$ m)	Amount Issued (\$m)	% of Reference Pool Covered		
2013	CAS 2013 deals	\$26,756	\$675	2.5		
2014	CAS 2014 deals	\$227, 234	\$5,849	2.6		
2015 CAS 2015 deals		\$187,126	\$5,463	2.9		
2016	CAS 2016 deals	\$236,459	\$7,392	3.1		
2017	CAS 2017 deals	\$264,697	\$8,707	3.3		
2018	CAS 2018 deals	\$205,900	\$7,314	3.6		
2019	CAS 2019 deals	\$291,400	\$8,071	2.8		
January 2020	CAS 2020 - R01	\$29,000	\$1,030	3.6		
February 2020	CAS 2020 - R02	\$29,000	\$1,134	3.9		
March 2020	CAS 2020 - SBT1	\$152,000	\$966	0.6		
Total		\$1,649,572	\$46,601	2.8		

Freddie Mac - S	Structured Agency Cred	<u> </u>		
Date	Transaction	Reference Pool Size (\$ m)	Amount Issued (\$m)	% of Reference Pool Covered
2013	STACR 2013 deals	\$57,912	\$1,130	2.0
2014	STACR 2014 deals	\$147,120	\$4,916	3.3
2015	STACR 2015 deals	\$209,521	\$6,658	3.2
2016	STACR 2016 deals	\$183,421	\$5,541	2.8
2017	STACR 2017 deals	\$248,821	\$5,663	2.3
2018	STACR 2018 deals	\$216,581	\$6,055	2.8
2019	STACR 2019 deals	\$271,105	\$5,947	2.2
January 2020	STACR Series 2020 - DNA1	\$29,641	\$794	2.7
February 2020	STACR Series 2020 - HQA1	\$24,268	\$738	3.0
February 2020	STACR Series 2020 - DNA2	\$43,596	\$1,169	2.7
March 2020	STACR Series 2020 - HQA2	\$35,066	\$1,006	2.9
July 2020	STACR Series 2020 - DNA3	\$48,328	\$1,106	2.3
July 2020	STACR Series 2020 - HQA3	\$31,278	\$835	2.7
August 2020	STACR Series 2020 - DNA4	\$41,932	\$1,088	2.6
September 2020	STACR Series 2020 - HQA4	\$25,009	\$680	2.7
October 2020	STACR Series 2020 - DNA5	\$43,406	\$1,086	2.5
November 2020	STACR Series 2020 - HQA5	\$42,257	\$1,080	2.6
December 2020	STACR Series 2020 - DNA6	\$38,810	\$790	2.0
January 2021	STACR Series 2021 - DNA1	\$58,041	\$970	1.7
February 2021	STACR Series 2021 - HQA1	\$62,980	\$1,386	2.2
March 2021	STACR Series 2021 - DNA2	\$55,687	\$1,188	2.1
Total		\$1,914,780	\$49,826	2.6

GSES UNDER CONSERVATORSHIP

GSE RISK-SHARING INDICES

The figures below show the spreads on the 2015, 2016, 2017, 2018, 2019, and 2020 indices, as priced by dealers. Note the substantial spread widening in March 2020. This reflects expectations of higher defaults and potential credit losses owing to COVID-19, as well as forced selling. Spreads have tightened considerably since then but remain above pre-COVID levels, especially for B tranches. The 2015 and 2016 indices consist of the bottom mezzanine, i.e. M tranche in each deal, weighted by the original issuance amount (equity, i.e. B tranches were not sold in these years.) The 2017, 2018, 2019, and 2020 indices contain both the bottom mezzanine tranche as well as the equity tranche, in all deals when the latter was sold. 2020 indices are heavily Freddie Mac as Fannie hasn't issued any new deals since March 2020.

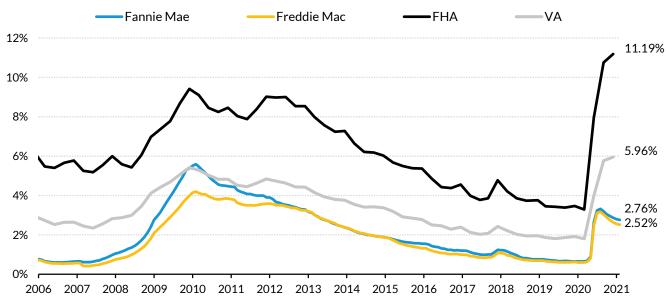


Sources: Vista Data Services and Urban Institute. **Note**: Data as of April 15, 2021.

SERIOUS DELINQUENCY RATES

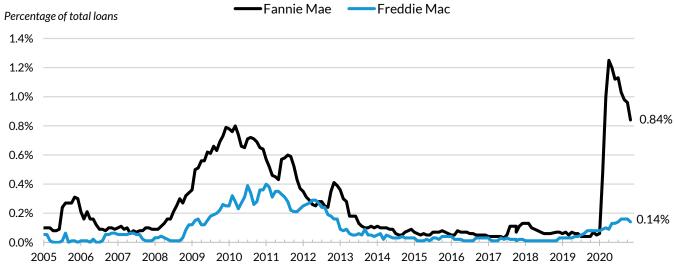
Serious delinquency rates for single-family GSE loans decreased in February 2021, to 2.76 percent for Fannie Mae and 2.52 percent for Freddie Mac. In Q4 2020, serious delinquency rates for FHA and VA loans rose again after spiking significantly in Q3. Note that loans that are in forbearance are counted as delinquent for the purpose of measuring delinquency rates. Fannie multifamily delinquencies decreased in February 2021 to 0.84 percent, while Freddie multifamily delinquencies remained at 0.14 percent, same as last month.

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 February 2021. GSE delinquencies are reported monthly, last updated February 2021.

Serious Delinquency Rates-Multifamily GSE Loans



Sources: Fannie Mae, Freddie Mac and Urban Institute.

February 2021

AGENCY GROSS AND NET ISSUANCE

Agency gross issuance was \$983.4 billion for the first three months of 2021, more than double the volume in the same period of 2020. 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 \$200.2 in the first three months of 2021, a 118.6 percent increase from the volume in the first three months of 2020.

Agency Gross Issuance

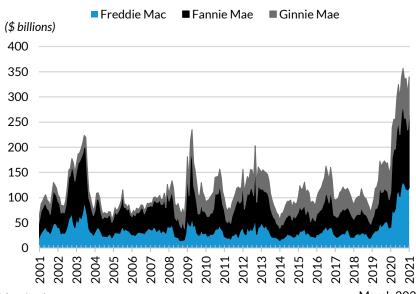
Agency Net Issuance

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	\$2,407.5	\$775.4	\$3,182.9	2020	\$632.8	\$19.9	\$652.7
2021 YTD	\$756.0	\$227.4	\$983.4	2021 YTD	\$206.5	-\$6.3	\$200.2
2021 % Change Over 2020	136.3%	41.9%	104.8%	2021 % Change Over 2020	207.7%	-125.7%	118.6%
2021 Annualized	\$3,024.1	\$909.6	\$3,933.7	2021 Annualized	\$826.0	-\$25.2	\$800.9

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 precrisis 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 has declined, reaching 22.6 percent in March 2021; the drop reflects the more robust ramp up in GSE refinances relative to Ginnie Mae refinances.

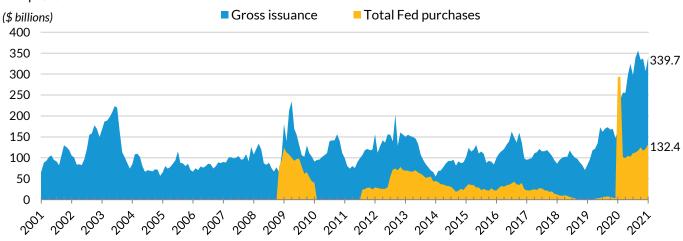


Sources: eMBS, Federal Reserve Bank of New York, and Urban Institute.

March 2021

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 2020 the Fed bought \$292.2 billion in agency MBS, and April 2020 clocked in at \$295.1 billion, the largest two months of mortgage purchases ever; and well over 100 percent of gross issuance for each of those two months. After the market stabilized, the Fed slowed its purchases to around \$100 billion per month in May through August of 2020. More recently, Fed purchases have ramped up again slightly; purchases totaled \$132.4 billion in March 2021. February Fed purchases totaled 39.0 percent of monthly issuance. As of March 2021, total agency MBS owned by the Fed equaled \$2.22 trillion. Prior to the COVID-19 intervention, the Fed was winding down its MBS portfolio from its 2014 prior peak.

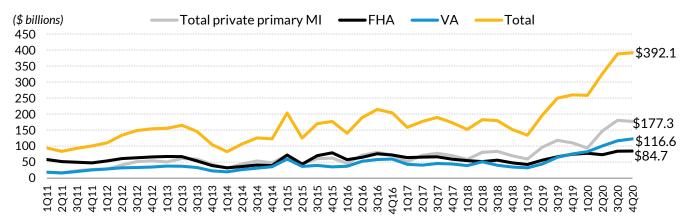


March 2021

MORTGAGE INSURANCE ACTIVITY

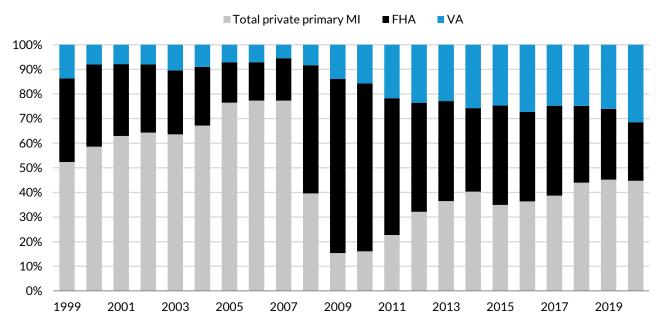
MI Activity

In the last quarter of 2020, private mortgage insurance written increased by \$67.3 billion, FHA increased by \$10.2 billion, and VA increased by \$47.0 billion relative to Q4 2019. During this period, the VA share increased from 29.1 to 31.3 percent, the highest on record, while the FHA share fell from 28.6 to 21.6 percent. The private mortgage insurers share increased, from 42.3 to 45.2 percent compared to the same period a year ago.



Sources: Inside Mortgage Finance and Urban Institute. Last updated March 2021.

MI Market Share



Sources: Inside Mortgage Finance and Urban Institute. Last updated March 2021.

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 FICOs 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 1/26/2015c	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.

Initial Monthly Payment Comparison: FHA vs. PMI

	Assumptions
Property Value	\$250,000
Loan Amount	\$241,250
LTV	96.5
Base Rate	
Conforming	3.08
ГШΛ	2.27

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	\$1,242	\$1,242	\$1,242	\$1,242	\$1,242	\$1,242	\$1,242	\$1,242
PMI	\$1,495	\$1,433	\$1,397	\$1,310	\$1,266	\$1,229	\$1,188	\$1,164
PMI Advantage	-\$253	-\$191	-\$155	-\$69	-\$24	\$13	\$54	\$78

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 March 2021.

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 33 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.

^{*} For a short period in 2008 the FHA used a risk based FICO/LTV matrix for MI.

 $^{^{\}rm a}$ Applies to purchase loans less than or equal to \$625,500. Those over that amount have an annual premium of 150 bps.

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.

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Authors: Laurie Goodman, Jung Hyun Choi

Date: March 9, 2021

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