



HOUSING FINANCE AT A GLANCE

A MONTHLY CHARTBOOK

June 2020

ABOUT THE CHARTBOOK

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

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

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HOUSING FINANCE POLICY CENTER STAFF

Laurie Goodman
Center Vice President

Alanna McCargo
Center Vice President

Jim Parrott
Nonresident Fellow

Jun Zhu
Nonresident Fellow

Sheryl Pardo
Associate Director of Communications

Karan Kaul
Senior Research Associate

Michael Neal
Senior Research Associate

Jung Choi
Research Associate

Linna Zhu
Research Associate

Sarah Stochak
Research Analyst

John Walsh
Research Assistant

Caitlin Young
Research Assistant

Alison Rincon
Director, Center Operations

Gideon Berger
Senior Policy Program Manager

Rylea Luckfield
Special Assistant and Project Administrator

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INTRODUCTION

Credit Box Narrows Slightly for Agency Refinance Mortgages

The characteristics of GSE and Ginne Mae or “agency” mortgages originated in January and April suggest that the mortgage credit box tightened in recent months, largely in the FICO score dimension, and specifically across refinance mortgages. Debt-to-income (DTI) and combined loan-to-value ratio (LTV) characteristics appear mostly unchanged. But Mortgage Bankers Association data suggest that conditions continued tightening in May, particularly on GSE mortgages, suggesting that the April results may under-report the extent of tightening that has occurred in GSE mortgages.

Agency Mortgage Credit Box

	Purchase				Refi		
	FICO	DTI	LTV		FICO	DTI	LTV
GSE							
January 2020	761	37.0	80.0		756	36.0	70.0
April 2020	761	36.0	85.0		769	33.0	70.0
Difference	0	-1.0	5.0		13	-3.0	0.0
Ginnie							
January 2020	680	43	96.5	0	691	40.35	91.0
April 2020	681	42	96.5	0	707	39.17	90.5
Difference	1	0	0.0	0	16	-1	-0.5

Source: Urban Institute calculations from eMBS.

Tighter lending standards on agency refinance mortgages partly reflect a still high unemployment rate, which raises the risk that some homeowners may not make their mortgage payment. Moreover, if the borrower requests forbearance prior to the sale of the loan to the GSEs or FHA, the lender must sell the loan at a penalty. And forborne mortgages have advancing requirements, imposing a further burden on the servicer.

The strong demand for refinance applications – which has fallen a bit from an earlier peak – is also contributing to tighter standards as lenders seek to manage their capacity. In response to strong demand for refinance mortgages, lenders typically tighten standards to manage their capacity. As a result, some homeowners’ ability to benefit from historically low mortgage rates and continued house price appreciation is reduced due to tighter standards on refinance mortgages.

MBA’s Mortgage Credit Availability Index (MCAI) through April suggests that lending standards on non-agency jumbo mortgages tightened more than agency mortgages. Over the month of April, the Conforming MCAI fell 7.1 percent and the Government MCAI fell 9.5 percent while the jumbo MCAI declined 22.6 percent. This difference likely reflects actions taken by the Federal Reserve in March to purchase agency mortgage-backed securities in unlimited amounts. And the May MCAI indicated that credit availability continued to tighten, however, the decline in Jumbo and Government mortgage credit availability slowed dramatically while the decrease in Conforming mortgage availability continued apace (4.4 and 0.8 percent v. 6.9 percent respectively).

These results suggest that the GSE mortgage credit box is tighter than what the mortgage data to date communicates.

INSIDE THIS ISSUE

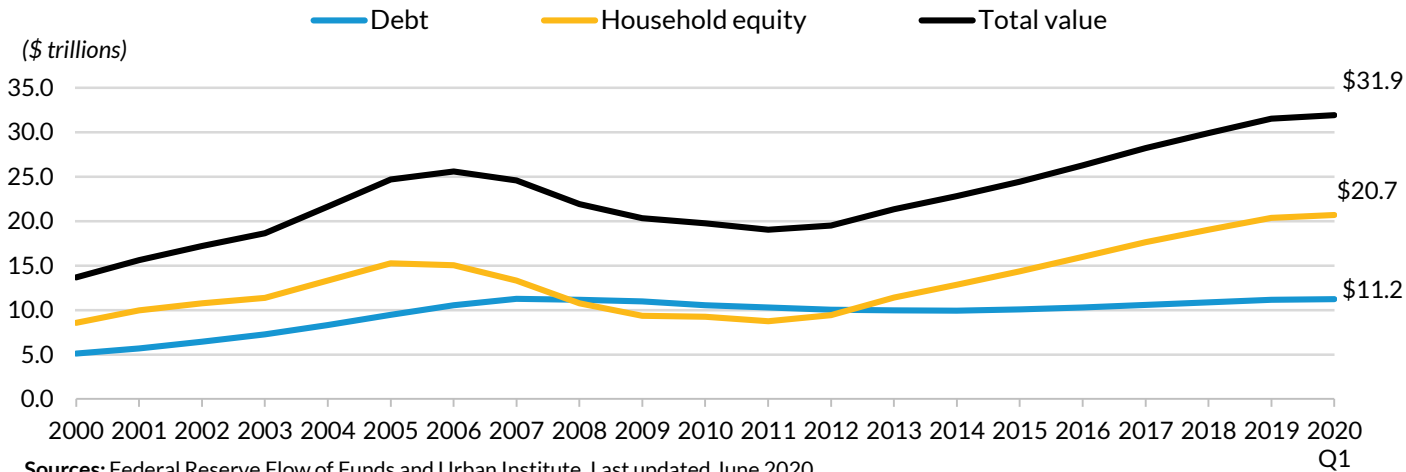
- The total value of the housing market grew to \$31.9 trillion in Q1 2020, 24.8 percent higher than the pre-crisis peak in 2006 (Page 6).
- Refi activity continues to drive the bulk of new agency issuance, with 77% of GSE’s and 53% of Ginnie Mae’s May 2020 issuances being refinance mortgages (Page 9).
- The cash-out share of all refinances fell from 48 percent in Q4 2019 to 42 percent in Q1 2020 as the share of rate refinances soared (Page 10).
- The median FICO score for agency originations reached 758 in May 2020, likely reflecting tighter credit in the post-COVID world and high refinance shares (Page 17).

OVERVIEW

MARKET SIZE OVERVIEW

The Federal Reserve's Flow of Fund Report has indicated a gradually increasing total value of the housing market, driven primarily by growing home equity since 2012. The Q1 2020 numbers show that while mortgage debt outstanding was steady this quarter at \$11.2 trillion, total home equity grew slightly from \$20.3 trillion in Q4 2019 to \$20.7 trillion in the first quarter of 2020, bringing the total value of the housing market to \$31.9 trillion, 24.8 percent higher than the pre-crisis peak in 2006. Agency MBS account for 62.1 percent of the total mortgage debt outstanding, private-label securities make up 4.0 percent, and unsecuritized first liens make up 30.0 percent. Home equity loans comprise the remaining 4.4 percent of the total.

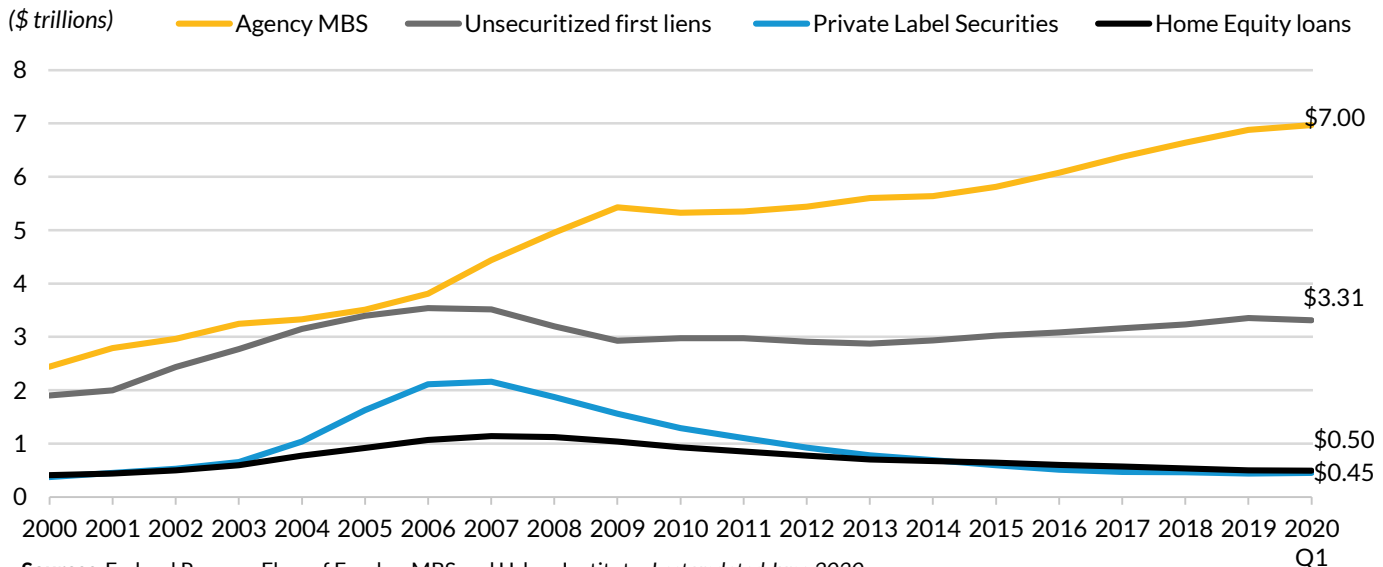
Value of the US Single Family Housing Market



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

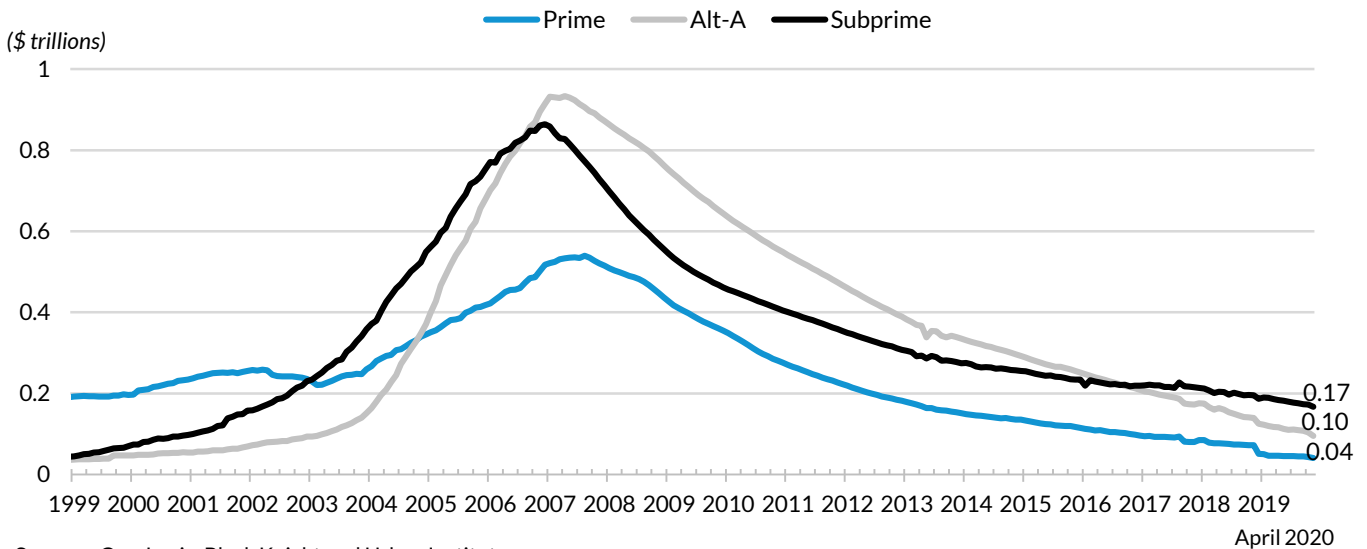
Note: Unsecuritized first liens includes loans held by commercial banks, GSEs, savings institutions, credit unions and other financial companies

OVERVIEW

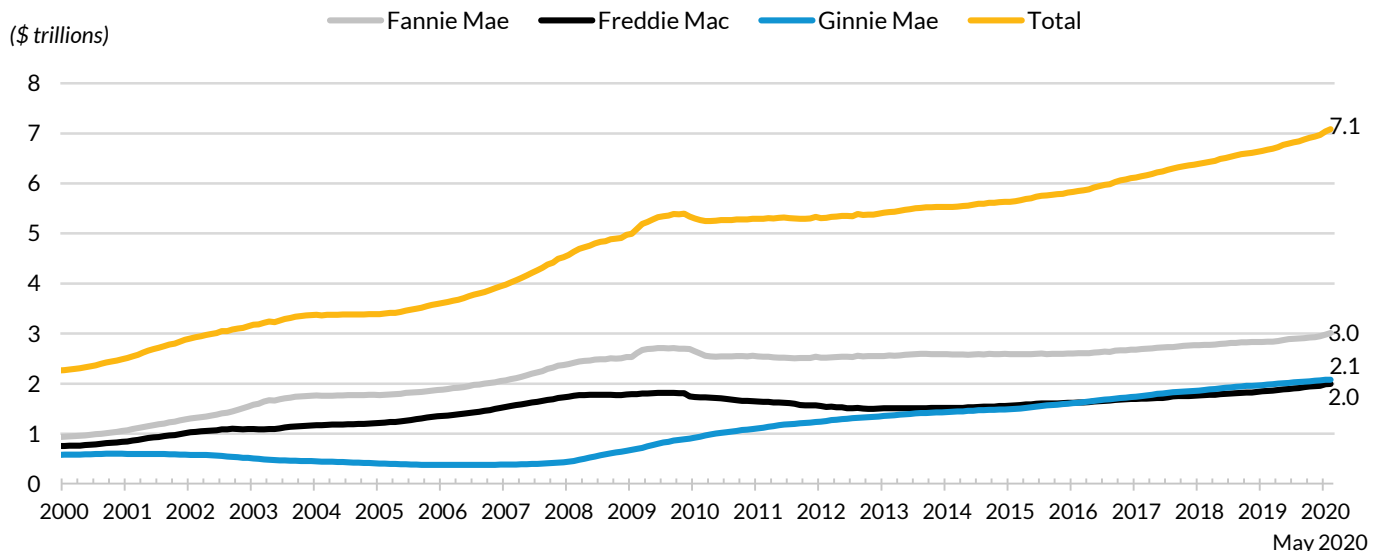
MARKET SIZE OVERVIEW

As of April 2020, our sample of first lien mortgage debt in the private-label securitization market totaled \$303 billion and was split among prime (13.4 percent), Alt-A (31.5 percent), and subprime (55.0 percent) loans. In May 2020, outstanding securities in the agency market totaled \$7.1 trillion, 42.5 percent of which was Fannie Mae, 28.1 percent Freddie Mac, and 29.4 percent Ginnie Mae. Ginnie Mae has had more outstanding securities than Freddie Mac since June 2016.

Private-Label Securities by Product Type



Agency Mortgage-Backed Securities

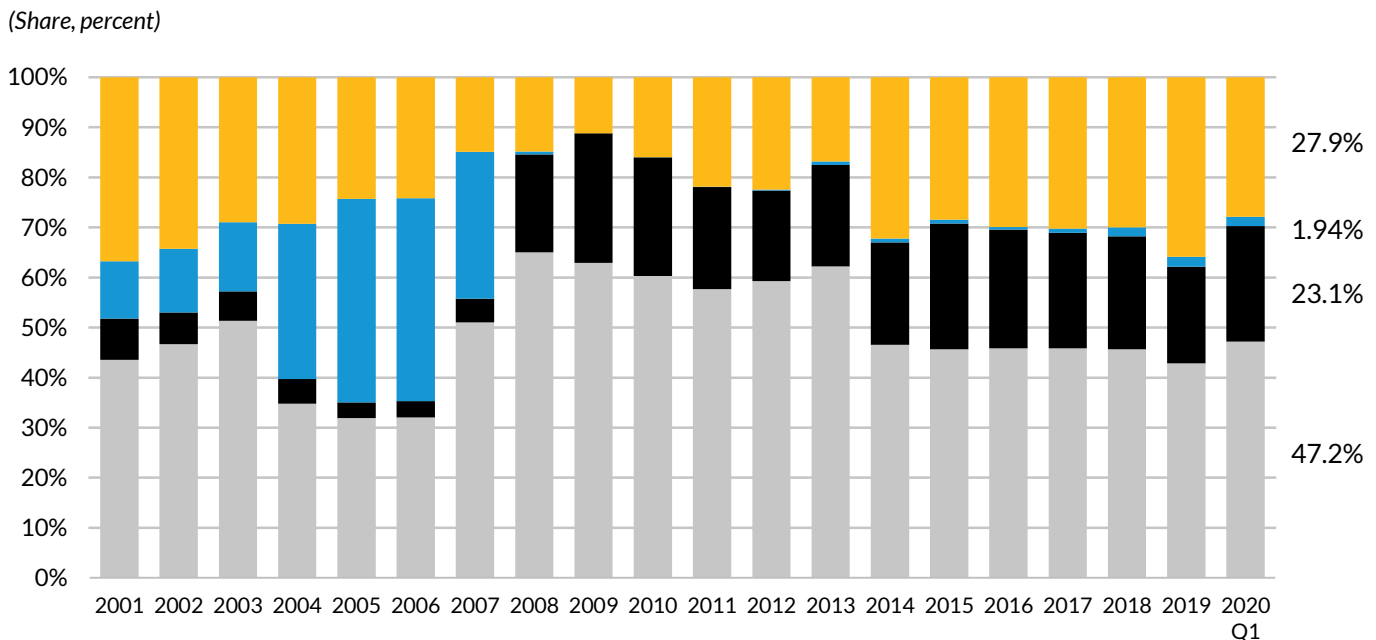
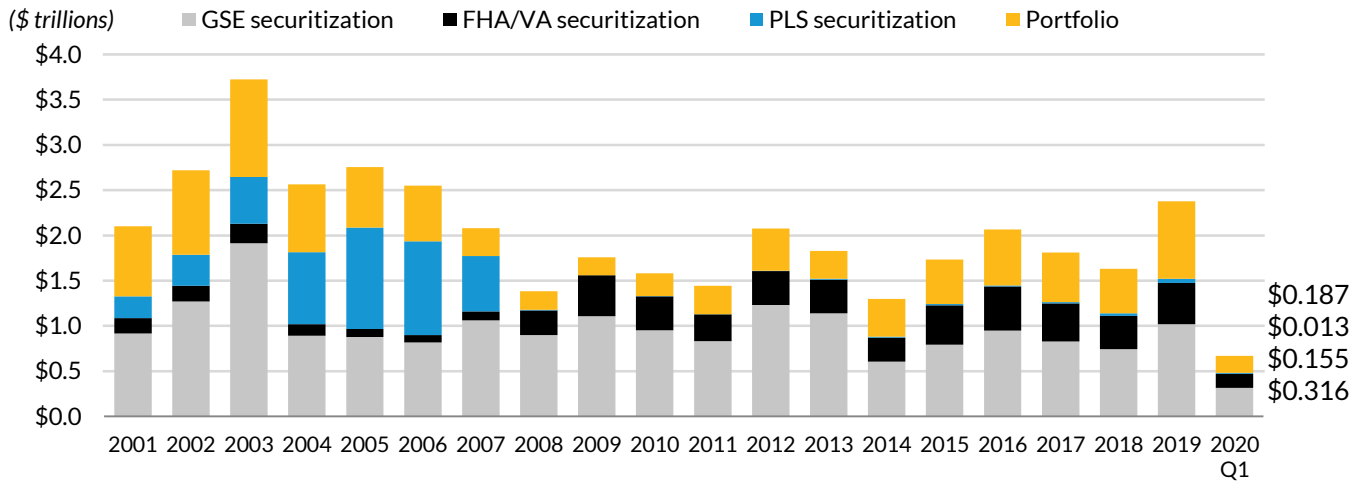


OVERVIEW

ORIGINATION VOLUME AND COMPOSITION

First Lien Origination Volume

In the first quarter of 2020, first lien originations totaled \$670 billion, up from the Q1 2019 volume of \$355 billion. The share of portfolio originations was 27.9 percent in Q1 2020, a significant decline from the 37.3 percent share in the same period of 2019. The Q1 2020 GSE share stood at 47.2 percent, up from 39.6 percent in Q1 2019. The FHA/VA share grew to 23.1 percent, compared to 21.0 percent last year. Private-label securitization currently tallies 1.94 percent, down from 2.9 percent one year ago, and a fraction of its share in the pre-bubble years.

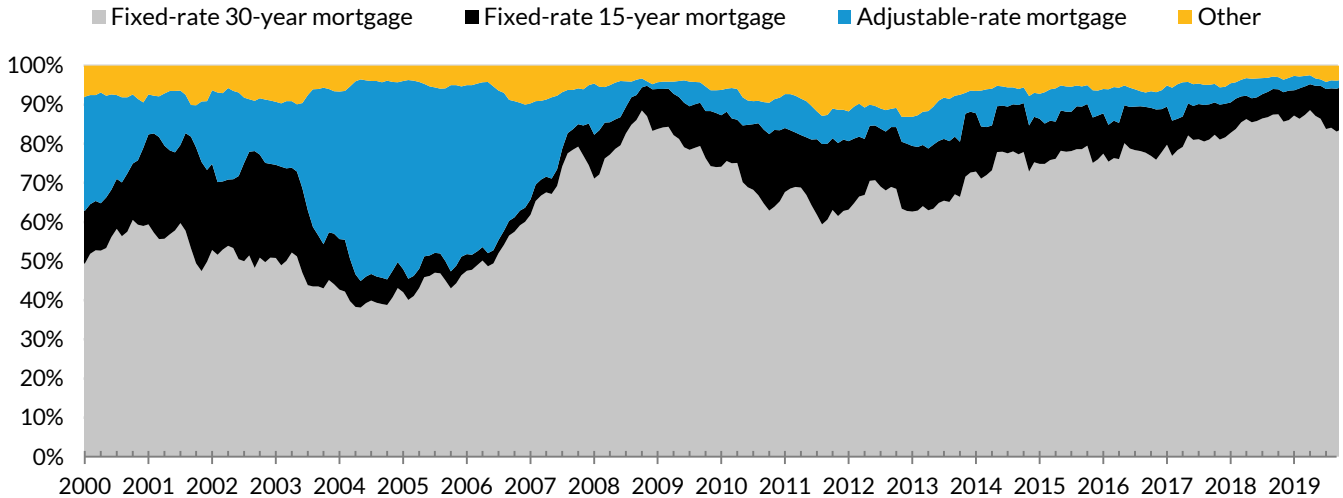


OVERVIEW

PRODUCT COMPOSITION AND REFINANCE SHARE

The 30-year fixed-rate mortgage continues to remain the bedrock of the US housing finance system, accounting for 77 percent of new originations in April 2020. This share has increased over the last decade as the share of other products has shrunk. The 15-year fixed-rate mortgage share, predominantly a refinance product, grew to 14.2 percent of new originations in April 2020, while the ARM share accounted for 2.7 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 and Ginnie Mae as interest rates have dropped. With rates at historic lows the refi share is very high; the GSEs are in the 75 to 77 percent range, Ginnie Mae at 53.4 percent.

Product Composition

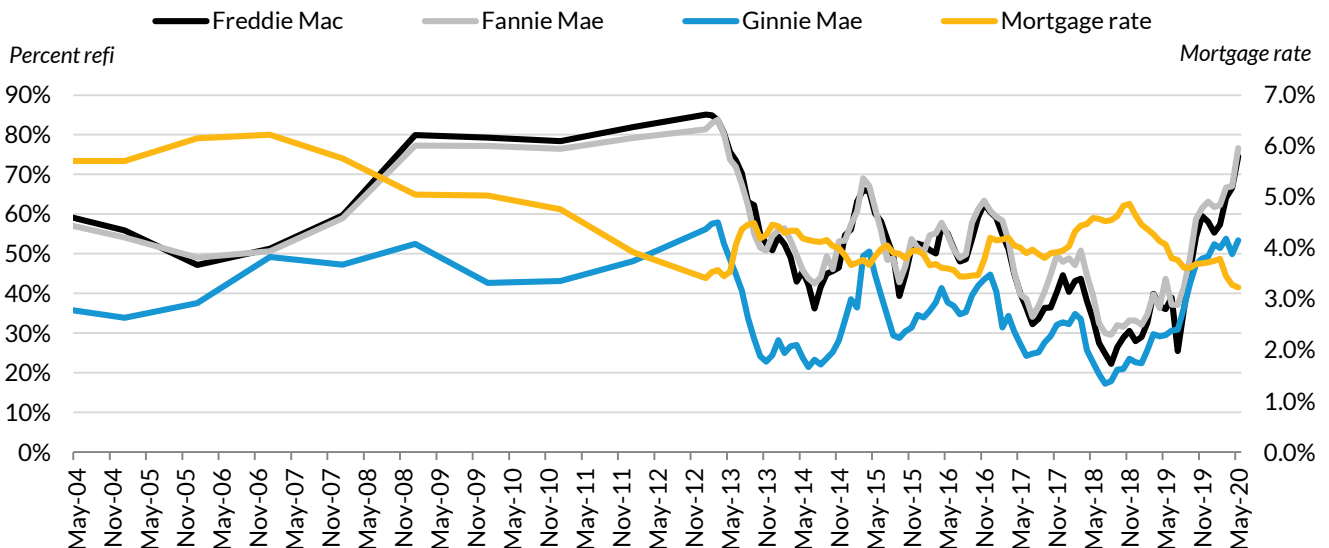


Sources: Black Knight, eMBS, HMDA, SIFMA and Urban Institute.

Note: Includes purchase and refinance originations.

April 2020

Percent Refi at Issuance



Sources: eMBS and Urban Institute.

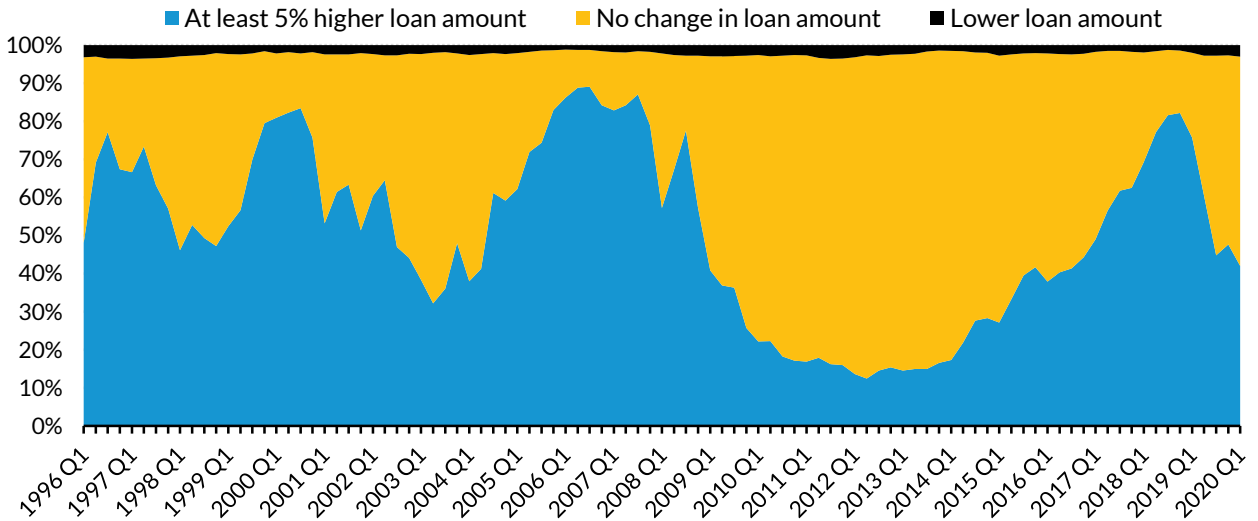
Note: Based on at-issuance balance. Figure based on data from May 2020.

OVERVIEW

CASH-OUT REFINANCES

When mortgage rates are low, the share of cash-out refinances tends to be relatively smaller, as refinancing allows borrowers to save money by taking advantage of lower rates. But when rates are high, the cash-out refinance share is higher since the rate reduction incentive is gone and the only reason to refinance is to take out equity. The cash-out share of all refinances fell from 48 percent at the end of 2019 to 42 percent in the first quarter of 2020. While the cash-out refinance share for conventional mortgages may seem high at 42 percent, equity take-out volumes are substantially lower than during the bubble years. The cash-out refi share of all agency lending has fallen in the first four months of 2020, likely due to the increased rate refinance activity from borrowers taking advantage of historically low rates.

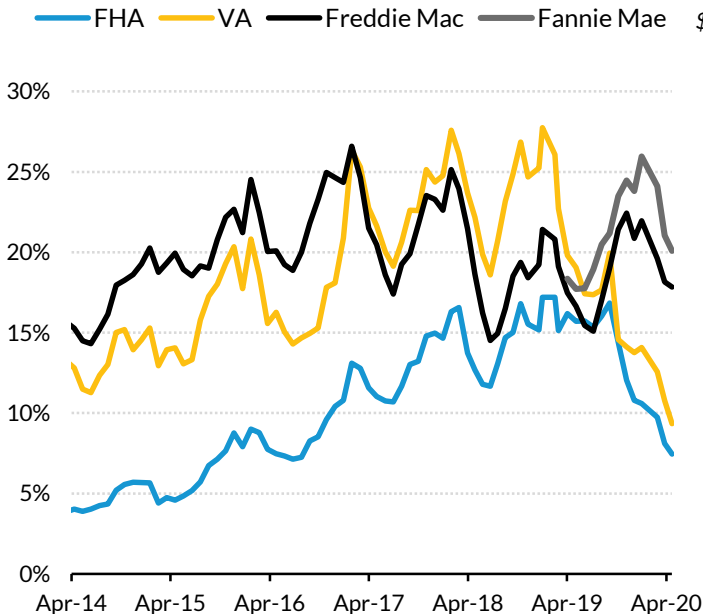
Loan Amount after Refinancing



Sources: Freddie Mac and Urban Institute.

Note: Estimates include conventional mortgages only.

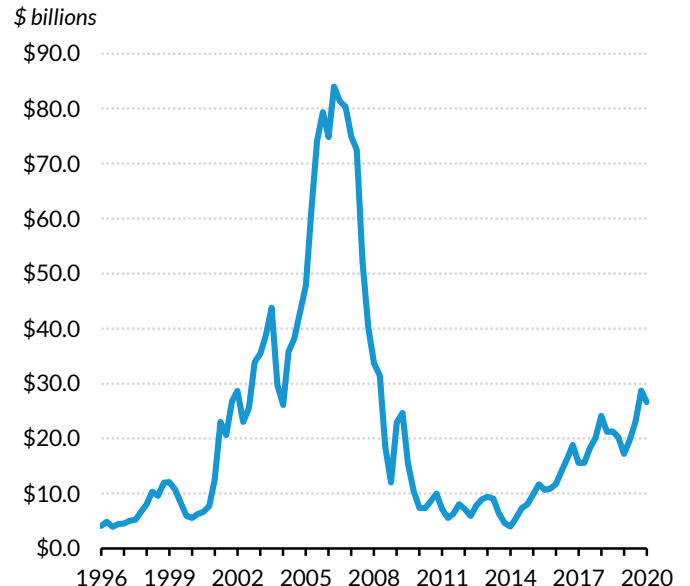
Cash-out Refi Share of All Originations



Sources: eMBS and Urban Institute.

Note: Data as of April 2020.

Equity Take-Out from Conventional Mortgage Refinance Activity



Sources: Freddie Mac and Urban Institute.

Note: These quarterly estimates include conventional mortgages only.

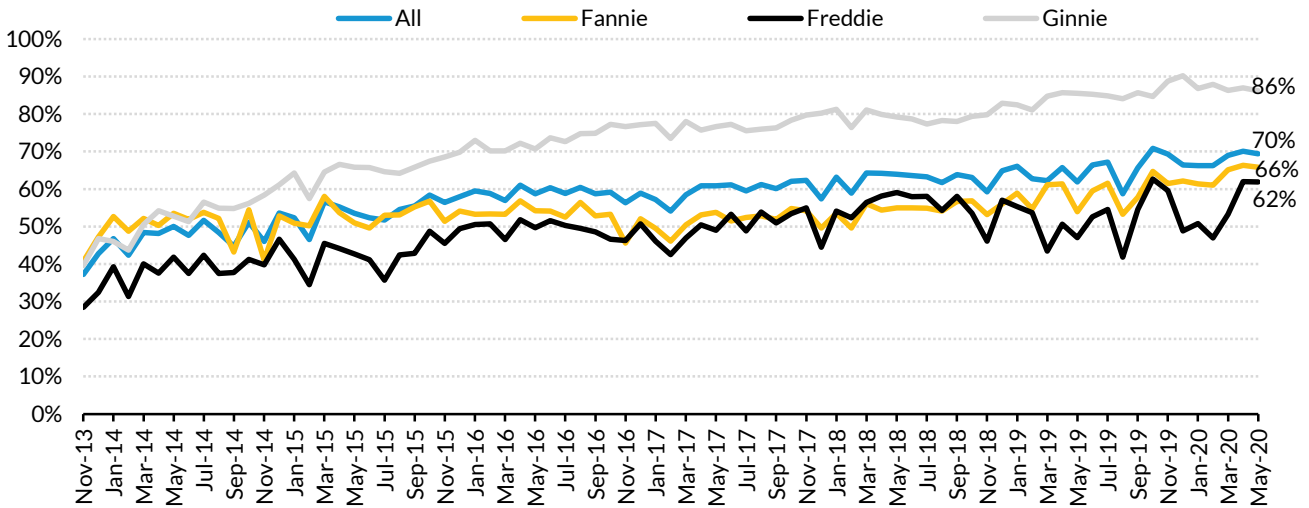
Q1 2019

OVERVIEW

AGENCY NONBANK ORIGINATION SHARE

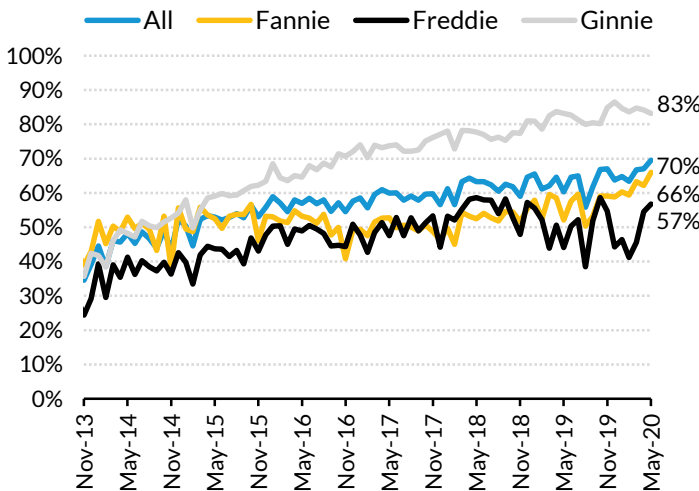
The nonbank share for agency originations has been rising steadily since 2013, standing at 70 percent in May 2020. The Ginnie Mae nonbank share has been consistently higher than the GSEs, falling slightly in May 2020 to 86 percent. Fannie and Freddie's nonbank shares both remained steady in May at 66 and 62 percent, respectively (note that these numbers can be volatile on a month-to-month basis.) Ginnie Mae, Fannie Mae and Freddie Mac all have higher nonbank origination shares for refi activity than for purchase activity.

Nonbank Origination Share: All Loans



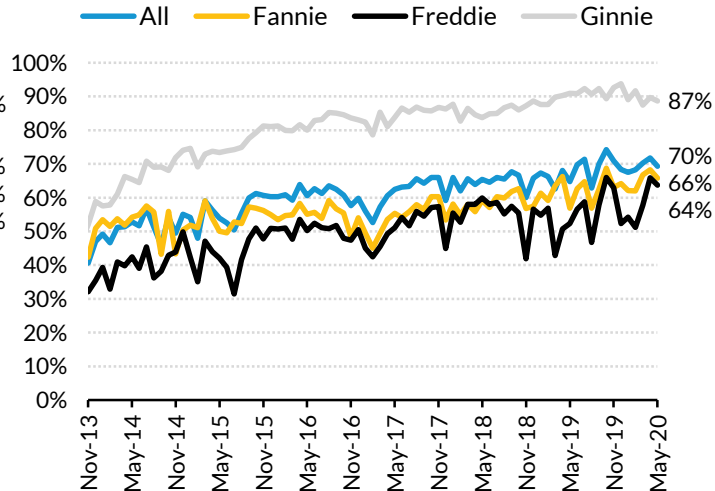
Sources: eMBS and Urban Institute.

Nonbank Origination Share: Purchase Loans



Sources: eMBS and Urban Institute.

Nonbank Origination Share: Refi Loans



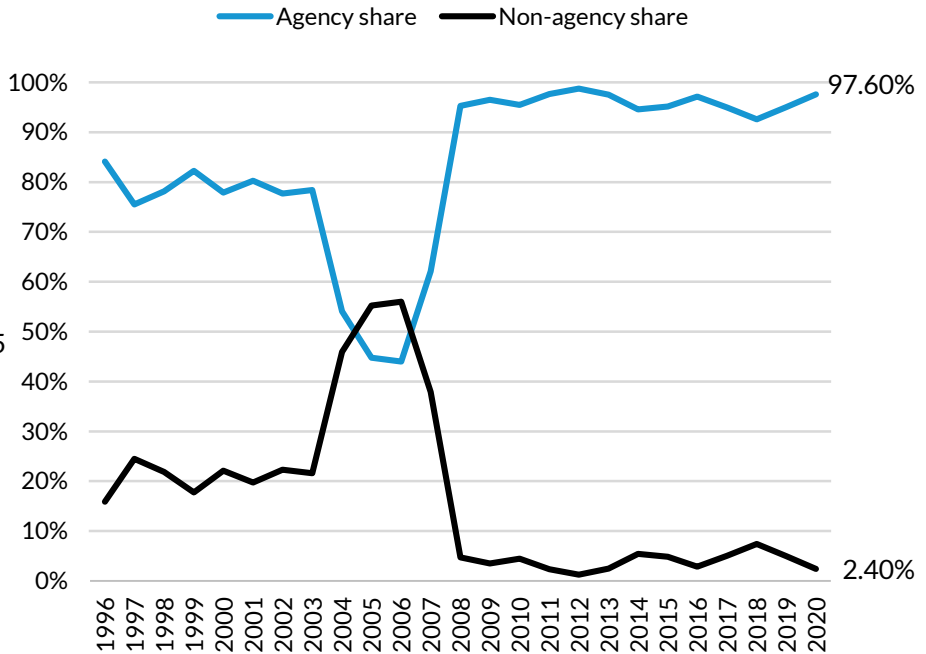
Sources: eMBS and Urban Institute.

OVERVIEW

SECURITIZATION VOLUME AND COMPOSITION

Agency/Non-Agency Share of Residential MBS Issuance

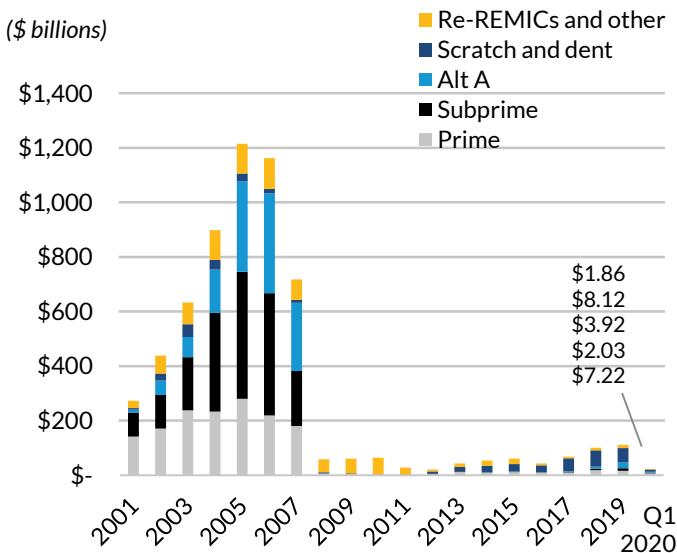
The non-agency share of mortgage securitizations has increased gradually over the post-crisis years, from 1.83 percent in 2012 to 5.0 percent in 2019. Through May of 2020, the non-agency share was 2.40 percent, and we expect it to go lower in the months ahead, as the non-agency market has been largely dormant due to dislocations caused by COVID-19. Non-agency securitization volume totaled \$23.15 billion in Q1 2020, a decrease relative to Q1 2019's \$24.93 billion total. Alt-A securitizations have grown, while scratch and dent securitizations have fallen since the same period last year. Non-agency securitizations continue to be tiny compared to pre-crisis levels.



Sources: Inside Mortgage Finance and Urban Institute.

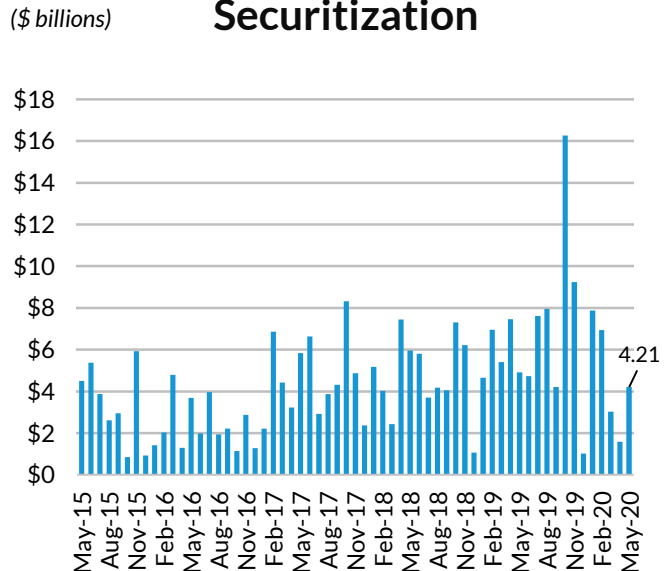
Note: Based on data from May 2020. Monthly non-agency volume is subject to revision.

Non-Agency MBS Issuance



Sources: Inside Mortgage Finance and Urban Institute.

Monthly Non-Agency Securitization



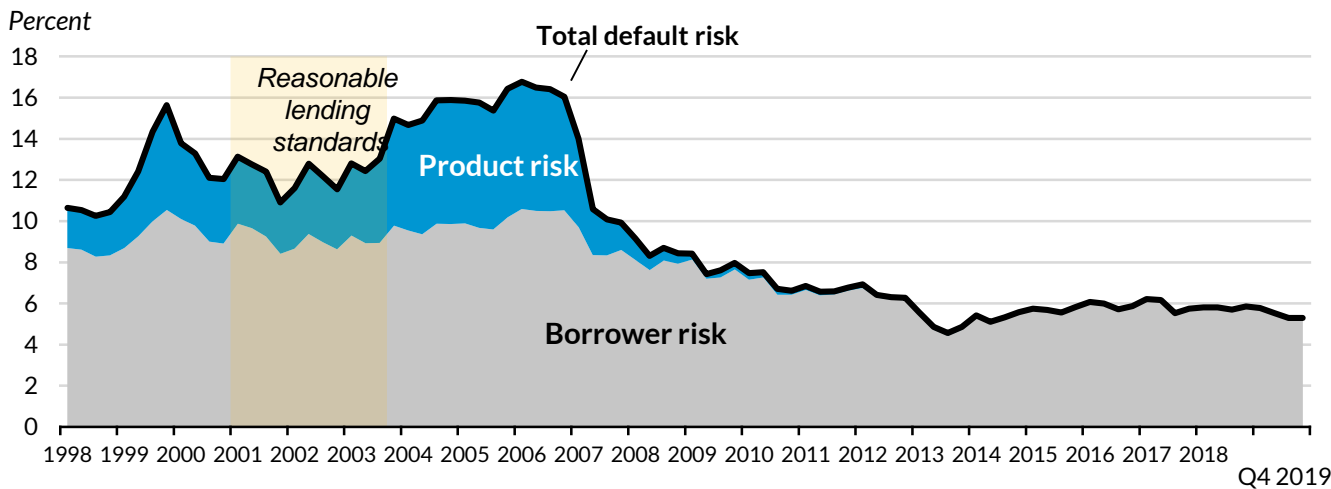
Sources: Inside Mortgage Finance and Urban Institute.

CREDIT BOX

HOUSING CREDIT AVAILABILITY INDEX

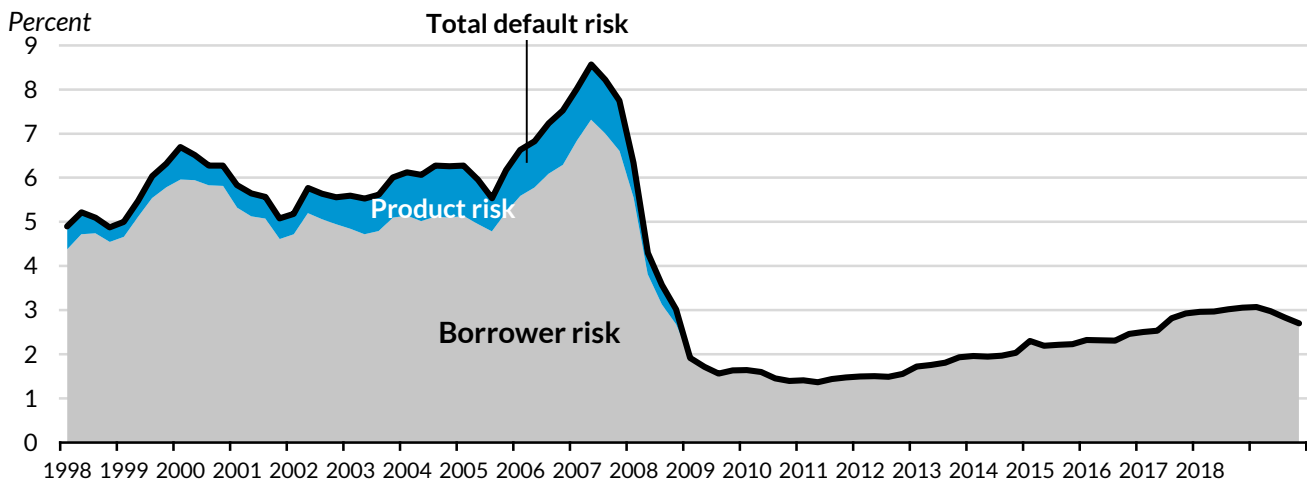
The Urban Institute's Housing Credit Availability Index (HCAI) assesses lenders' tolerance for both borrower risk and product risk, calculating the share of owner-occupied purchase loans that are likely to go 90+ days delinquent over the life of the loan. The HCAI Index stood at 5.3 percent in Q4 2019, unchanged from the previous quarter. There was a small drop in credit availability in all three channels, and a small increase in the market share of the government channel, which is relatively higher risk than the other channels. 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. In Q3 2018, the index reached 3 percent for the first time since 2008, and then continued to increase in the following two quarters, reaching 3.07 percent in Q1 2019. HCAI declined in Q2, Q3 and Q4 of 2019, standing at 2.70 percent in Q4 2019.



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

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

Q4 2019

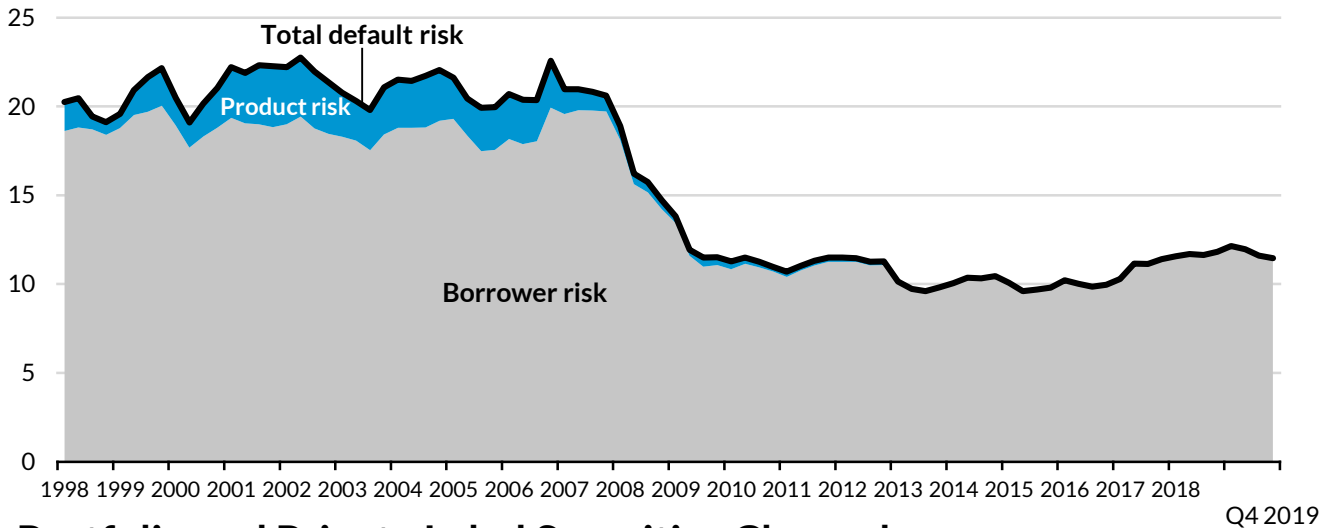
CREDIT BOX

HOUSING CREDIT AVAILABILITY INDEX

Government Channel

The total default risk the government channel is willing to take bottomed out at 9.6 percent in Q3 2013. It has gradually increased since then, although it was down slightly at 11.46 percent in Q4 2019, from 11.6 percent in Q3 2019.

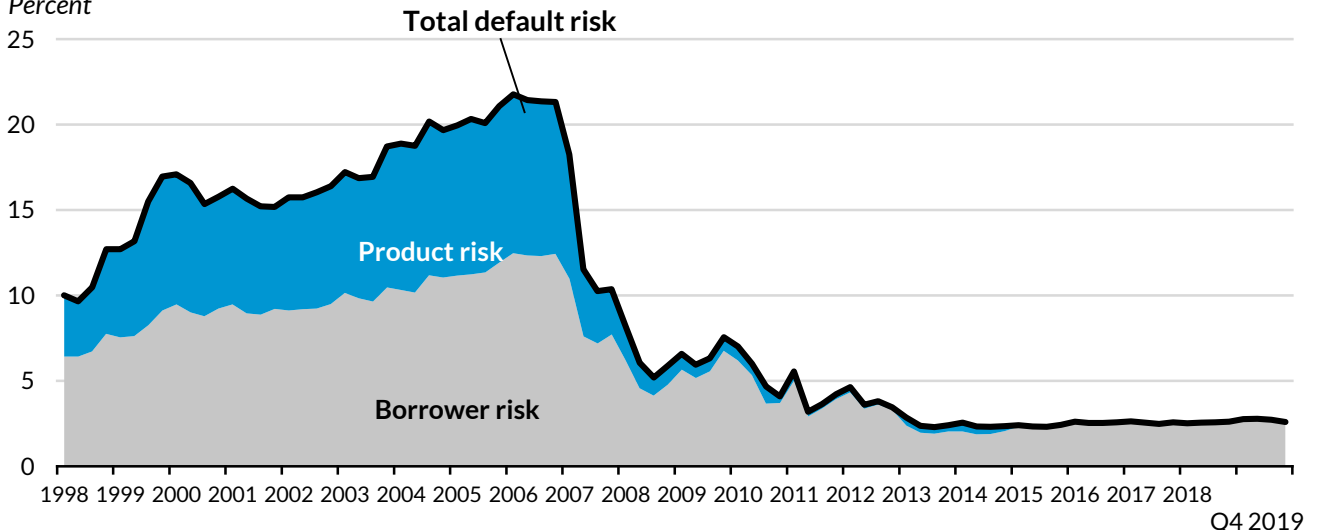
Percent



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 2008 housing crisis, PP channel's product and borrower risks dropped sharply. The numbers have stabilized since 2013, with product risk fluctuating below 0.6 percent and borrower risk in the 2.0-3.0 percent range. Borrower risk decreased in the fourth quarter of 2019, and now stands at 2.59 percent, down from 2.72 percent in Q3 2019. Total risk in the portfolio and private-label securities channel stood at 2.60 percent in Q4 2019.

Percent



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

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

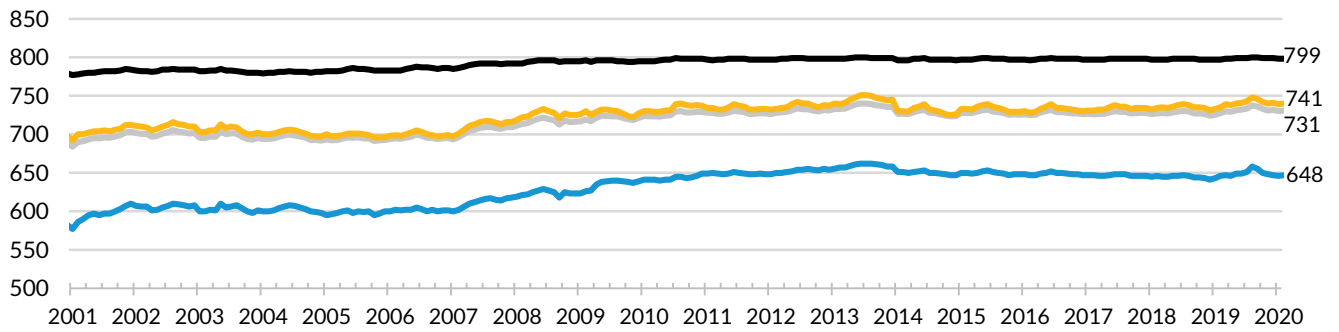
CREDIT AVAILABILITY FOR PURCHASE LOANS

Access to credit remains tight, especially for lower FICO borrowers. The median FICO for current purchase loans is about 41 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 648 in April 2020, which is high compared to low-600s pre-bubble. The median LTV at origination of 95 percent also remains high, reflecting the rise of FHA and VA lending. Although current median DTI of 38 percent exceeds the pre-bubble level of 36 percent, higher FICO scores more than compensate. Since this data is from April 2020, it reflects mortgage application activity in February and March; it is just starting to show the credit tightening due to the effects of COVID-19.

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

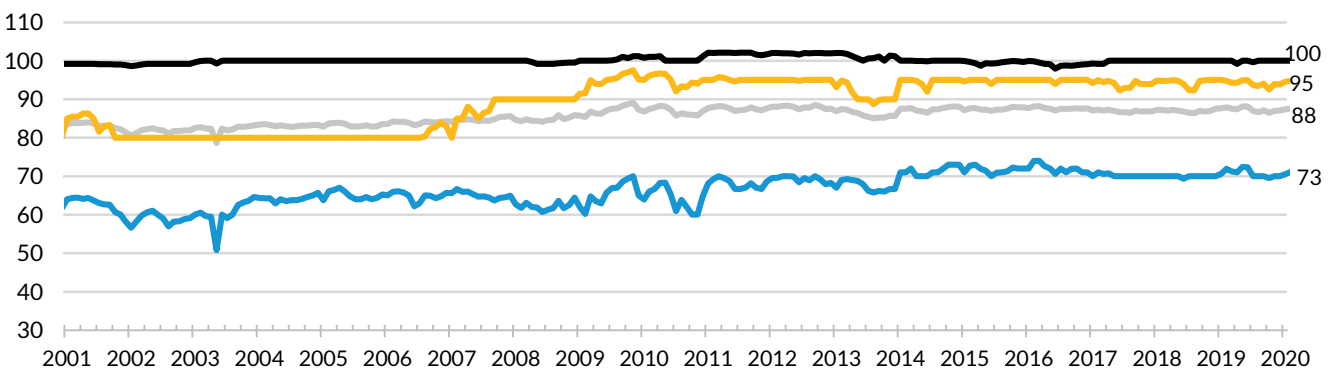
Borrower FICO Score at Origination

FICO Score



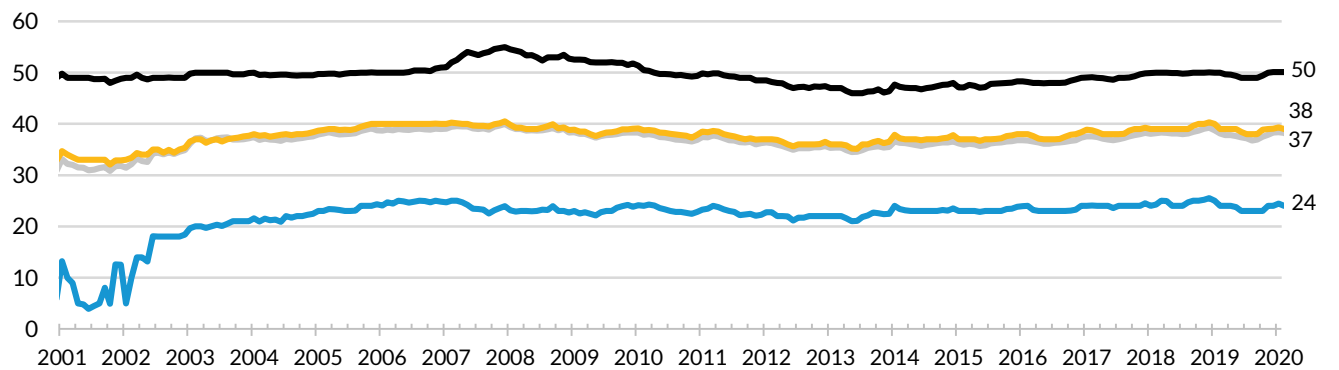
Combined LTV at Origination

LTV



DTI at Origination

DTI



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

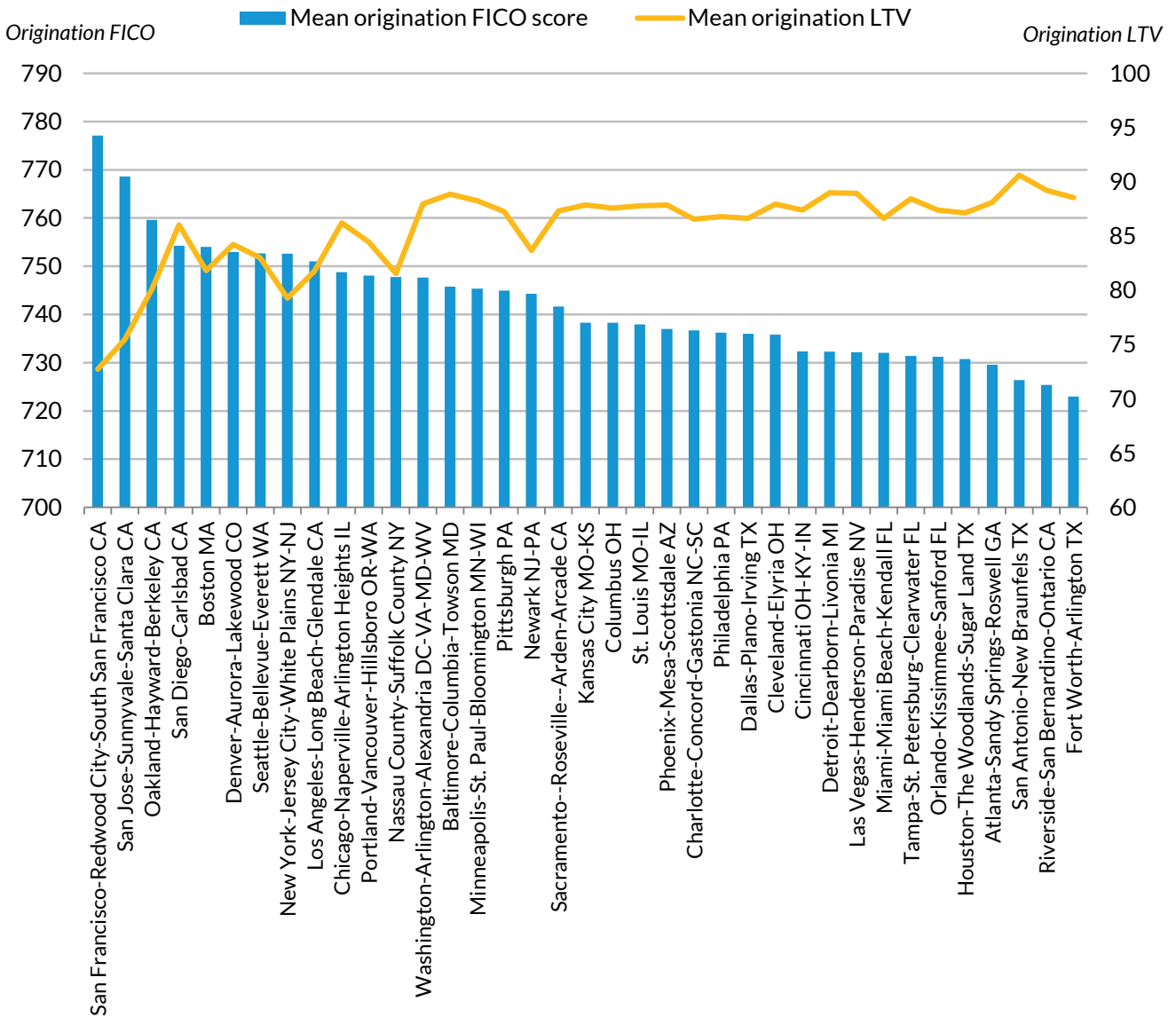
Note: Includes owner-occupied purchase loans only. DTI data prior to April 2018 is from CoreLogic; after that date, it is from Black Knight. Data as of April 2020.

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 777. 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.

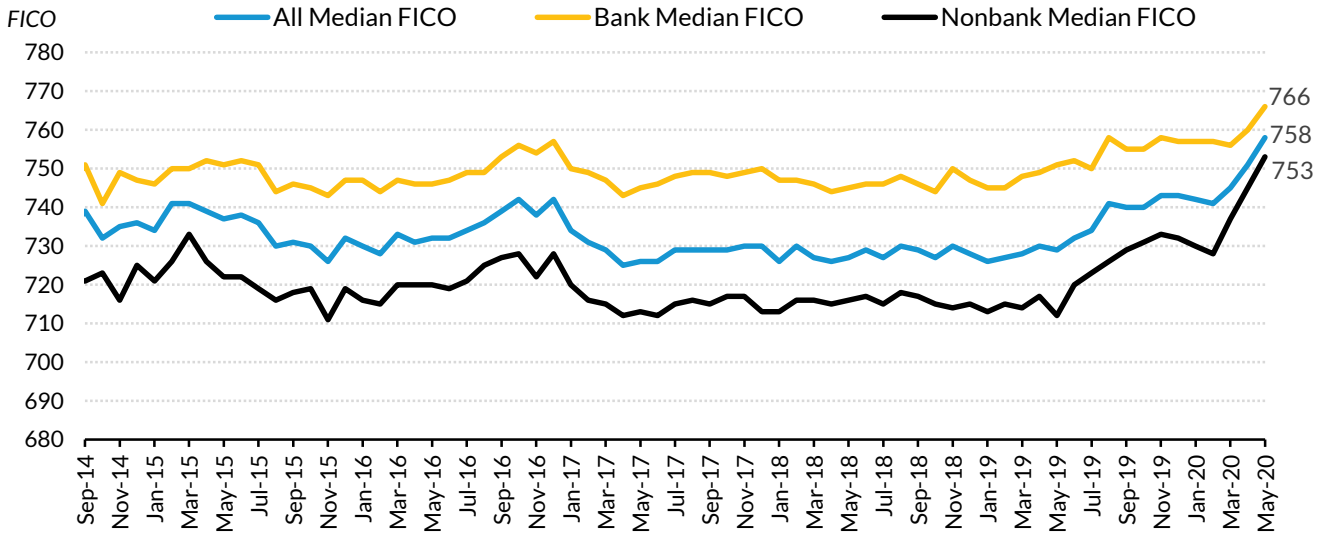
Note: Includes owner-occupied purchase loans only. Data as of April 2020.

CREDIT BOX

AGENCY NONBANK CREDIT BOX

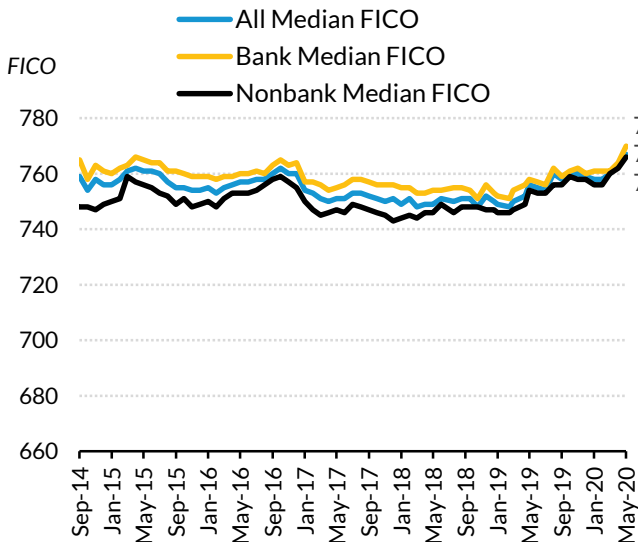
Nonbank originators have played a key role in expanding access to credit. In the GSE space, FICO scores for banks and nonbanks have nearly converged; the differential is much larger in the Ginnie Mae space. FICO scores for banks and nonbanks in both GSE and Ginnie Mae segments increased over the course of 2019 and early 2020, due to increased refi activity; this activity is skewed toward higher FICO scores. This has been particularly pronounced the last two three months, March, April and May of 2020. Comparing Ginnie Mae FICO scores today versus five years ago (late 2014), FICO scores have risen significantly for the banks, while those of the non-banks were roughly constant; this reflects a sharp cut-back in FHA lending by many banks. As pointed out on page 11, banks comprise only about 14 percent of Ginnie Mae originations.

Agency FICO: Bank vs. Nonbank



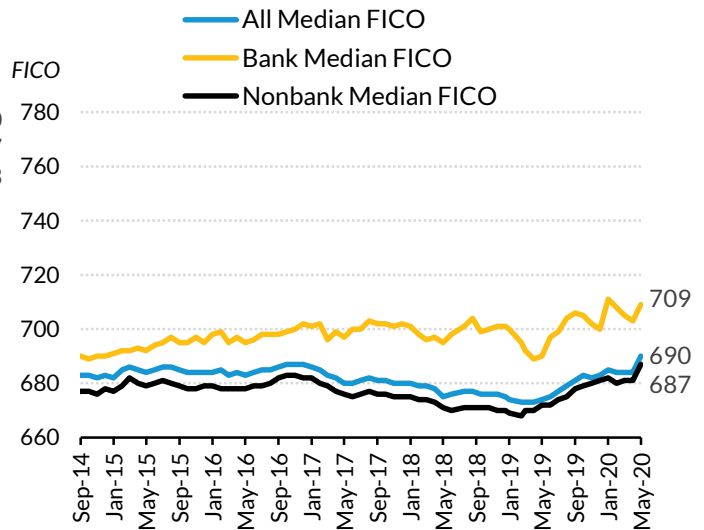
Sources: eMBS and Urban Institute.

GSE FICO: Bank vs. Nonbank



Sources: eMBS and Urban Institute.

Ginnie Mae FICO: Bank vs. Nonbank



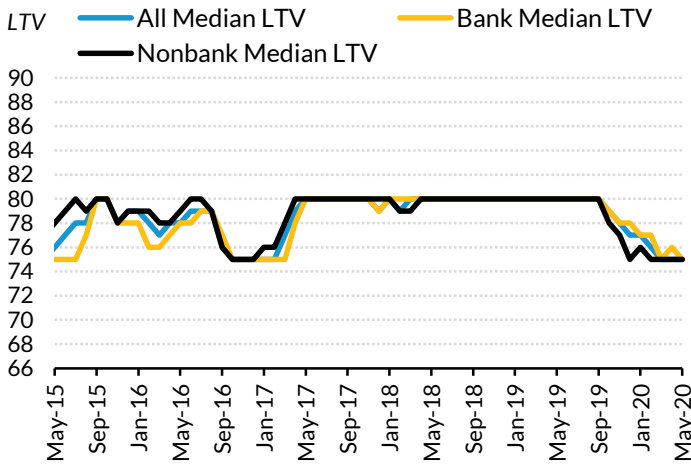
Sources: eMBS and Urban Institute.

CREDIT BOX

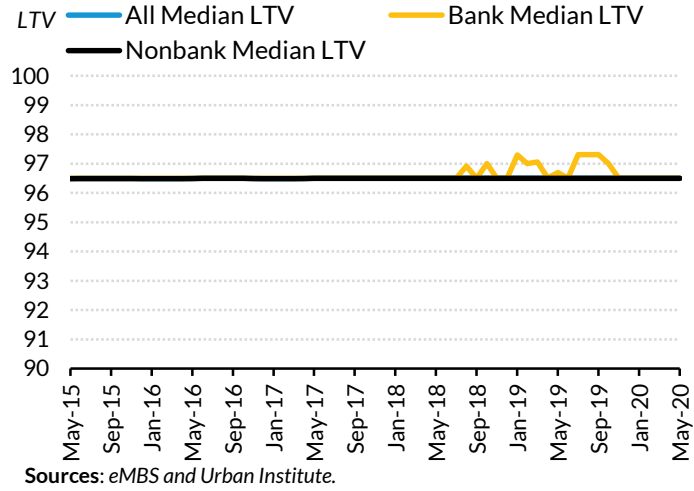
AGENCY NONBANK CREDIT BOX

The median LTVs for nonbank and bank originations are comparable, while the median DTI for nonbank loans is higher than for bank loans, more so in the Ginnie Mae space. From early 2017 to early 2019, there was a sustained increase in DTIs, which has reversed beginning in the spring of 2019. This is true for both Ginnie Mae and the GSEs, for banks and nonbanks. As interest rates in 2017 and 2018 increased, DTIs rose, because borrower payments were driven up relative to incomes. As rates fell during most of 2019 and thus far in 2020, DTIs fell as borrower payments declined relative to incomes.

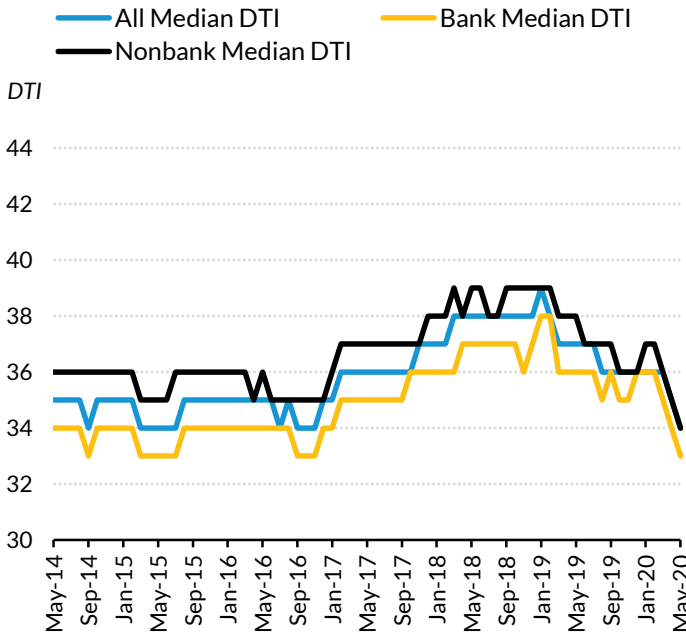
GSE LTV: Bank vs. Nonbank



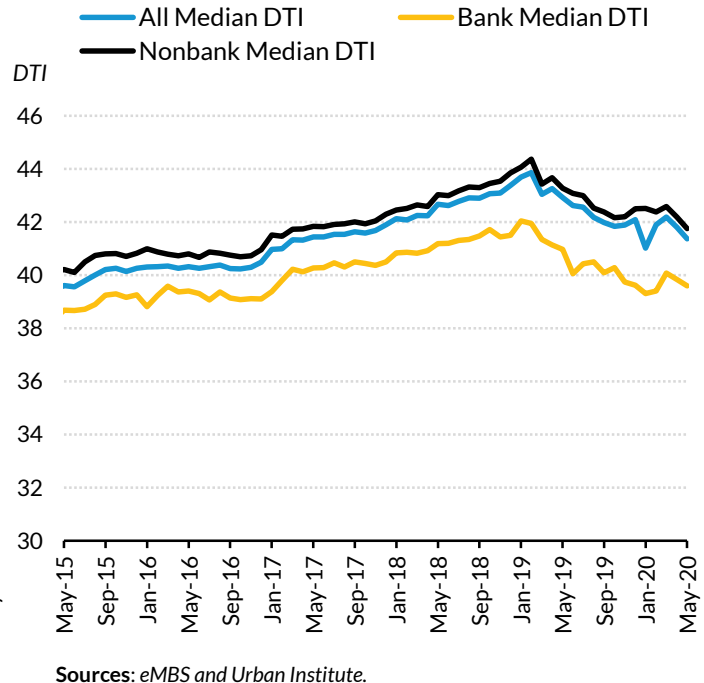
Ginnie Mae LTV: Bank vs. Nonbank



GSE DTI: Bank vs. Nonbank



Ginnie Mae DTI: Bank vs. Nonbank



MORTGAGE ORIGINATION PROJECTIONS

Fannie Mae, Freddie Mac and the MBA estimate 2020 origination volume to be between \$2.44 and \$3.00 trillion, higher than the \$1.68 to \$1.77 trillion in 2018 and the \$2.17 to \$2.33 trillion in 2019. The increase in the 2020 origination volume is due to expectations of very strong refinance activity. All three groups expect the refinance share to be 10-18 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	334	350	325	32	35	30
2019 Q2	540	555	501	33	36	29
2019 Q3	716	695	651	47	47	42
2019 Q4	715	725	696	55	58	55
2020 Q1	768	670	563	61	60	54
2020 Q2	1027	770	868	70	66	60
2020 Q3	689	754	695	50	64	45
2020 Q4	517	723	525	48	66	40
2016	2052	2125	1891	49	47	49
2017	1826	1810	1760	36	37	35
2018	1766	1700	1677	30	32	28
2019	2304	2325	2173	44	46	41
2020	3000	2916	2439	59	64	51
2021	2325	2524	2075	46	51	33

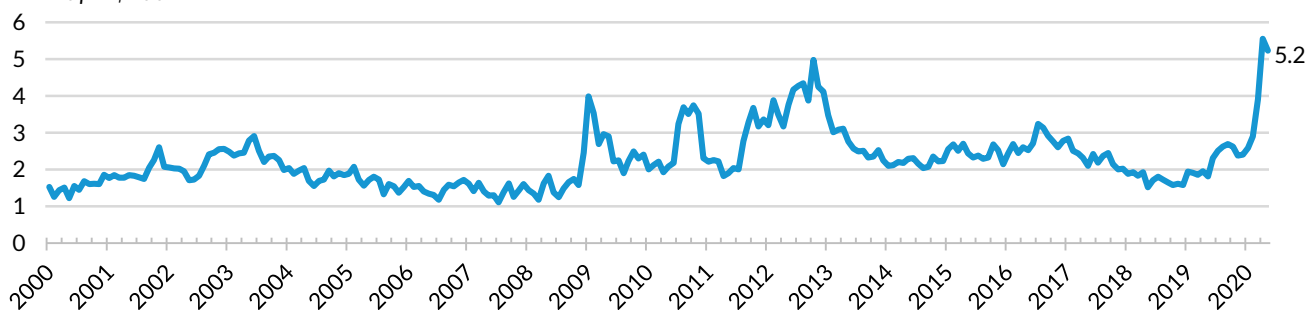
Sources: Fannie Mae, Freddie Mac, Mortgage Bankers Association and Urban Institute.

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 3.2, 3.4, and 3.4 percent.

Originator Profitability and Unmeasured Costs

In May 2020, Originator Profitability and Unmeasured Costs (OPUC) stood at \$5.23 per \$100 loan, up substantially from \$2.59 in January 2020, and down only slightly from last month's \$5.55, the highest level on record. Increased profitability reflects lender capacity constraints amidst strong refi demand. Additionally, the Fed's massive purchases of agency MBS in March and April 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 May 2020.

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

STATE OF THE MARKET

HOUSING SUPPLY

COVID-19 have led to a small increase in the months supply of housing. At 4.8 months, this is slightly above the 4.3 months in May 2019. However, strong demand for housing in recent years, fueled by low mortgage rates, and coupled with low home construction has kept the months supply limited. Fannie Mae, Freddie Mac, the MBA, and the NAHB forecast 2020 housing starts to be 1.08 to 1.28 million units, behind 2019 levels. Fannie Mae, Freddie Mac, and the MBA predict total home sales of 4.80 to 5.89 million units in 2020, also below 2019 levels.

Months of Supply

Months of supply



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

Housing Starts and Homes Sales

Year	Housing Starts, thousands				Home Sales, thousands			
	Total, FNMA estimate	Total, FHLMC estimate	Total, MBA estimate	Total, NAHB estimate	Total, FNMA estimate	Total, FHLMC estimate	Total, MBA estimate	Total, NAHB estimate*
2016	1174	1170	1177	1177	6011	6010	6001	5385
2017	1203	1200	1208	1208	6123	6120	6158	5522
2018	1250	1250	1250	1250	5957	5960	5956	5357
2019	1290	1250	1295	1295	6023	6000	6016	5439
2020	1169	1280	1177	1079	5398	4800	5891	4799
2021	1210	N/A	1260	1272	5784	5600	6358	5513

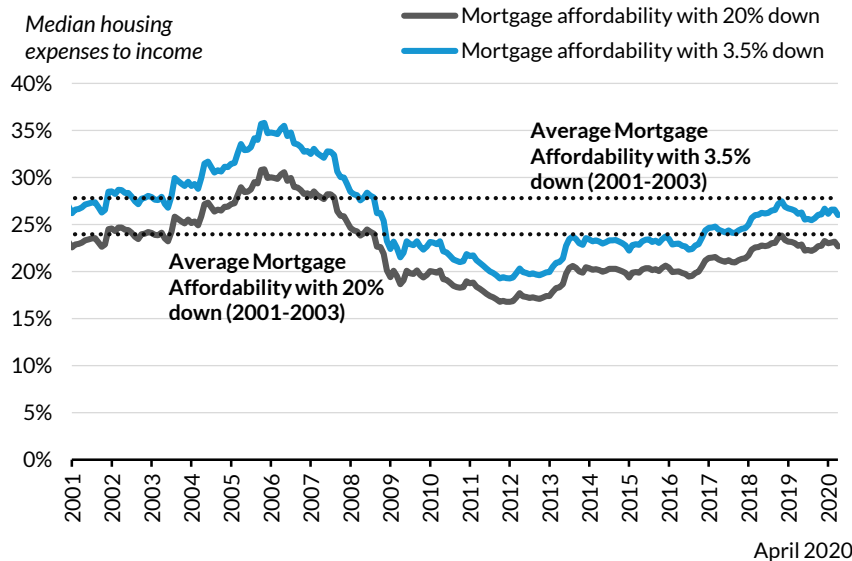
Sources: Mortgage Bankers Association, Fannie Mae, Freddie Mac, National Association of Home Builders and Urban Institute.
Note: Shaded boxes indicate forecasted figures; column labels indicate source of estimate. Freddie Mac numbers are now updated quarterly instead of monthly. *NAHB home sales estimate is for single-family structures only, it excludes condos and co-ops. Other figures include all single-family sales.

STATE OF THE MARKET

HOUSING AFFORDABILITY

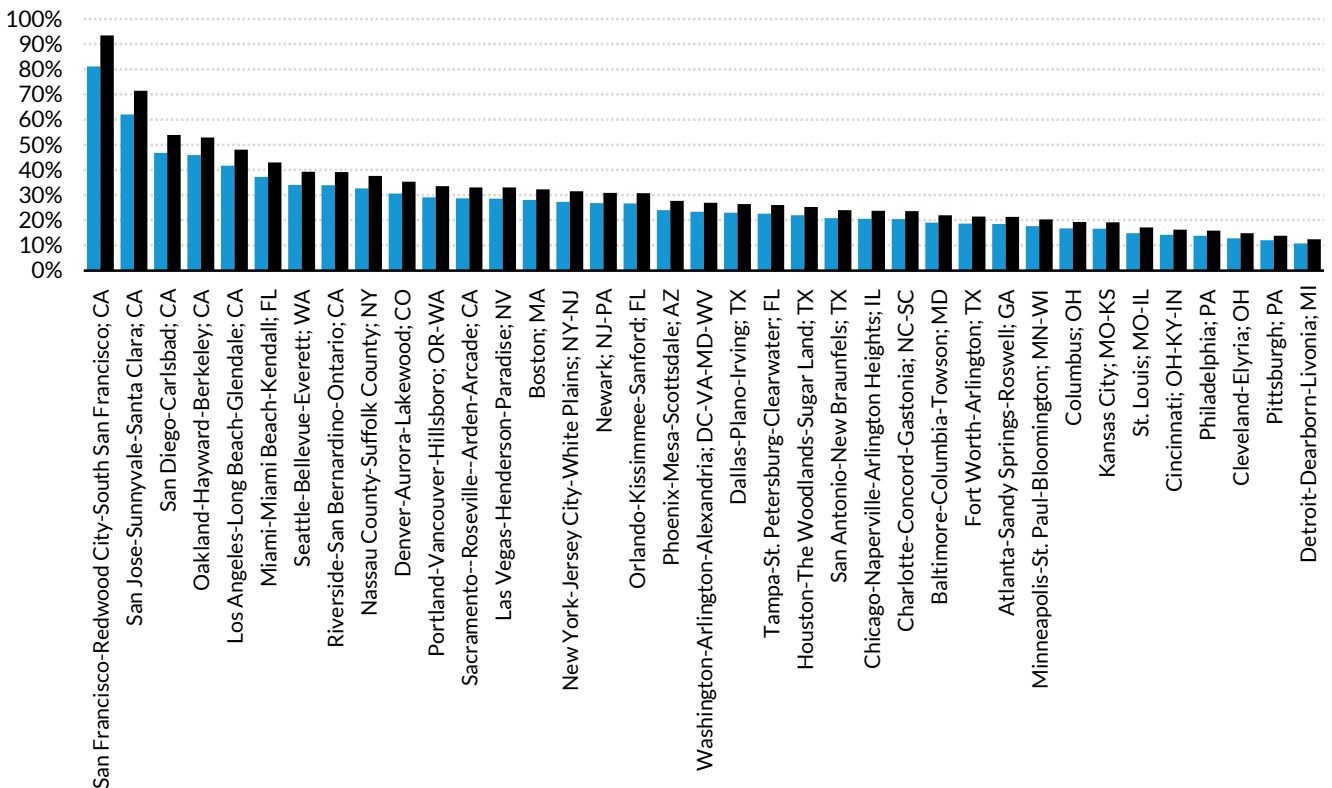
National Mortgage Affordability Over Time

Home prices remain affordable by historic standards, despite price increases over the last 8 years, as interest rates remain relatively low in an historic context. As of April 2020, with a 20 percent down payment, the share of median income needed for the monthly mortgage payment stood at 22.7 percent; with 3.5 down, it is 26.0 percent. Since February 2019, the median housing expenses to income ratio has been slightly lower than the 2001-2003 average. As shown in the bottom picture, mortgage affordability varies widely by MSA.



Mortgage Affordability by MSA

Mortgage affordability index



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

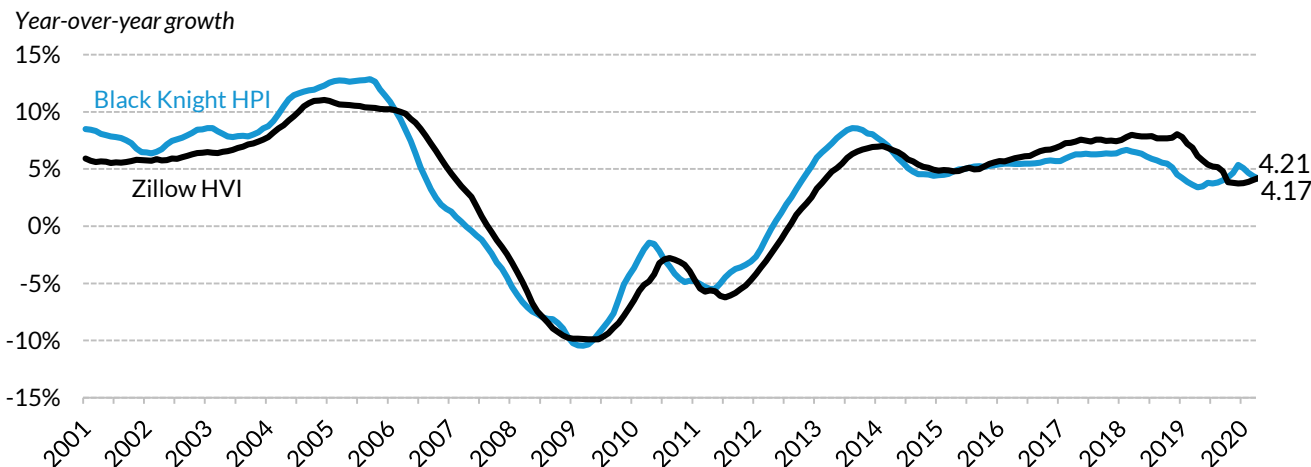
Note: Mortgage affordability is the share of median family income devoted to the monthly principal, interest, taxes, and insurance payment required to buy the median home at the Freddie Mac prevailing rate 2018 for a 30-year fixed-rate mortgage and property tax and insurance at 1.75 percent of the housing value. Data for the bottom chart as of Q2 2019.

STATE OF THE MARKET

HOME PRICE INDICES

National Year-Over-Year HPI Growth

According to Black Knight's repeat sales index, year-over-year home price appreciation declined slightly to 4.17 percent in April 2020. Year-over-year home price appreciation was 4.21 percent in April 2020, up slightly from March, as measured by Zillow's hedonic index. Although housing affordability remains constrained, especially at the lower end of the market, recent declines in rates serve as a partial offset. These numbers do not fully reflect the effect of the pandemic; high frequency data indicates a deceleration, but not a decline in home prices.



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

Changes in Black Knight HPI for Top MSAs

After rising 55.4 percent from the trough, national house prices are now 18.5 percent higher than pre-crisis peak levels. At the MSA level, thirteen 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; Riverside, CA; Dallas, TX; Minneapolis, MN; Seattle, WA; Denver, CO; San Diego, CA; and Anaheim, CA. Two MSAs particularly hard hit by the boom and bust—Chicago, IL and Baltimore, MD—are 8.7 and 6.0 percent, respectively, below peak values.

MSA	HPI changes (%)			% above peak
	2000 to peak	Peak to trough	Trough to current	
United States	75.2	-25.4	58.8	18.5
New York-Jersey City-White Plains, NY-NJ	128.1	-22.6	48.0	14.6
Los Angeles-Long Beach-Glendale, CA	179.5	-38.1	93.8	19.9
Chicago-Naperville-Arlington Heights, IL	67.2	-38.4	48.3	-8.7
Atlanta-Sandy Springs-Roswell, GA	32.4	-35.1	85.3	20.3
Washington-Arlington-Alexandria, DC-VA-MD-WV	149.0	-28.3	41.9	1.7
Houston-The Woodlands-Sugar Land, TX	29.3	-6.6	50.6	40.7
Phoenix-Mesa-Scottsdale, AZ	113.0	-51.1	105.5	0.4
Riverside-San Bernardino-Ontario, CA	175.0	-51.7	95.4	-5.6
Dallas-Plano-Irving, TX	26.3	-7.2	71.8	59.4
Minneapolis-St. Paul-Bloomington, MN-WI	69.2	-30.6	65.8	15.0
Seattle-Bellevue-Everett, WA	90.5	-33.2	115.6	44.1
Denver-Aurora-Lakewood, CO	34.1	-12.2	97.1	73.1
Baltimore-Columbia-Towson, MD	123.3	-24.4	24.3	-6.0
San Diego-Carlsbad, CA	148.3	-37.5	84.7	15.4
Anaheim-Santa Ana-Irvine, CA	163.2	-35.2	70.1	10.1

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

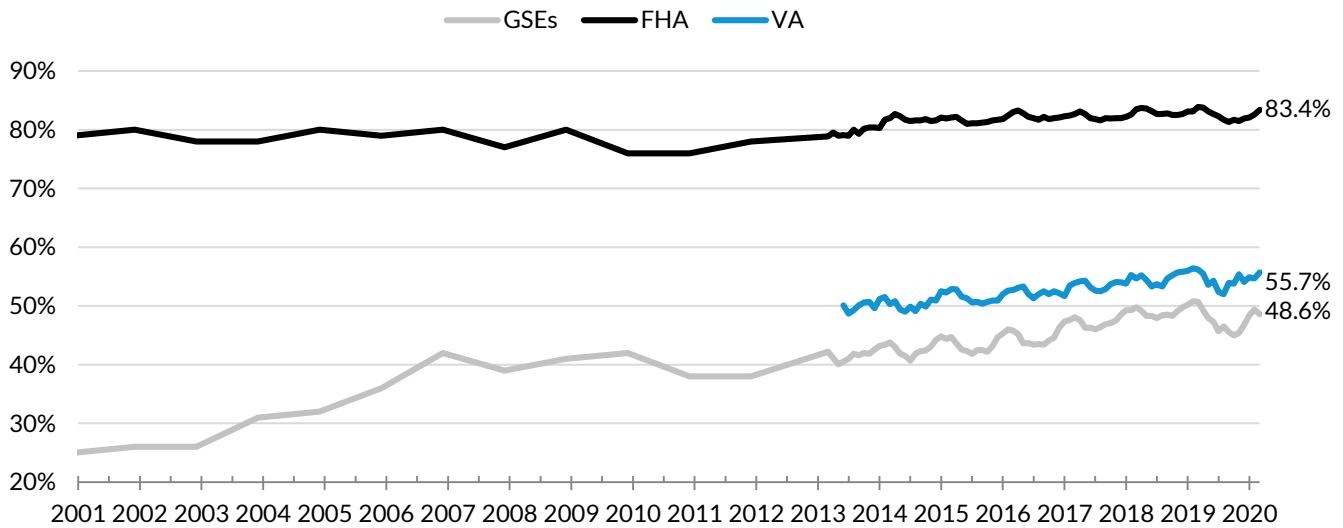
Note: This table includes the largest 15 Metropolitan areas by mortgage count.

STATE OF THE MARKET

FIRST-TIME HOMEBUYERS

First-Time Homebuyer Share

In April 2020, the FTHB share for FHA, which has always been more focused on first time homebuyers, grew slightly to 83.4 percent. The FTHB share of VA lending decreased slightly in April, to 55.7 percent. The GSE FTHB share in April was down from March to 48.6 percent. The bottom table shows that based on mortgages originated in April 2020, the average FTHB was more likely than an average repeat buyer to take out a smaller loan, have a lower credit score, and higher LTV, thus paying a higher interest rate.



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

April 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 (\$)	268,724	291,248	225,615	247,493	251,619	284,745
Credit Score	746	758	672	675	717	746
LTV (%)	88	80	96	94	91	82
DTI (%)	34	36	43	44	38	37
Loan Rate (%)	3.61	3.53	3.75	3.65	3.66	3.55

Sources: eMBS and Urban Institute.

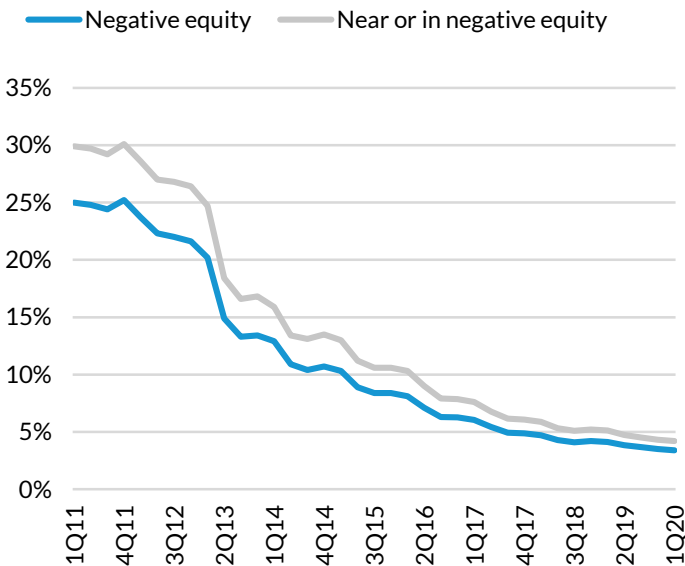
Note: Based on owner-occupied purchase mortgages originated in April 2020.

STATE OF THE MARKET

DELINQUENCIES AND LOSS MITIGATION ACTIVITY

Loans in and near negative equity continued to decline in 1Q 2020; 3.4 percent now have negative equity, an additional 0.8 percent have less than 5 percent equity. Loans that are 90 days delinquent or in foreclosure have also been in a long decline, falling to 1.67 percent in Q1 2020. As the impacts of COVID-19 continue to be felt by homeowners, we anticipate a rise in serious delinquency rates moving forward in 2020. New loan modifications and liquidations (bottom) have continued to decline. Since Q3, 2007, 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.

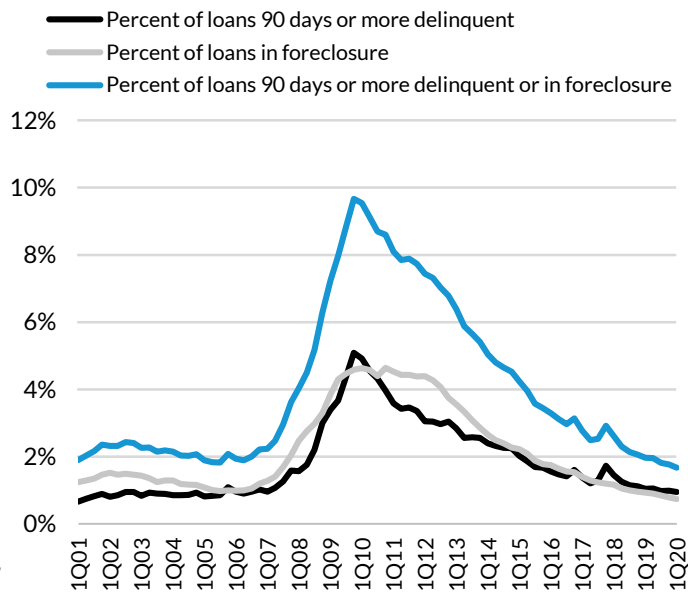
Negative Equity Share



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 June 2020.

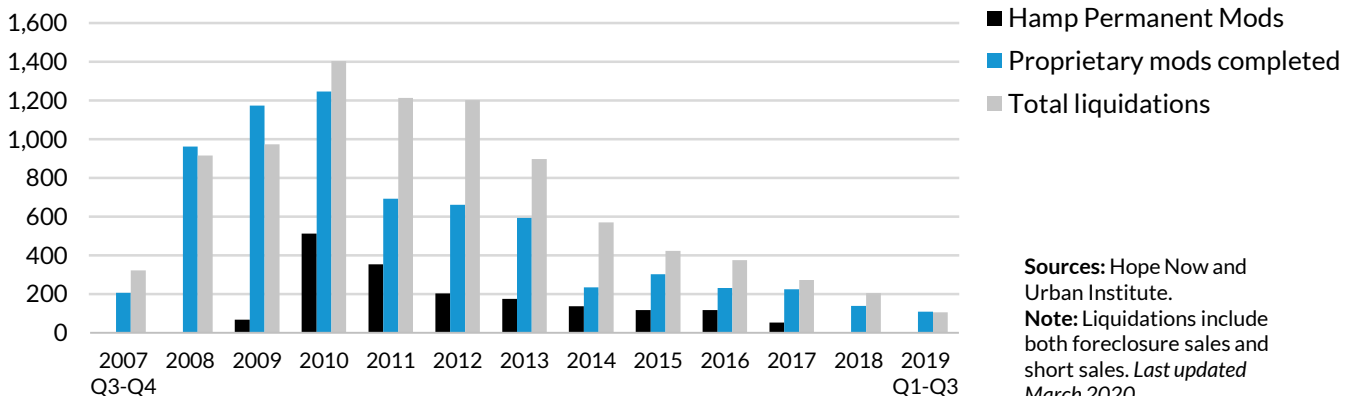
Loans in Serious Delinquency/Foreclosure



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

Loan Modifications and Liquidations

Number of loans (thousands)



Sources: Hope Now and Urban Institute.

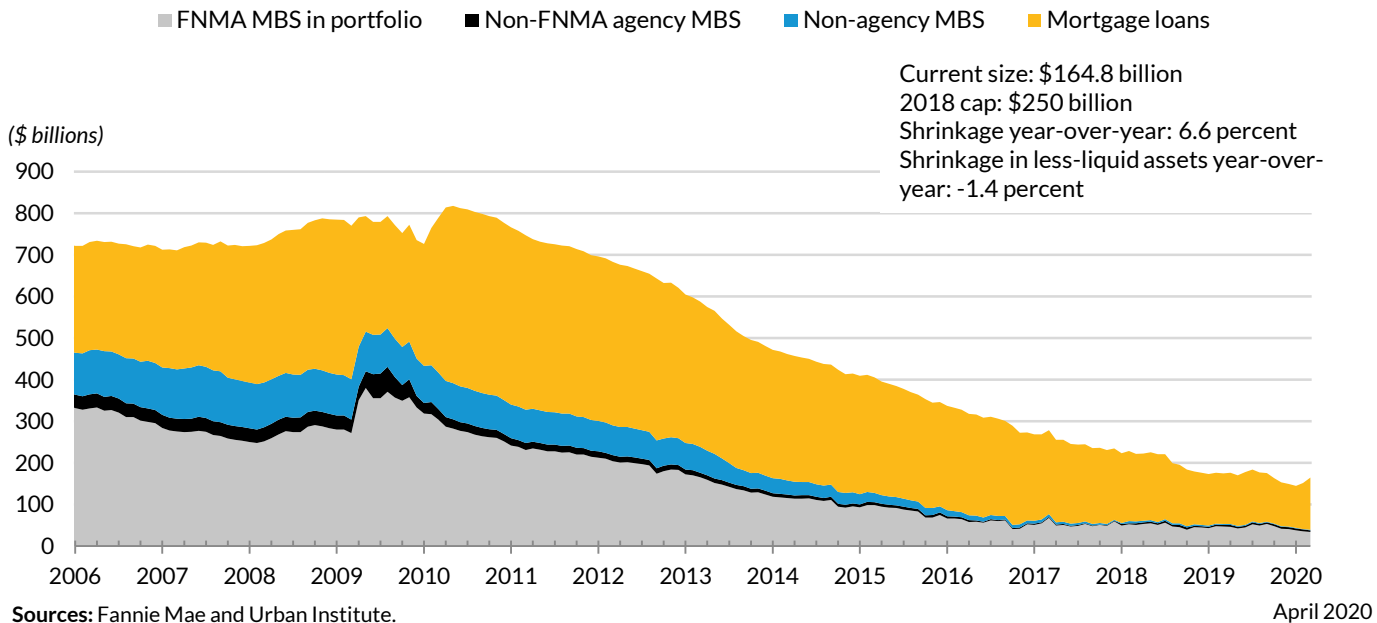
Note: Liquidations include both foreclosure sales and short sales. Last updated March 2020.

GSES UNDER CONSERVATORSHIP

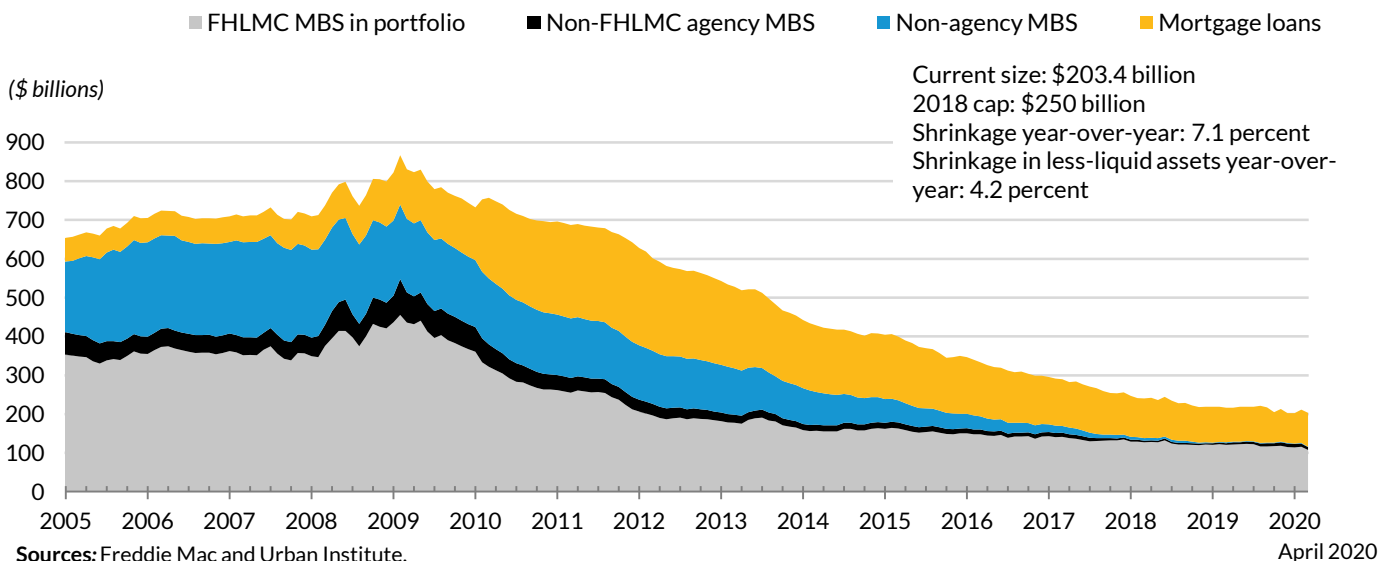
GSE PORTFOLIO WIND-DOWN

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 April 2019 to April 2020, the Fannie portfolio contracted by 6.6 percent, and the Freddie portfolio contracted by 7.1 percent. Within the portfolio, Freddie Mac continued to shrink its less liquid assets (mortgage loans, non-agency MBS), while Fannie grew these assets by 1.4 percent.

Fannie Mae Mortgage-Related Investment Portfolio Composition



Freddie Mac Mortgage-Related Investment Portfolio Composition



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EFFECTIVE GUARANTEE FEES

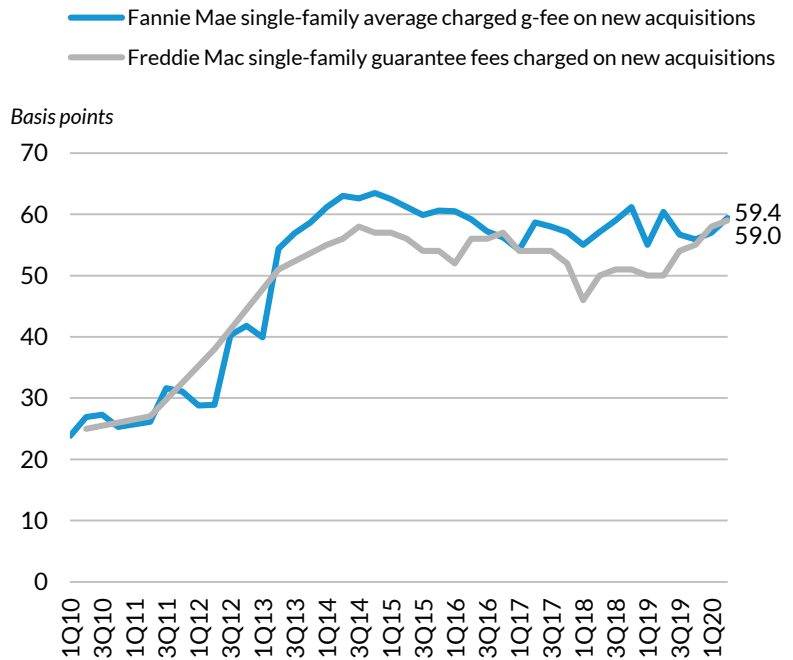
Guarantee Fees Charged on New Acquisitions

Fannie Mae's average g-fees charged on new acquisitions rose from 57.0 bps in Q4 2019 to 59.4 bps in Q1 2020.

Freddie's rose slightly from 58.0 bps to 59.0 bps. The gap between the two g-fees was only 0.4 bps in Q1 2020, which is the smallest gap since Q4 2016.

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 May 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% of new acquisitions. Fannie Mae's CAS issuances since inception total \$1.65 trillion; Freddie's STACR totals \$1.47 trillion. Note that there has been no new issuance since the massive spread widening in March 2020.

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
Total		\$1,467,052	\$39,617	2.2

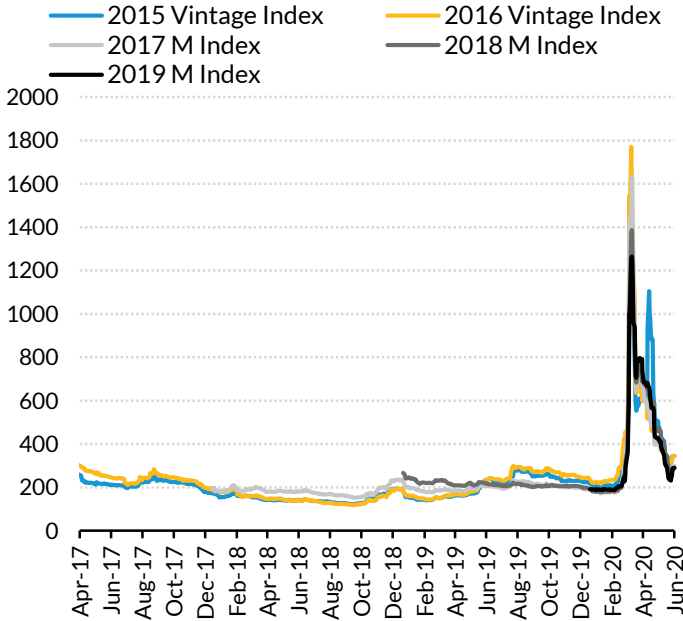
Sources: Fannie Mae, Freddie Mac and Urban Institute. Note: Classes A-H, M-1H, M-2H, and B-H are reference tranches only. These classes are not issued or sold. The risk is retained by Fannie Mae and Freddie Mac. "CE" = credit enhancement.

GSES UNDER CONSERVATORSHIP

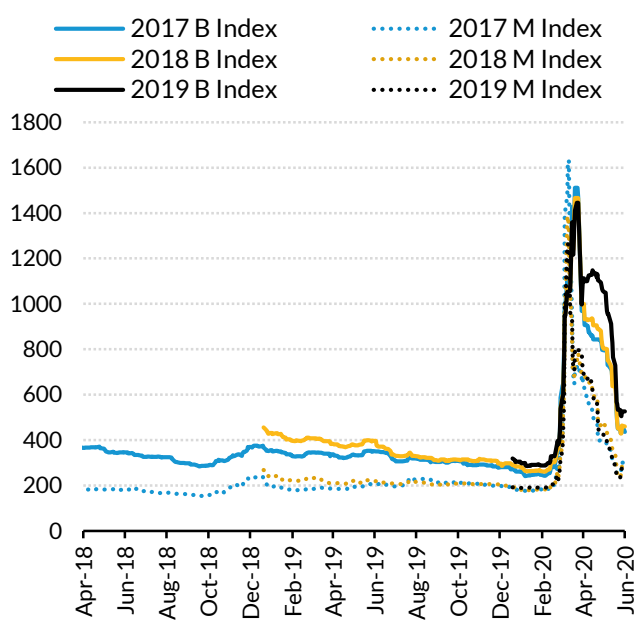
GSE RISK-SHARING INDICES

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 and 2018 indices contain both the bottom mezzanine tranche as well as the equity tranche (the B tranche), in all deals when the latter was sold.

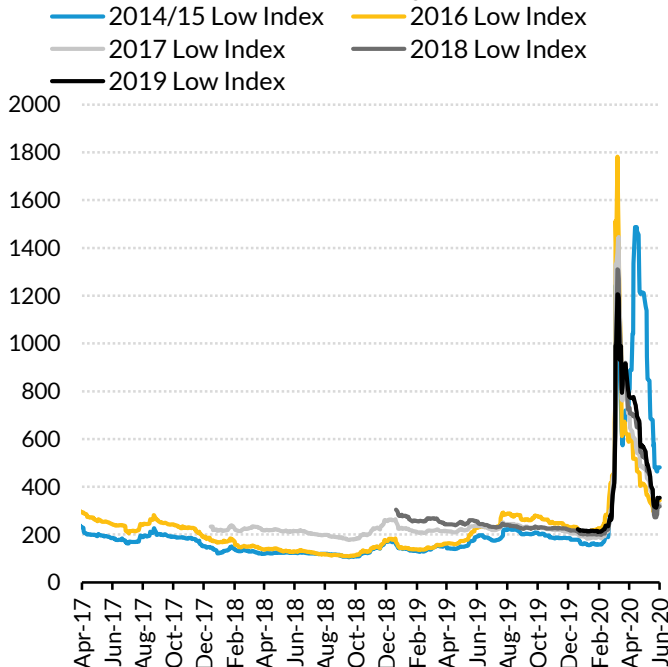
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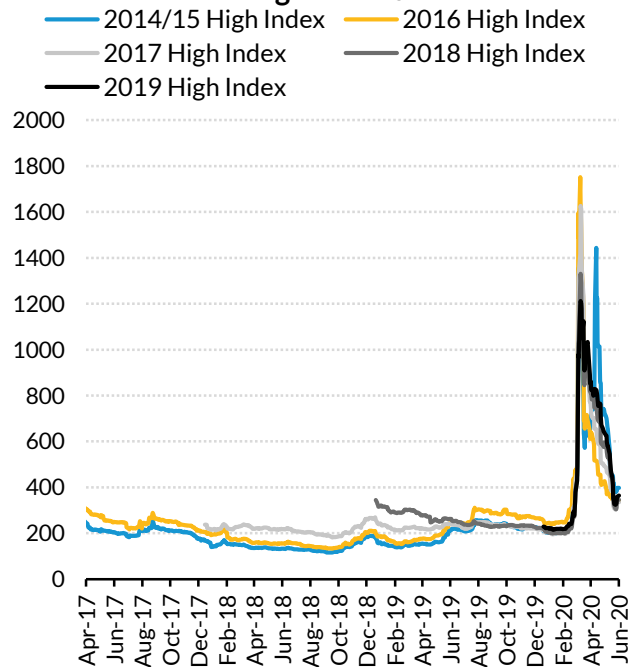
2017 and 2018 Indices



Low Indices



High Indices



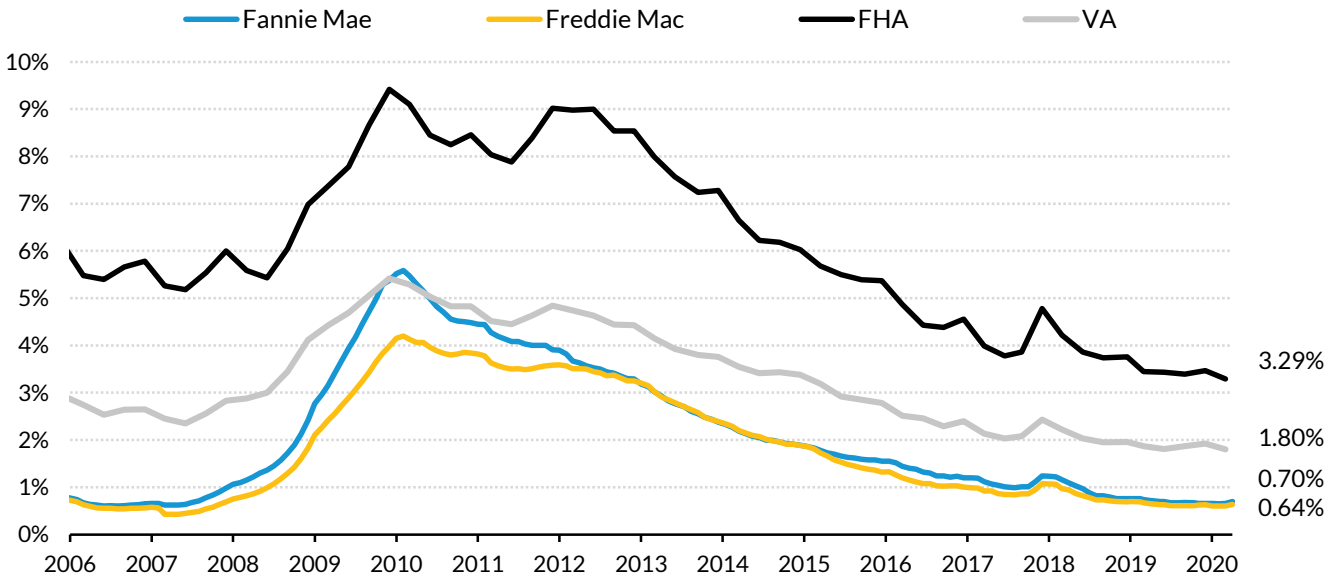
Sources: Vista Data Services and Urban Institute.
 Note: Data as of June 15, 2020.

GSES UNDER CONSERVATORSHIP

SERIOUS DELINQUENCY RATES

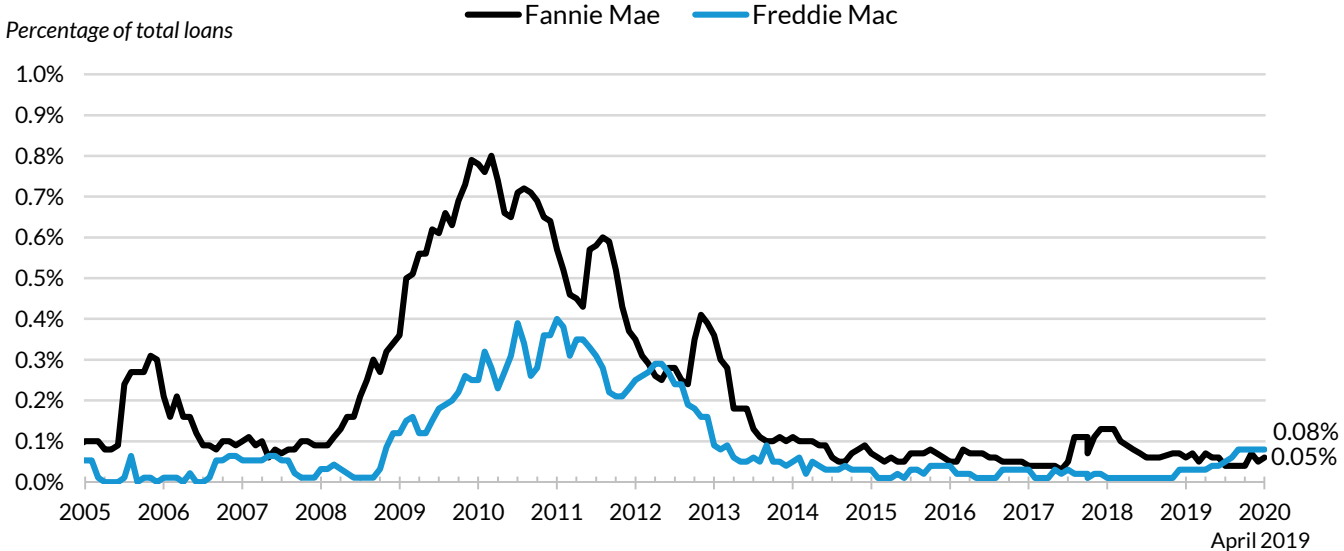
Serious delinquency rates for single-family GSE loans grew slightly in April 2020. For FHA loans and VA, they fell slightly through during Q1. GSE delinquencies remain just above their 2006-2007 level, while FHA and VA delinquencies (which are higher than their GSE counterparts) are well below 2006-2007 levels. GSE multifamily delinquencies have declined post-crisis and remain very low.

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 May 2020. GSE delinquencies are reported monthly, last updated June 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.

AGENCY ISSUANCE

AGENCY GROSS AND

NET ISSUANCE

Agency gross issuance was \$975.1 billion through the first five months of 2020, more than double the volume through May 2019. The sharp increase is due to the refinance wave, which did not begin in earnest until Q2 2019, and accelerated significantly in 2020. Net issuance (new securities issued less the decline in outstanding securities due to principal pay-downs or prepayments) totaled \$208.9 billion in the first five months of 2020, up 130.0 percent from the same period in 2019.

Agency Gross Issuance

Issuance Year	GSEs	Ginnie Mae	Total
2001	\$885.1	\$171.5	\$1,056.6
2002	\$1,238.9	\$169.0	\$1,407.9
2003	\$1,874.9	\$213.1	\$2,088.0
2004	\$872.6	\$119.2	\$991.9
2005	\$894.0	\$81.4	\$975.3
2006	\$853.0	\$76.7	\$929.7
2007	\$1,066.2	\$94.9	\$1,161.1
2008	\$911.4	\$267.6	\$1,179.0
2009	\$1,280.0	\$451.3	\$1,731.3
2010	\$1,003.5	\$390.7	\$1,394.3
2011	\$879.3	\$315.3	\$1,194.7
2012	\$1,288.8	\$405.0	\$1,693.8
2013	\$1,176.6	\$393.6	\$1,570.1
2014	\$650.9	\$296.3	\$947.2
2015	\$845.7	\$436.3	\$1,282.0
2016	\$991.6	\$508.2	\$1,499.8
2017	\$877.3	\$455.6	\$1,332.9
2018	\$795.0	\$400.6	\$1,195.3
2019	\$1,042.6	\$508.6	\$1,551.2
2020 YTD	\$692.8	\$282.4	\$975.1
2020 YTD % Change YOY	131.4%	87.3%	116.6%
2020 Ann.	\$1,662.6	\$677.7	\$2,340.3

Agency Net Issuance

Issuance Year	GSEs	Ginnie Mae	Total
2001	\$368.40	-\$9.90	\$358.50
2002	\$357.20	-\$51.20	\$306.10
2003	\$334.90	-\$77.60	\$257.30
2004	\$82.50	-\$40.10	\$42.40
2005	\$174.20	-\$42.20	\$132.00
2006	\$313.60	\$0.20	\$313.80
2007	\$514.90	\$30.90	\$545.70
2008	\$314.80	\$196.40	\$511.30
2009	\$250.60	\$257.40	\$508.00
2010	-\$303.20	\$198.30	-\$105.00
2011	-\$128.40	\$149.60	\$21.20
2012	-\$42.40	\$119.10	\$76.80
2013	\$69.10	\$87.90	\$157.00
2014	\$30.5	\$61.6	\$92.1
2015	\$75.1	\$97.3	\$172.5
2016	\$127.4	\$125.8	\$253.1
2017	\$168.5	\$131.3	\$299.7
2018	\$149.4	\$112.0	\$261.5
2019	\$197.8	\$95.7	\$293.5
2020 YTD	\$168.5	\$40.3	\$208.9
2020 YTD % Change YOY	213.7%	8.7%	130.0%
2020 Ann.	\$404.5	\$96.8	\$501.3

Sources: eMBS and Urban Institute.

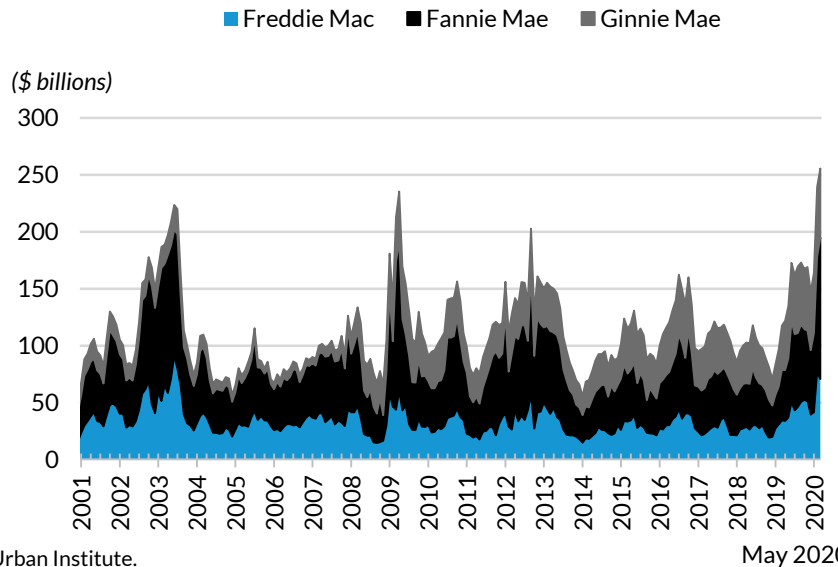
Note: Dollar amounts are in billions. Data as of May 2020.

AGENCY ISSUANCE

AGENCY GROSS ISSUANCE & FED PURCHASES

Monthly Gross Issuance

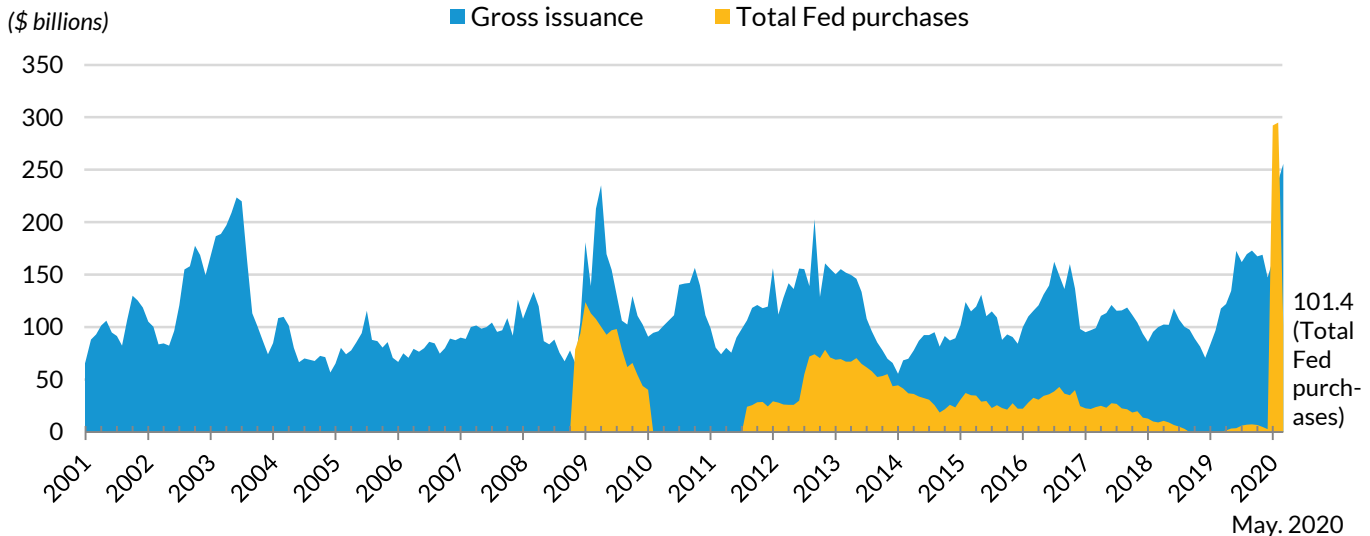
While FHA, VA and GSE lending have dominated the mortgage market since the 2008 housing crisis, there has been a change in the mix. The Ginnie Mae share of new issuances has risen from a precrisis level of 10-12 percent to 23.8 percent in May 2020. This reflects gains in both purchase and refinance share.



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

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. Purchases slowed in May to \$101.4 billion, 40 percent of monthly issuance, still sizeable from a historical perspective. Prior to the COVID-19 intervention, the Fed was winding down its MBS portfolio from its 2014 prior peak.



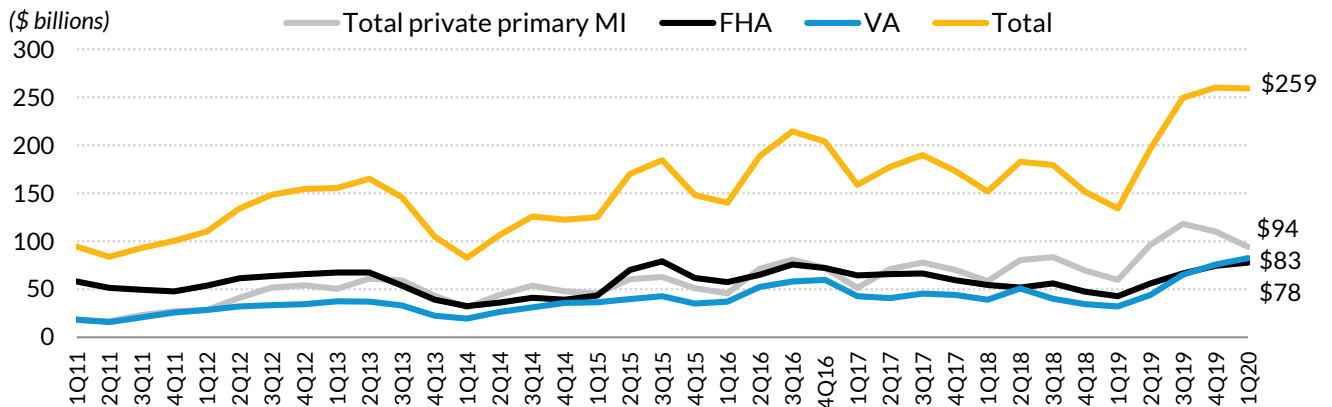
Sources: eMBS, Federal Reserve Bank of New York and Urban Institute.

AGENCY ISSUANCE

MORTGAGE INSURANCE ACTIVITY

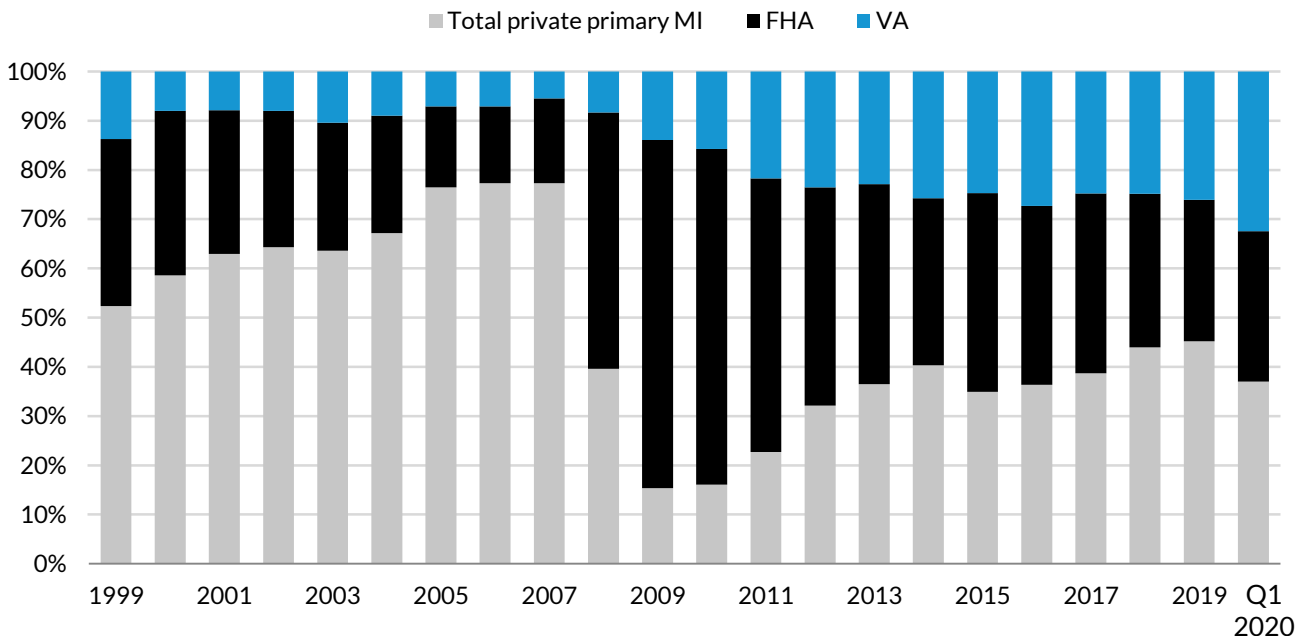
MI Activity

Mortgage insurance activity via the FHA, VA and private insurers increased from \$134 billion in Q1 2019 to \$259 billion in Q1 2020, a 93.1 percent increase. In the first quarter of 2020, private mortgage insurance written decreased by \$15.88 billion, FHA increased by \$3.32 billion and VA increased by \$6.89 billion from the previous quarter. During this period, the VA share grew from 29.1 to 31.9 percent and the FHA share also grew, from 28.6 to 30.0 percent. The private mortgage insurers share fell significantly, from 42.3 to 36.3 percent compared to the previous quarter.



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

MI Market Share



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

AGENCY ISSUANCE 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	3.23
FHA	3.41

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	\$1,261	\$1,261	\$1,261	\$1,261	\$1,261	\$1,261	\$1,261	\$1,261
PMI	\$1,516	\$1,453	\$1,417	\$1,331	\$1,286	\$1,249	\$1,208	\$1,184
PMI Advantage	-\$255	-\$192	-\$156	-\$70	-\$26	\$12	\$53	\$77

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 May 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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