HOUSING FINANCE POLICY CENTER

HOUSING FINANCE AT A GLANCE

A MONTHLY CHARTBOOK

May 2019

URBAN INSTITUTE · ELEVATE · THE · DEBATE

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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INTRODUCTION

Another data point shows we don't seem to be in a housing bubble

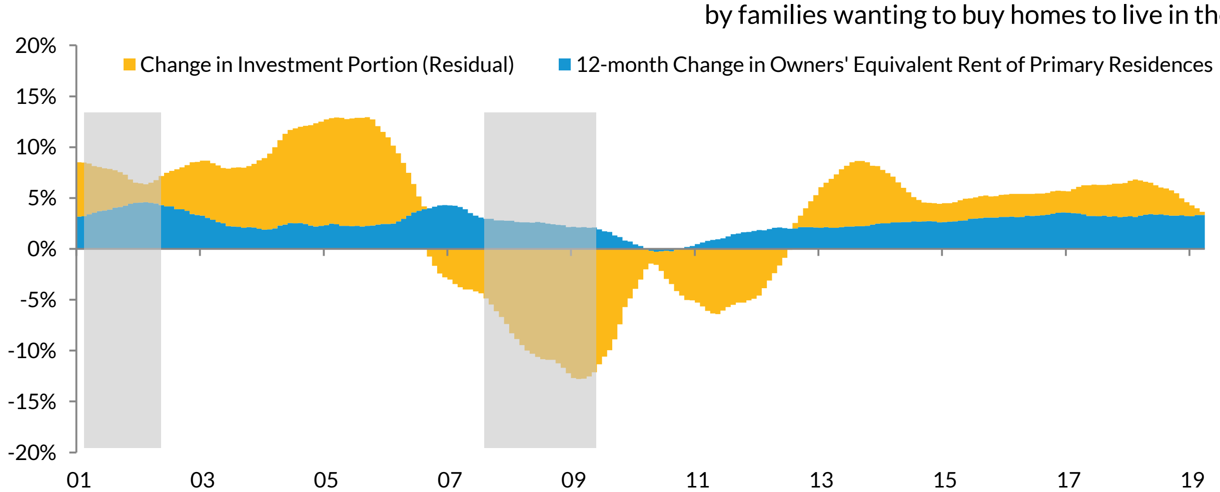
Demand for homeownership has two components: a family wants to own a place to live ("consume" housing), and they want to benefit from long-term equity build-up ("invest" in housing.) The House Price Index (HPI) reflects these two variables: appreciation caused by demand for housing both as a consumable good and as an investment. Breaking down HPI into these components provides valuable insight into the health of the housing market.

The consumption portion of HPI can be estimated using the owner's equivalent rent of a primary residence (OER), a component of Consumer Price Index produced by the Bureau of Labor Statistics. In simple terms, OER is the rent the owner anticipates it would receive if they rented out the home and is used to calculate changes in the cost of consuming housing. The residual, i.e. difference between HPI and OER, reveals the investment component of HPI.

The subsequent collapse in prices resulted in a steep fall-off in investment returns from housing. Investment-driven demand for housing returned in '12 as buyers with strong credit and deep pockets snapped up foreclosed homes at rock bottom prices. Not surprisingly, the investment component in Sep '13 of 4.2 percent far outpaced the consumption component of 2.2 percent, although to a lesser extent than during the bubble.

With nationwide house prices now up substantially, the potential for investment returns has largely vanished. However, note that when making the decision to own or rent, one must also consider the absolute cost of owning versus renting, including maintenance costs, taxes and insurance, foregone interest on down payment, with some "credit" given for the fact that homeownership provides a hedge against future rent increases.

More importantly, this data should also give comfort to those worried about another housing crash. Compared to 2005-2007 bubble, when HPI was driven mostly by speculators, today it is driven by families wanting to buy homes to live in them.



According to Black Knight, house prices rose 3.6 percent from March '19 to March '18, smaller than the 6.8 percent increase between Feb '17 and Feb '18 (page 22). The current 3.6 percent annual HPI is in line with the annual change in the OER of 3.3 percent. The investment portion of HPI (3.6 - 3.3) or .3 percent is currently quite small. In other words, a family that buys a home at today's prices will do slightly better than inflation, but shouldn't expect outsized equity gains.

During the housing bubble, investment component of HPI was substantially larger, reflecting reckless lending and speculative homebuying.

INSIDE THIS ISSUE

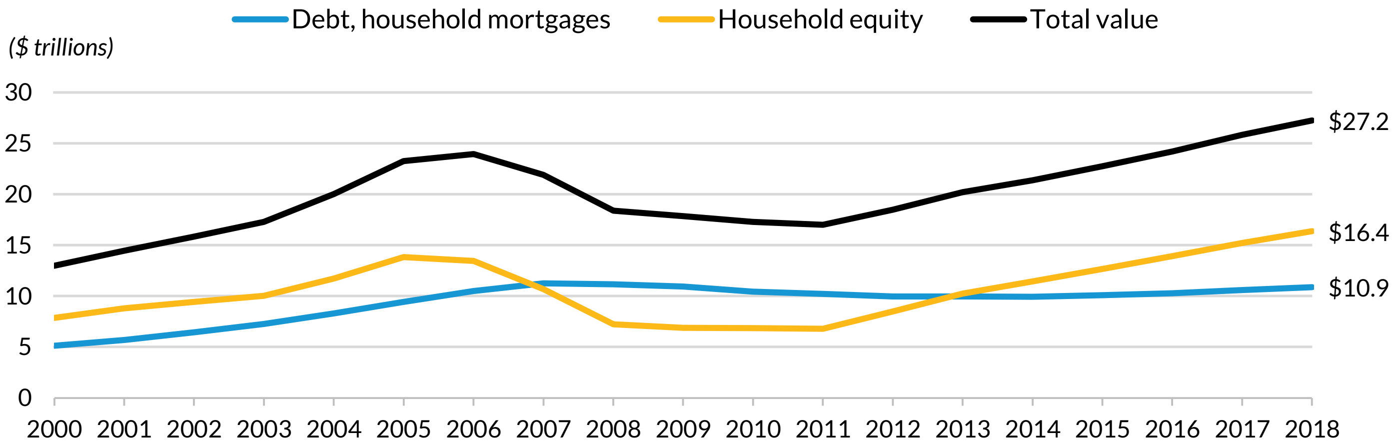
- The non-bank origination share of Ginnie Mae mortgages grew to 86 percent in April 2019, a new high (page 11).
- Year-over-year home price appreciation as measured by Black Knight's HPI slowed to 3.64 percent in March 2019, compared to 6.53 percent in March 2018 (page 22).
- The first-time homebuyer share of GSE purchase loans reached 50.2 percent in February 2019, a historical high (page 23).
- PMI, FHA and VA all witnessed declines in insurance volume written from $152 billion in Q1 2018 to $134 billion in Q1 2019, or 11.7 percent (page 32).

OVERVIEW

MARKET SIZE OVERVIEW

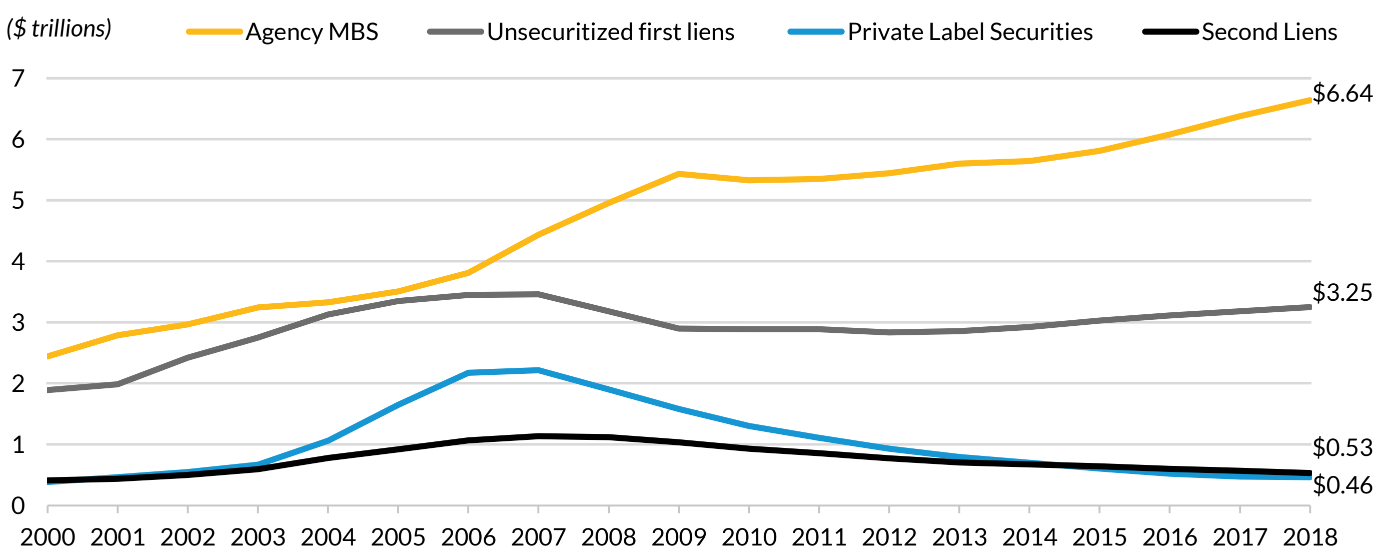
The Federal Reserve's Flow of Funds report has indicated a gradually increasing total value of the housing market driven by growing household equity since 2012, and 2018 Q4 was no different. While total mortgage debt outstanding was steady at $10.9 trillion, household equity ticked up from $16.2 trillion in Q3 to 16.4 trillion in Q4 2018, bringing the total value of the housing market to $27.2 trillion, 13 percent higher than the pre-crisis peak in 2006. Agency MBS account for 61.0 percent of the total mortgage debt outstanding, private-label securities make up 4.3 percent, and unsecuritized first liens make up 29.8 percent. Second liens comprise the remaining 4.9 percent of the total.

Value of the US Housing Market



Sources: Federal Reserve Flow of Funds and Urban Institute. *Last updated March 2019.*

Size of the US Residential Mortgage Market

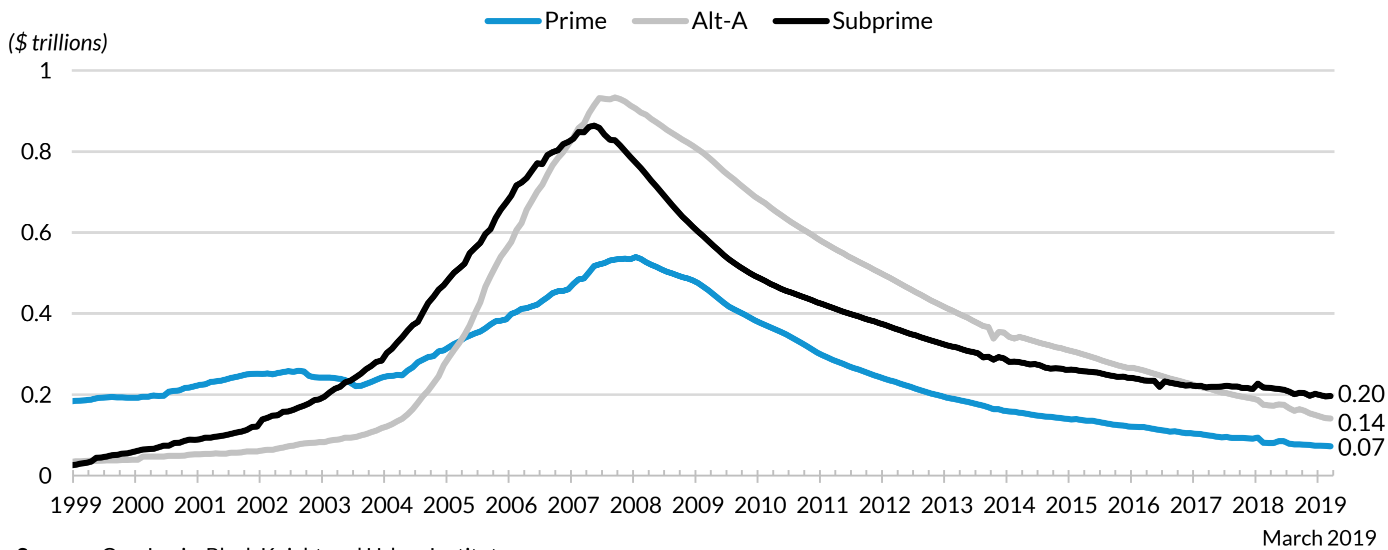


Sources: Federal Reserve Flow of Funds, Inside Mortgage Finance, Fannie Mae, Freddie Mac, eMBS and Urban Institute. *Last updated March 2019.* **Note:** Unsecuritized first liens includes loans held by commercial banks, GSEs, savings institutions, and credit unions.

MARKET SIZE OVERVIEW

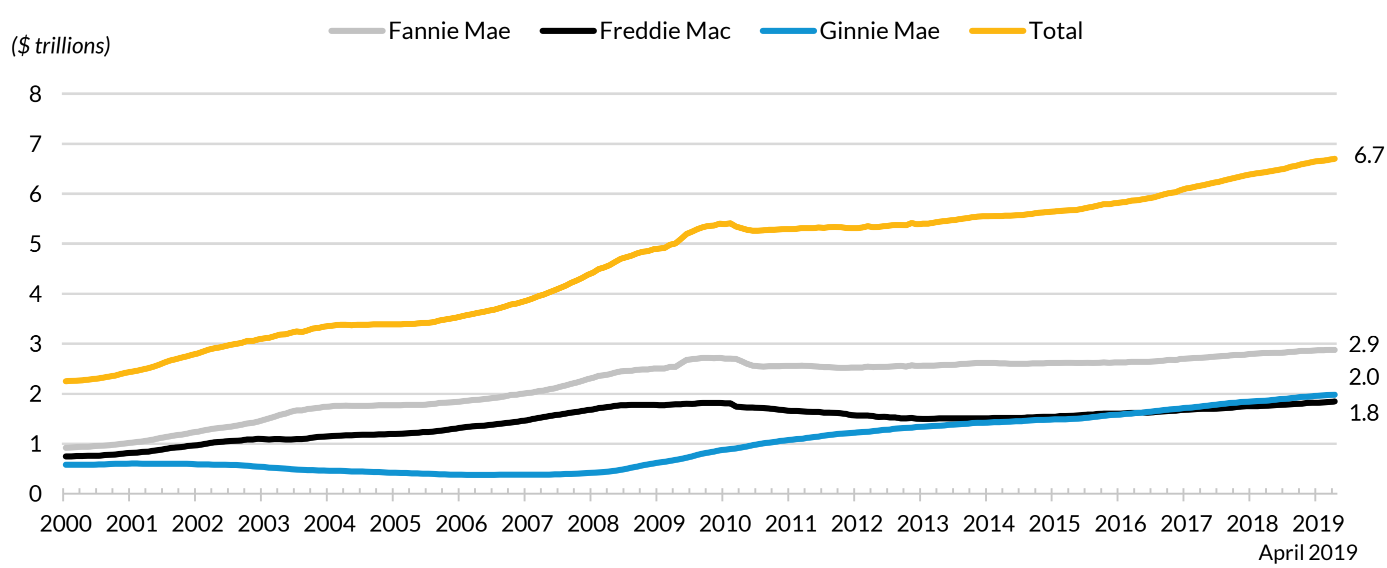
As of March 2019, debt in the private-label securitization market totaled $409 billion and was split among prime (17.7 percent), Alt-A (34.4 percent), and subprime (47.9 percent) loans. In April 2019, outstanding securities in the agency market totaled $6.7 trillion, 42.9 percent of which was Fannie Mae, 27.6 percent Freddie Mac, and 29.6 percent Ginnie Mae. Ginnie Mae has had more outstanding securities than Freddie Mac since May 2016.

Private-Label Securities by Product Type



Sources: CoreLogic, Black Knight and Urban Institute.

Agency Mortgage-Backed Securities



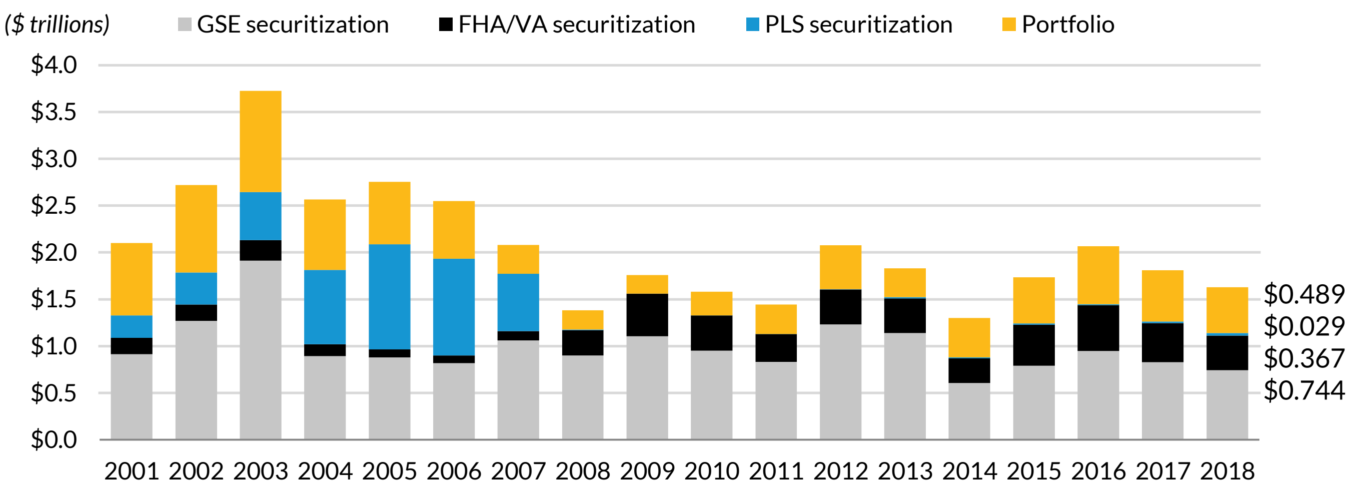
Sources: eMBS and Urban Institute.

OVERVIEW

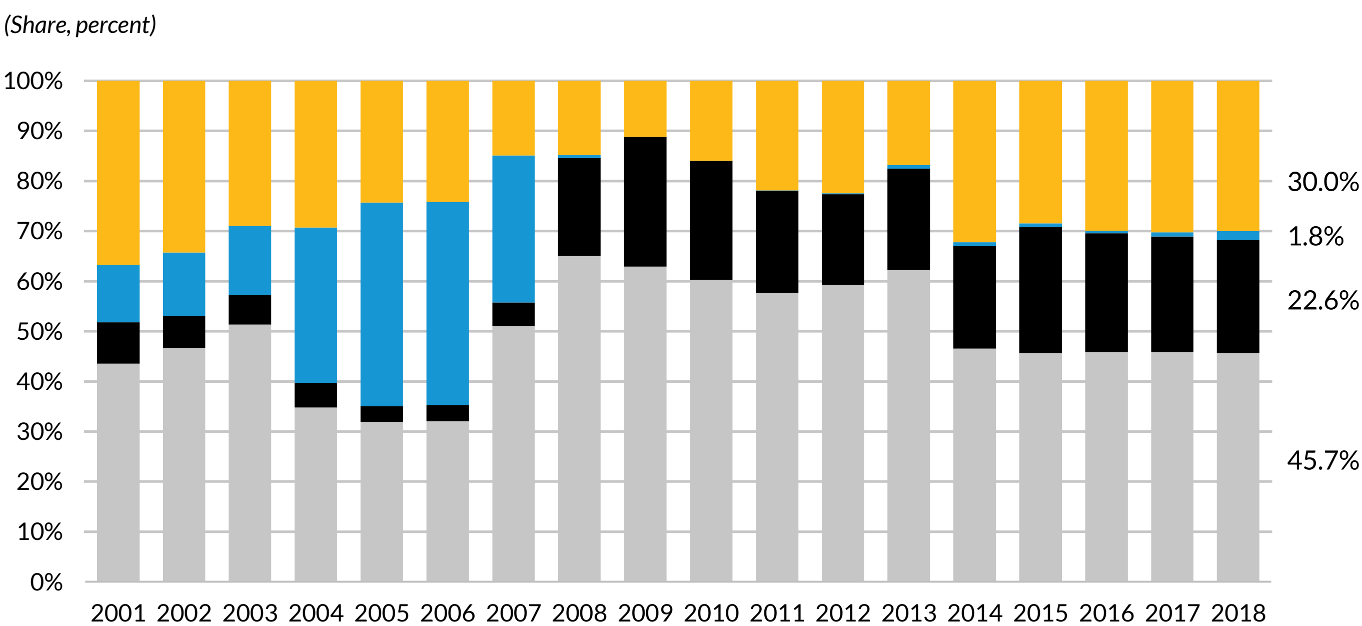
ORIGINATION VOLUME AND COMPOSITION

First Lien Origination Volume

In 2018, first lien originations totaled $1.63 trillion, down from $1.81 trillion in 2017, as higher interest rates curtailed refinance activity. The share of portfolio originations was 30 percent in 2018, down slightly from 30.3 percent in 2017. The GSE share was flat, at just above 45 percent. The FHA/VA share was down slightly: 22.6 percent in 2018 versus 23 percent in 2017. Private-label securitization finished at just under 2 percent share in 2018, the highest since 2007, but a small fraction of its share in the pre-bubble years.



Sources: Inside Mortgage Finance and Urban Institute. *Last updated March 2019*.



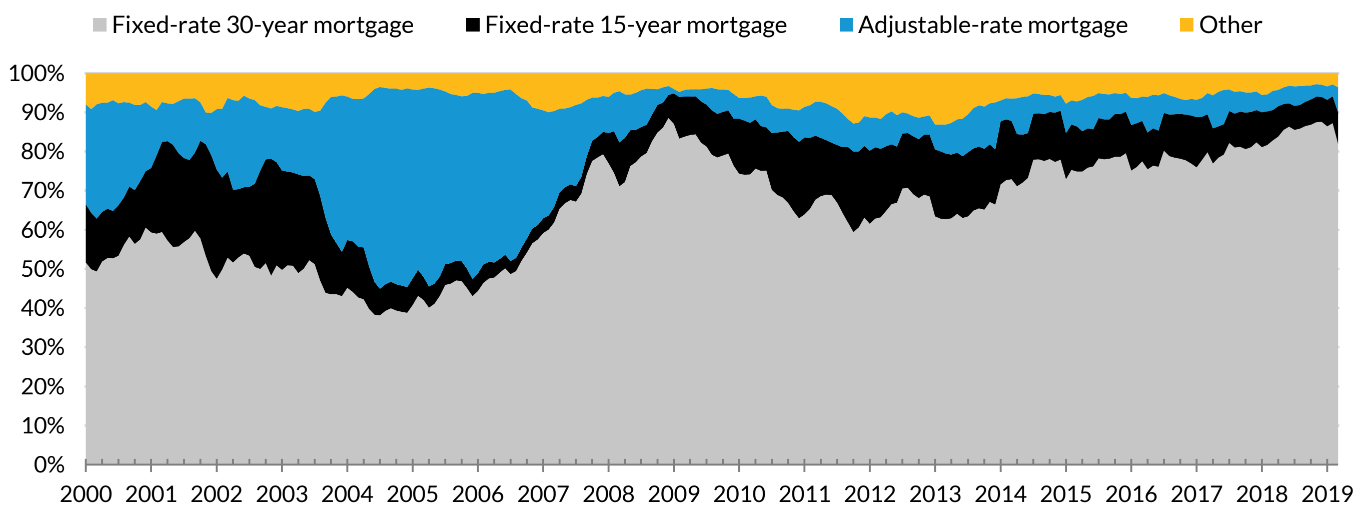
Sources: Inside Mortgage Finance and Urban Institute. *Last updated March 2019*.

OVERVIEW

PRODUCT COMPOSITION AND REFINANCE SHARE

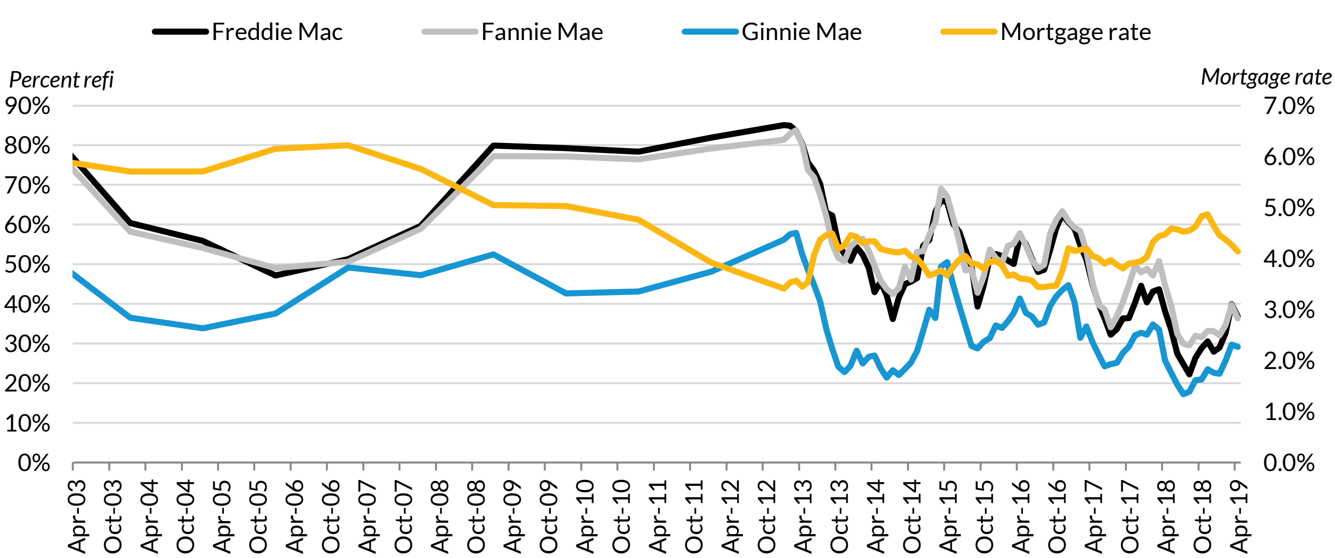
Adjustable-rate mortgages (ARMs) accounted for as much as 52 percent of all new originations during the peak of the housing bubble (top chart). The ARM share fell to a historic low of 1 percent in 2009, and then slowly increased to a high of 12 percent in December 2013. It grew in March 2019 to 6.4 percent, the highest level in almost two years, but remains far below the 2013 high. The 15-year fixed-rate mortgage, predominantly a refinance product, accounted for 8.1 percent of new originations in March 2019. The refinance share (bottom chart) increased in Q1 2019, driven by declining rates as well as seasonal declines in purchase volume. With the more recent rate stabilization, the April 2019 refi share also stabilized.

Product Composition



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

Percent Refi at Issuance



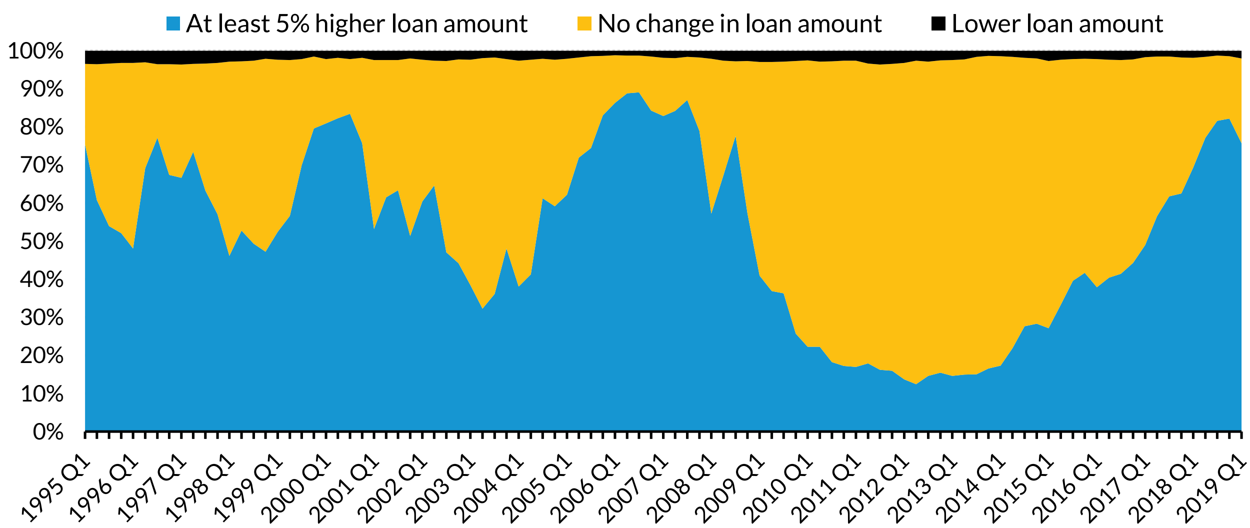
Sources: eMBS and Urban Institute.
Note: Based on at-issuance balance. Figure based on data from April 2019.

OVERVIEW

CASH-OUT REFINANCES

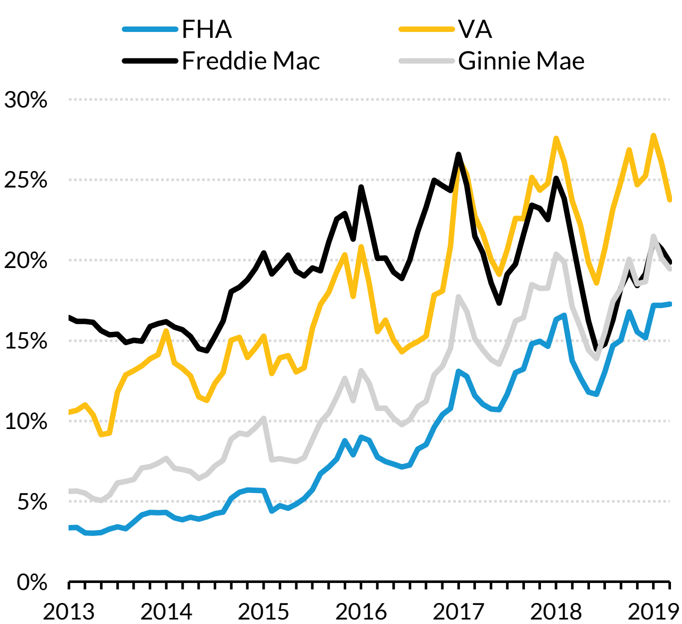
When mortgage rates are low, the share of cash-out refinances tends to be small, as refinancing allows borrowers to save money by taking advantage of lower rates. But when rates are high, the cash-out refinance share is higher: borrowers have no incentive to refinance for a rate reduction; the only reason for a refinance is to take out equity. The cash-out share of all refinances fell from 82 percent in the fourth quarter of 2018 to 76 percent in the first quarter of 2019, likely reflecting increased rate-refi activity amid falling rates in Q1 2019. FHA's cash-out refinance share remains the lowest. While the cash-out refinance share for conventional mortgages is close to bubble era peak, cash out volumes are substantially lower.

Loan Amount after Refinancing



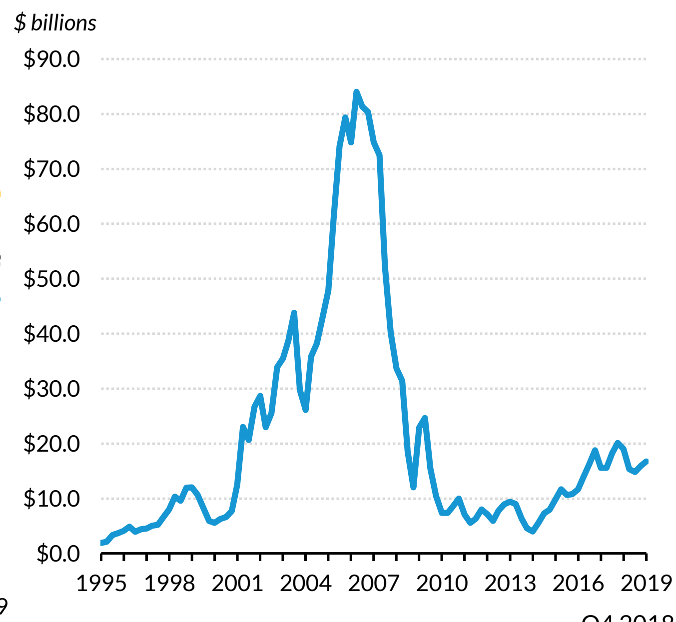
Sources: Freddie Mac and Urban Institute.
Note: Estimates include conventional mortgages only.

Cash-out Refi Share of All Originations



Sources: eMBS and Urban Institute.
Note: Cash-out refinance data not available for Fannie Mae. Data as of March 2019.

Cash-out Refi Volume



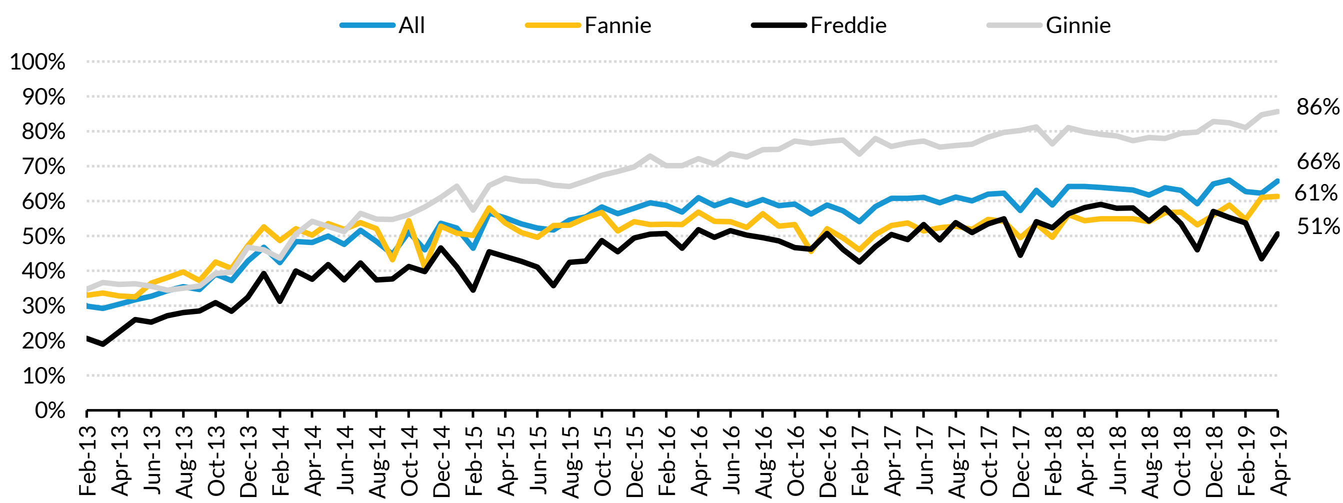
Sources: Freddie Mac and Urban Institute.
Note: Estimates include conventional mortgages only.

OVERVIEW

AGENCY NONBANK ORIGINATION SHARE

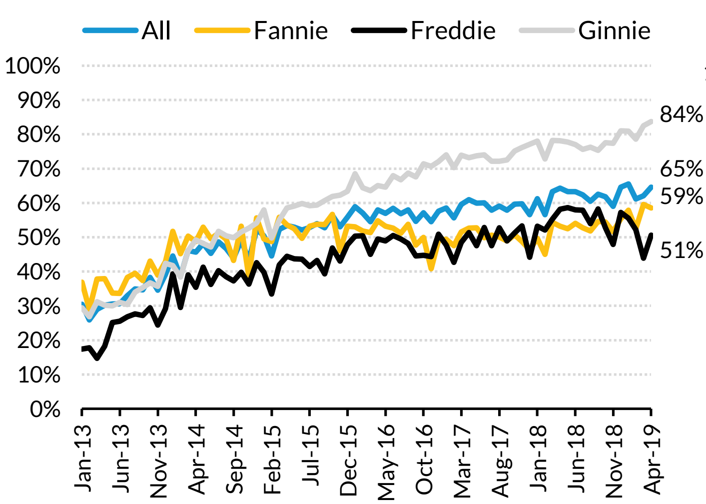
The nonbank origination share has been rising steadily for all three agencies since 2013. The Ginnie Mae nonbank share has been consistently higher than the GSEs, standing at a record high of 86 percent in April 2019. Freddie Mac's nonbank share grew in April, increasing to 51 percent, while Fannie remained at 61 percent (note that these numbers can be volatile on a month to month basis.) For Fannie and Ginnie, the nonbank origination share is higher for refinance loans than for purchase loans; they are about the same for Freddie.

Nonbank Origination Share: All Loans



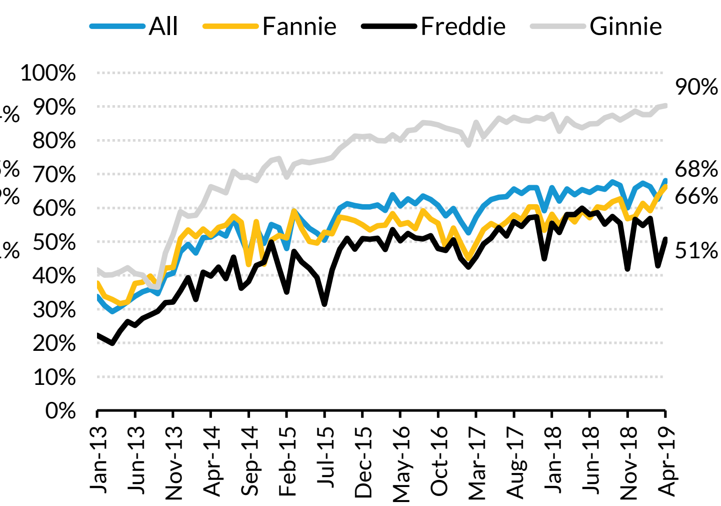
Sources: *eMBS and Urban Institute.*

Nonbank Origination Share: Purchase Loans



Sources: *eMBS and Urban Institute.*

Nonbank Origination Share: Refi Loans



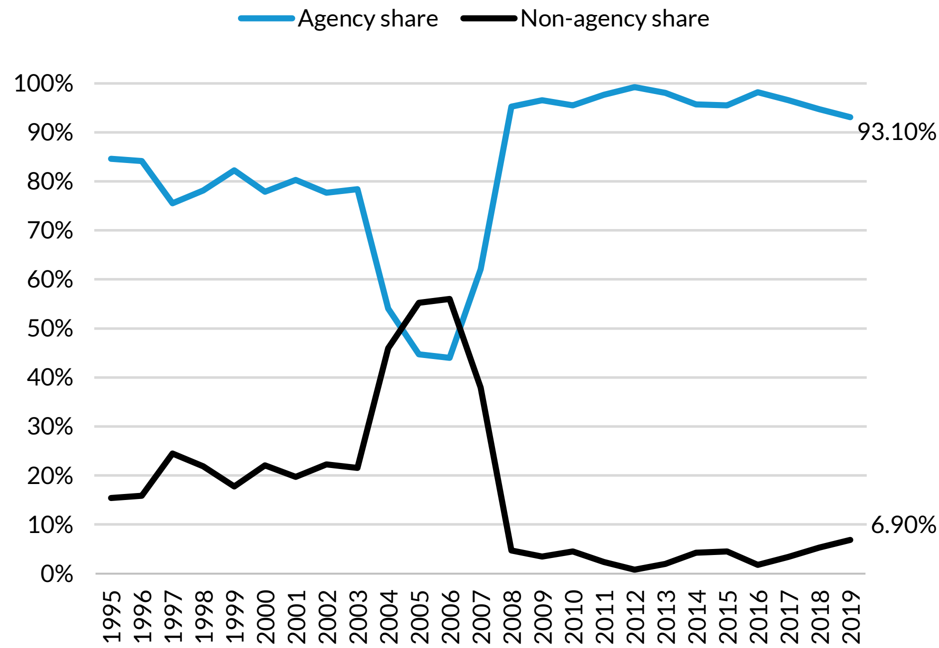
Sources: *eMBS and Urban Institute.*

OVERVIEW

SECURITIZATION VOLUME AND COMPOSITION

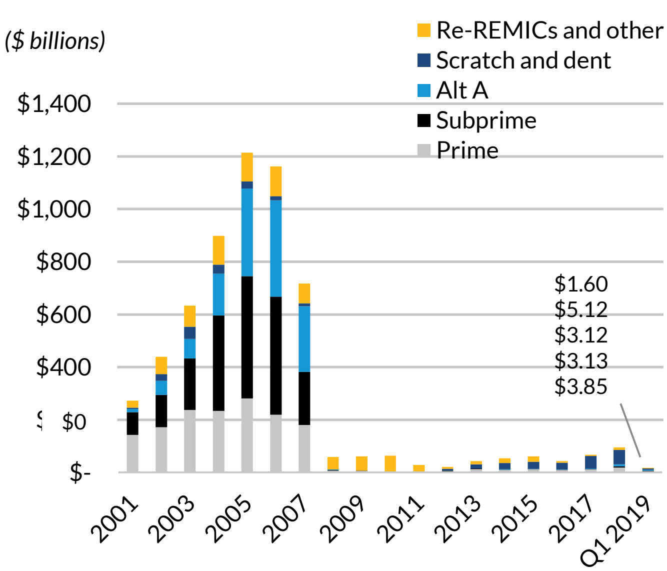
Agency/Non-Agency Share of Residential MBS Issuance

Non-agency share of mortgage securitizations has increased gradually over the years, from 1.8 percent in 2016 to 4.4 percent in 2018. It was even higher, 6.90 percent, as of April 2019. Non-agency securitization volume totaled $16.83 billion for Q1 2019, slightly higher than the $16.79 billion totaled in Q1 2018, but there is a change in the mix. Alt-A and subprime securitizations continue to grow, with subprime securitizations more than tripling and Alt-A securitizations more than doubling since this same period last year. Non-agency securitizations continue to be tiny compared to pre-crisis levels.



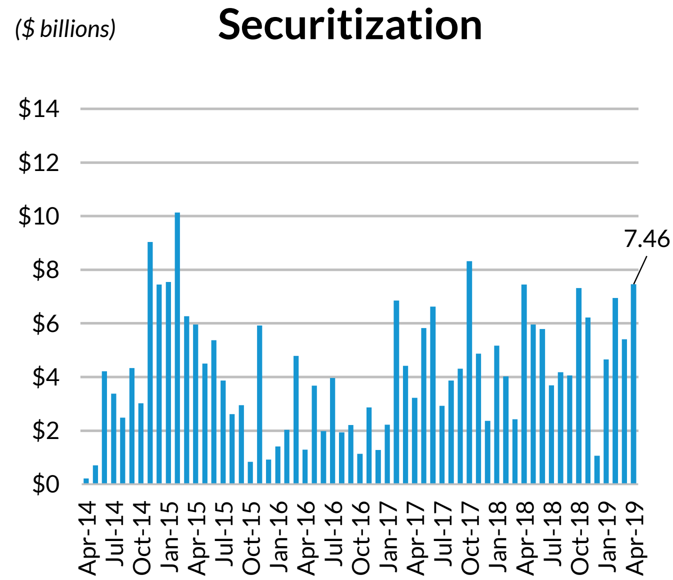
Sources: Inside Mortgage Finance and Urban Institute.
Note: Based on data from April 2019.

Non-Agency MBS Issuance



Sources: Inside Mortgage Finance and Urban Institute.

Monthly Non-Agency Securitization



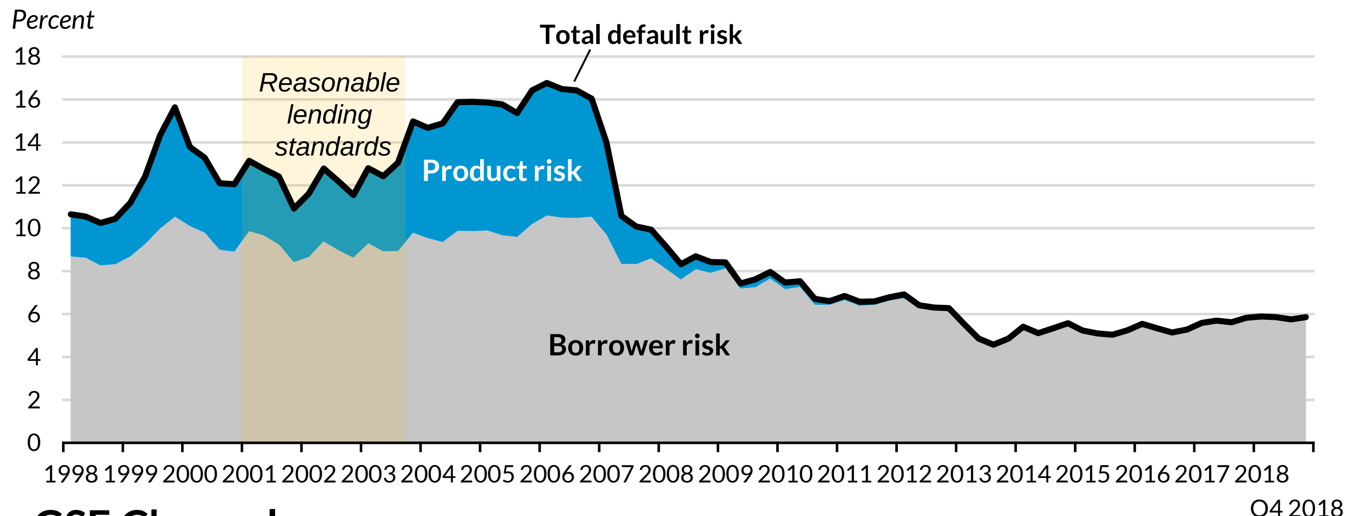
Sources: Inside Mortgage Finance and Urban Institute.

CREDIT BOX

HOUSING CREDIT AVAILABILITY INDEX

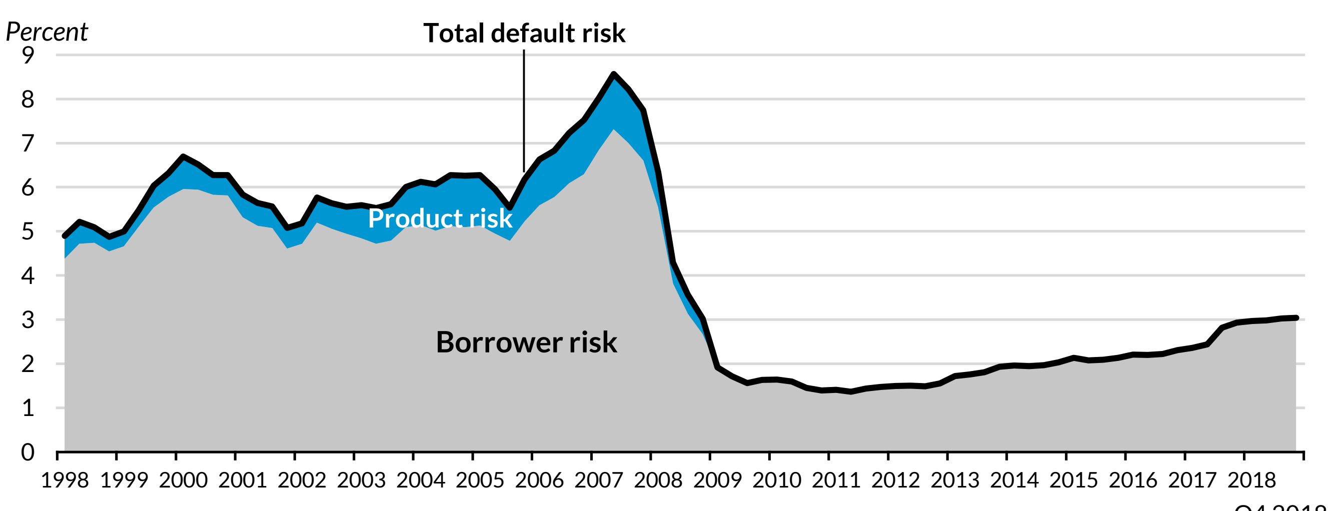
The Urban Institute's Housing Credit Availability Index (HCAI) assesses lenders' tolerance for both borrower risk and product risk, calculating the share of owner-occupied purchase loans that are likely to go 90+ days delinquent over the life of the loan. The index shows that mortgage credit availability increased to 5.85 percent in Q4 2018, up from the previous quarter (5.75 percent) and slightly higher than the fourth quarter of 2017 (5.83 percent). This quarter's increase was driven by an increase in risk taken by the portfolio and private-label securities channel. Credit also expanded in both the GSE and government channels, but very marginally. More information about the HCAI is available here.

All Channels



GSE Channel

The GSE market has expanded the credit box for borrowers more effectively than the government channel has in recent years. The downward trend of credit availability in the GSE channel began a reversal in Q2 2011. From Q2 2011 to Q4 2018, the total risk taken by the GSE channel has more than doubled, from 1.4 percent to 3.0 percent.



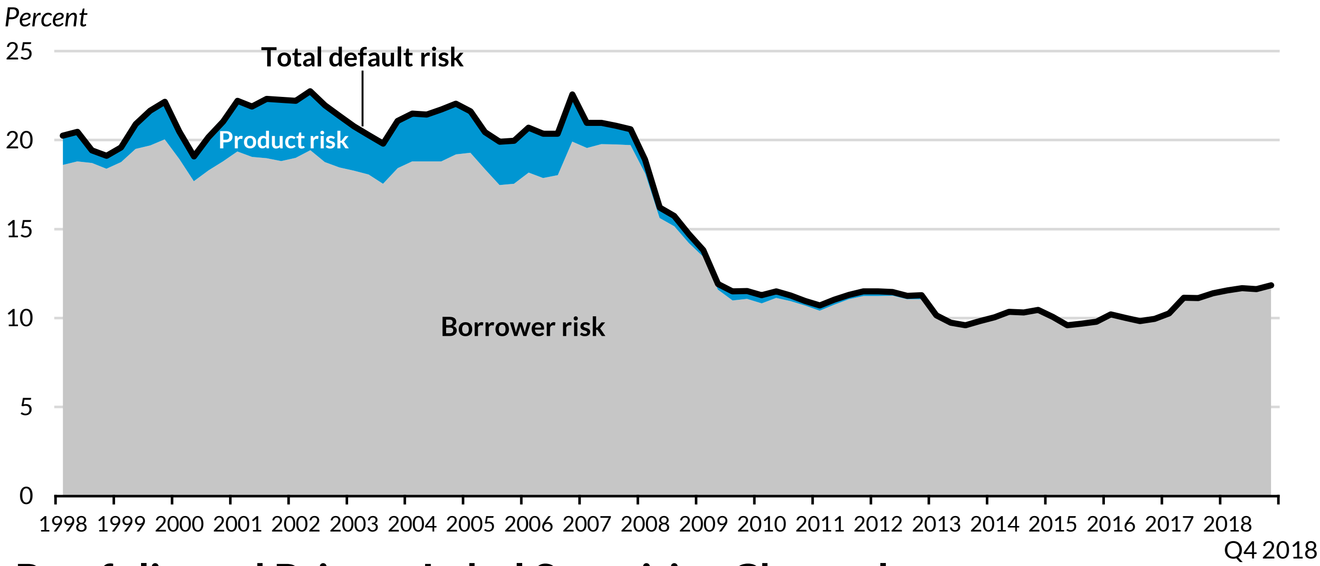
Sources: eMBS, CoreLogic, HMDA, IMF, and Urban Institute.
Note: Default is defined as 90 days or more delinquent at any point. *Last updated April 2019.*

CREDIT BOX

HOUSING CREDIT AVAILABILITY INDEX

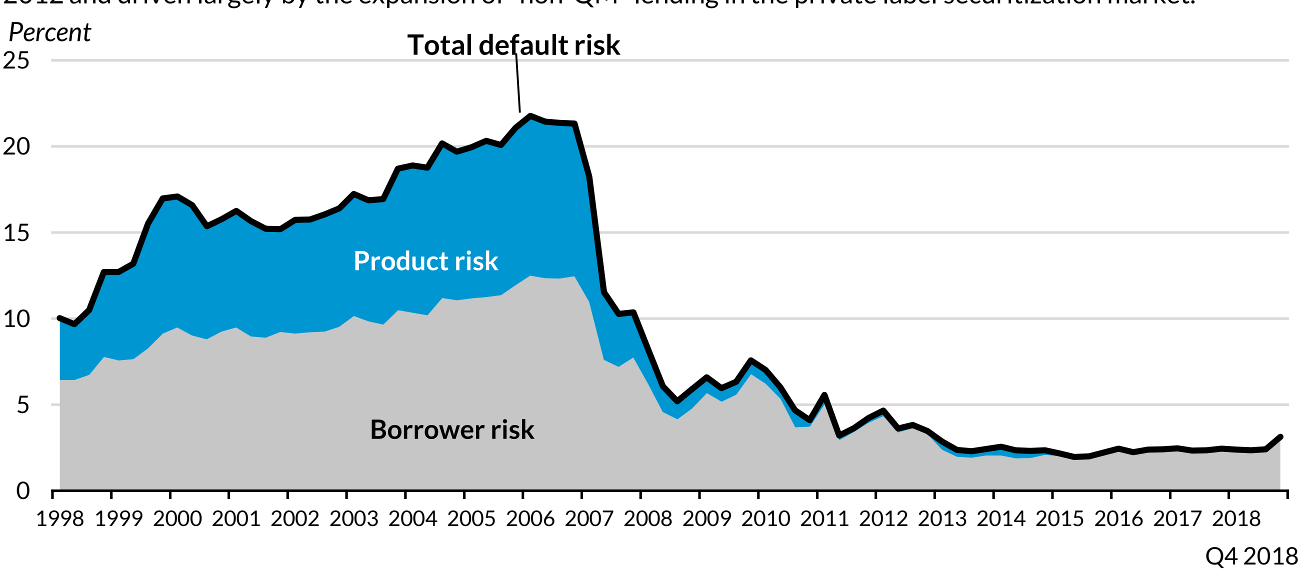
Government Channel

The total default risk the government channel is willing to take bottomed out at 9.6 percent in Q3 2013. It has fluctuated at or above that number since then. In the past nine quarters starting in Q4 2016, the risk in the government channel has risen from 9.9 to 11.8 percent, the highest level since 2009, but still about half the pre-bubble level of 19 – 23 percent.



Portfolio and Private Label Securities Channel

The portfolio and private-label securities channels collectively experienced a substantial increase in product and total default risk during the bubble. This was followed by a sharp decline post-crisis. Borrower risk increased in the fourth quarter of 2018, driven primarily a decline in FICO scores and an increase in high-LTV lending. Total risk in the PP channel was 3.1 percent in Q4 2018, up from 2.4 the previous quarter. This is the highest level since 2012 and driven largely by the expansion of "non-QM" lending in the private label securitization market.



Sources: eMBS, CoreLogic, HMDA, IMF, and Urban Institute.
Note: Default is defined as 90 days or more delinquent at any point. *Last updated April 2019.*

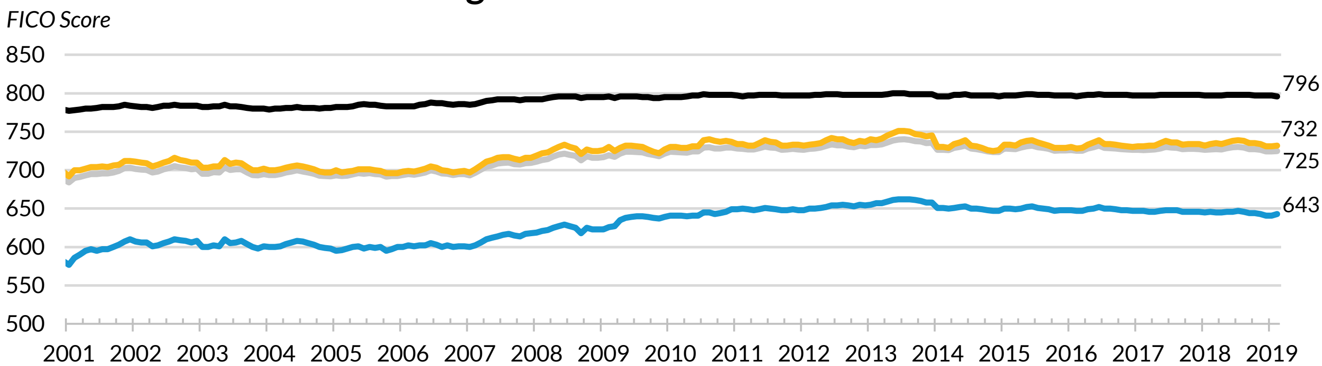
CREDIT BOX

CREDIT AVAILABILITY FOR PURCHASE LOANS

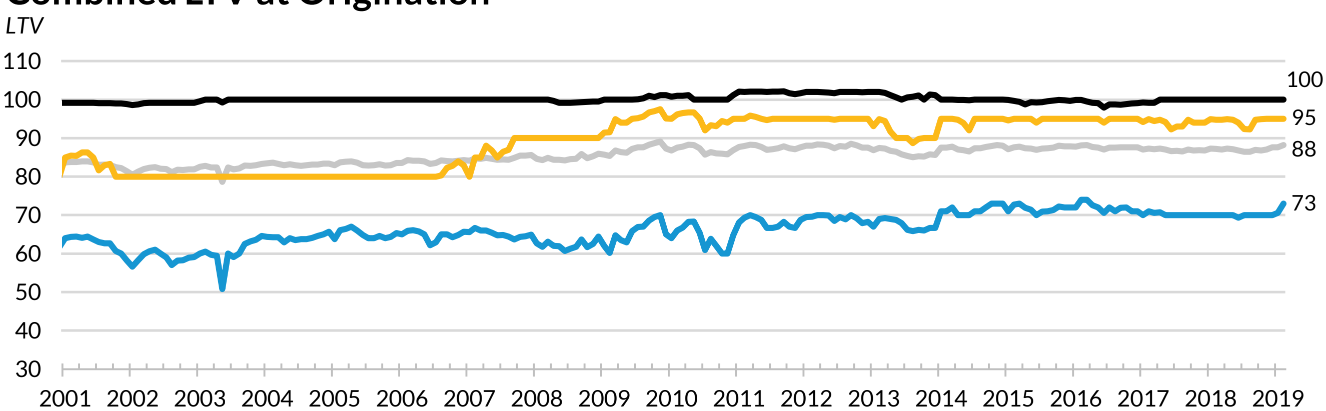
Access to credit remains tight, especially for lower FICO borrowers. Median FICO for current purchase loans is about 32 points higher than the pre-crisis level of around 700. The 10th percentile, which represents the lower bound of creditworthiness to qualify for a mortgage, increased to 643 in February 2019 compared to low-600s pre-bubble. Median LTV at origination of 95 percent remains relatively high, reflecting the rise of FHA and VA lending. Although current median DTI of 40 percent exceeds the pre-bubble level of 36 percent, higher FICO scores serve as a strong compensating factor.

Mean — 90th percentile — 10th percentile — Median

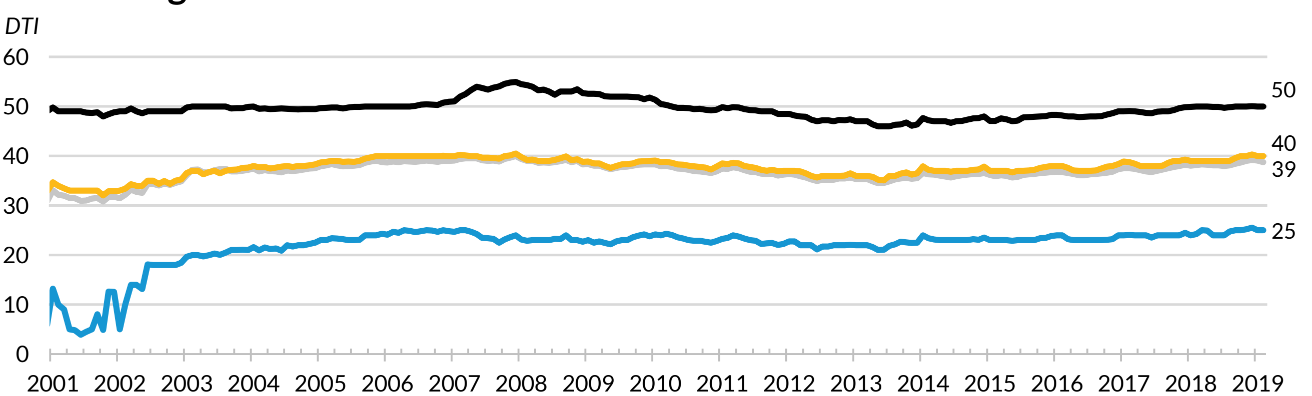
Borrower FICO Score at Origination



Combined LTV at Origination



DTI at Origination

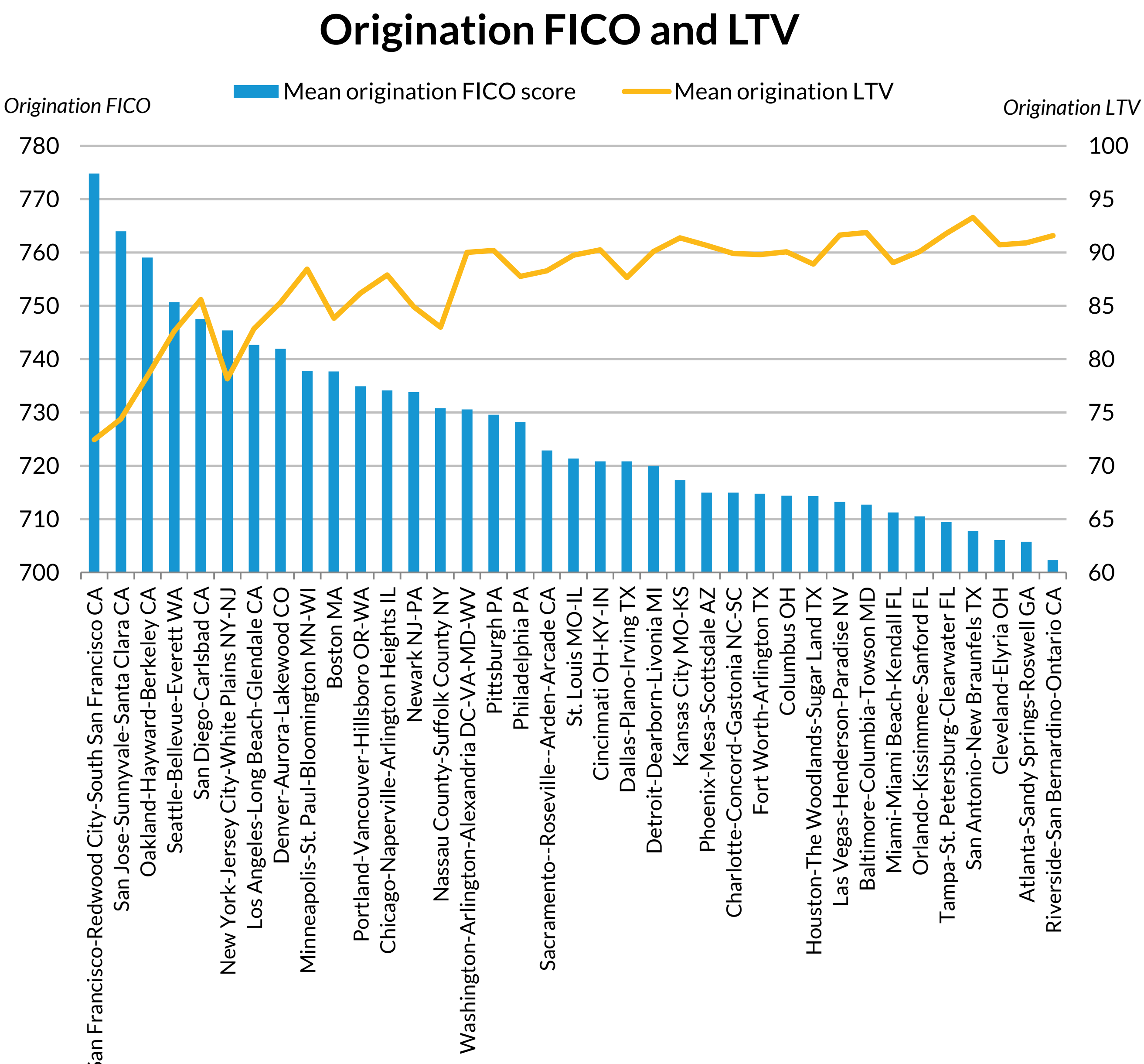


Sources: Black Knight, eMBS, HMDA, SIFMA, CoreLogic and Urban Institute.
Note: Includes owner-occupied purchase loans only. DTI data prior to April 2018 is from CoreLogic; after that date, it is from Black Knight. Data as of February 2019.

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

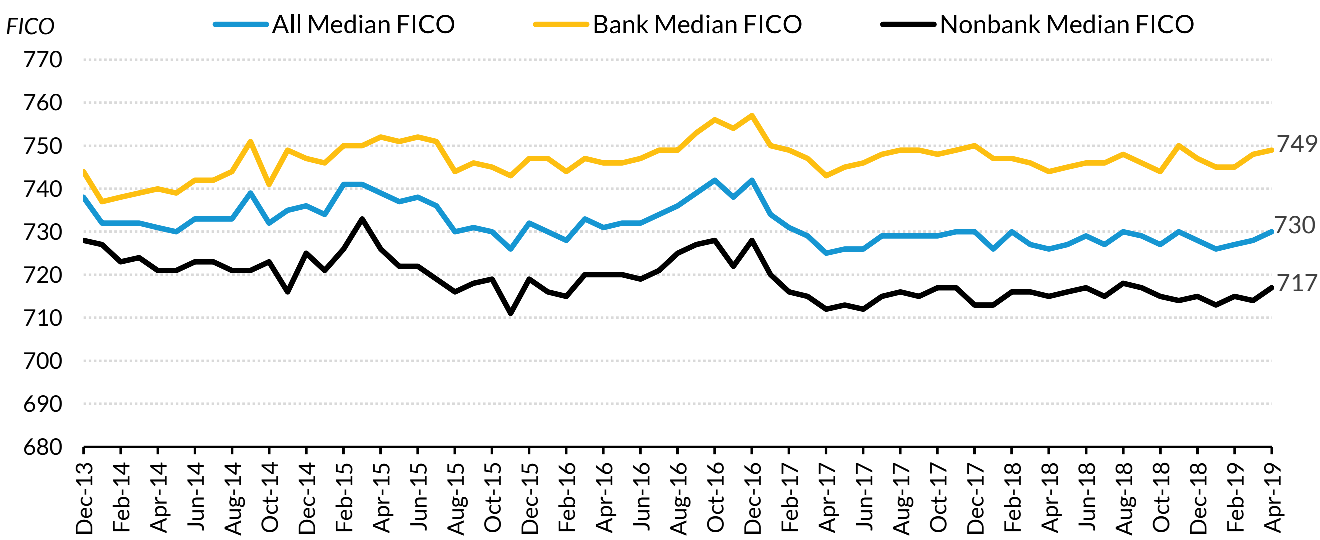


Sources: Black Knight, eMBS, HMDA, SIFMA and Urban Institute.
Note: Includes owner-occupied purchase loans only. Data as of February 2019.

AGENCY NONBANK CREDIT BOX

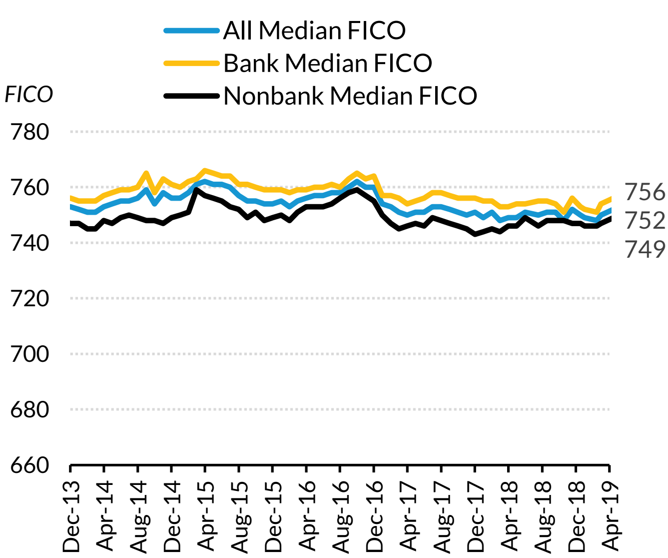
Nonbank originators have played a key role in opening up access to credit. Median GSE and Ginnie Mae FICOs for nonbank originations are lower than their bank counterparts, with a larger differential in the Ginnie Mae market. Within the GSE space, bank FICOs have declined slightly since 2014 and nonbank FICOs are roughly constant. In contrast, within the Ginnie Mae space, FICO scores for bank originations have been flat since 2014, while nonbank FICOs have declined. This largely reflects sharp cut-back in FHA lending by many banks. While banks comprise only 14% of the Ginnie Mae origination (page 11), those banks that are originating have relaxed their overlays. Bank FICO scores for Ginnie Mae origination have been steadily declining since December of 2018.

Agency FICO: Bank vs. Nonbank



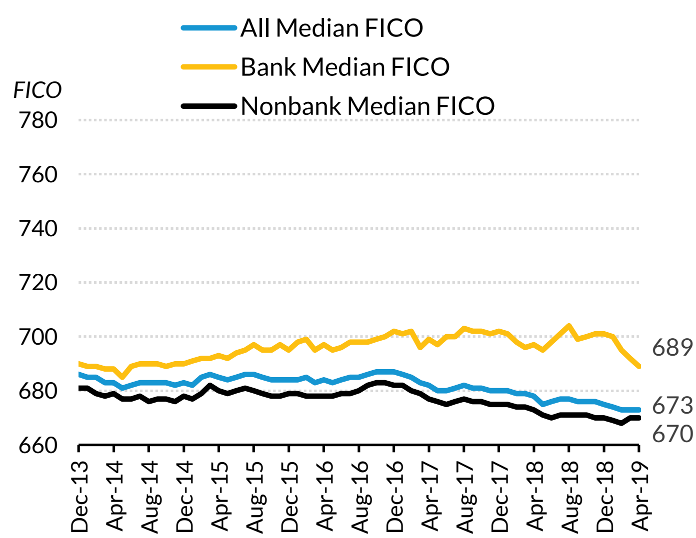
Sources: *eMBS and Urban Institute.*

GSE FICO: Bank vs. Nonbank



Sources: *eMBS and Urban Institute.*

Ginnie Mae FICO: Bank vs. Nonbank

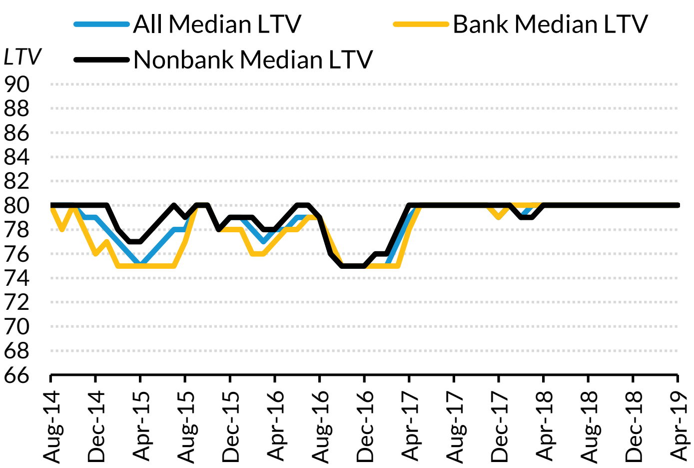


Sources: *eMBS and Urban Institute.*

AGENCY NONBANK CREDIT BOX

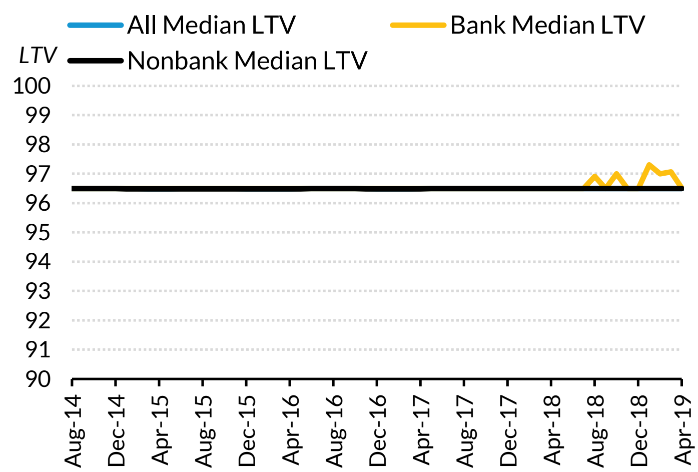
The median LTV for nonbank and bank originations are comparable, while the median DTIs for nonbank loans are higher, indicating that nonbanks are more accommodating in this dimension as well as in the FICO dimension. Since early 2017, there has been a substantial increase in DTIs, which has partially reversed in the past few months. This is true for both Ginnie Mae and the GSEs, for banks and nonbanks. As interest rates increased, DTIs rose, because borrower payments were driven up relative to incomes. With the fall in interest rates in the first quarter of 2019, DTIs decreased slightly.

GSE LTV: Bank vs. Nonbank



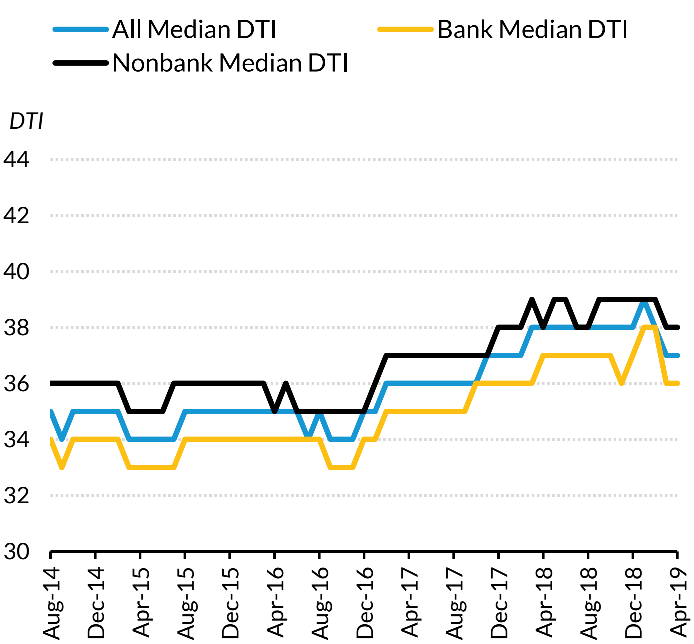
Sources: *eMBS and Urban Institute.*

Ginnie Mae LTV: Bank vs. Nonbank



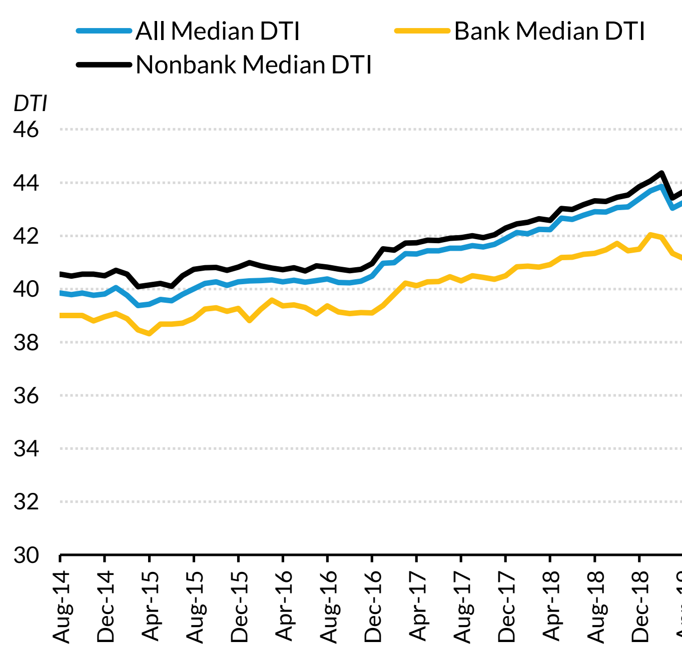
Sources: *eMBS and Urban Institute.*

GSE DTI: Bank vs. Nonbank



Sources: *eMBS and Urban Institute.*

Ginnie Mae DTI: Bank vs. Nonbank



Sources: *eMBS and Urban Institute.*

STATE OF THE MARKET

MORTGAGE ORIGINATION PROJECTIONS

With the drop in interest rates over the past few months, Fannie Mae, Freddie Mac and the MBA all estimate 2019 volume to be slightly higher than the $1.64 trillion in 2018. This increased origination estimate follows drops in origination volumes, due to drops in refinancing activity, over the past few years: 2018 was down from $1.76-$1.83 trillion in 2017, and 2017 was down from $1.89-2.05 trillion in 2016.

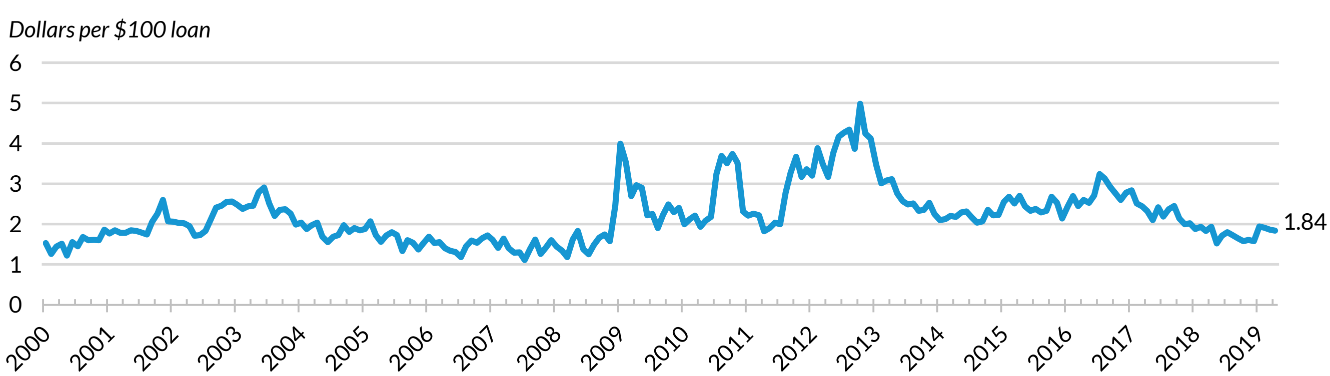
Total Originations and Refinance Shares

Period	Originations ($ billions)			Refi Share (percent)		
	Total, FNMA estimate	Total, FHLMC estimate	Total, MBA estimate	FNMA estimate	FHLMC estimate	MBA estimate
2018 Q1	368	377	342	38	40	37
2018 Q2	476	440	452	27	29	26
2018 Q3	429	435	457	26	25	24
2018 Q4	365	384	392	27	26	27
2019 Q1	329	357	325	34	39	30
2019 Q2	496	483	494	30	33	29
2019 Q3	435	480	460	24	31	22
2019 Q4	394	413	396	27	30	24
2015	1730	1750	1679	47	45	46
2016	2052	2125	1891	49	47	49
2017	1826	1807	1760	36	37	35
2018	1637	1636	1643	29	30	28
2019	1655	1773	1682	28	33	26
2020	1644	1701	1683	25	27	24

Sources: Fannie Mae, Freddie Mac, Mortgage Bankers Association and Urban Institute.
Note: Shaded boxes indicate forecasted figures. All figures are estimates for total single-family market. Regarding interest rates, the yearly averages for 2015, 2016, 2017 and 2018 were 3.9, 3.8, 4.0 and 4.6 percent. For 2019, the respective projections for Fannie, Freddie, and MBA are 4.4, 4.5, and 4.8 percent.

Originator Profitability and Unmeasured Costs

In April 2019, Originator Profitability and Unmeasured Costs (OPUC) stood at $1.84 per $100 loan, which is near the lower end of the range for the past 10 years, a decline from March 2019, but still up a bit over the final months of 2018. OPUC, formulated and calculated by the Federal Reserve Bank of New York, is a good relative measure of originator profitability. OPUC uses 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.



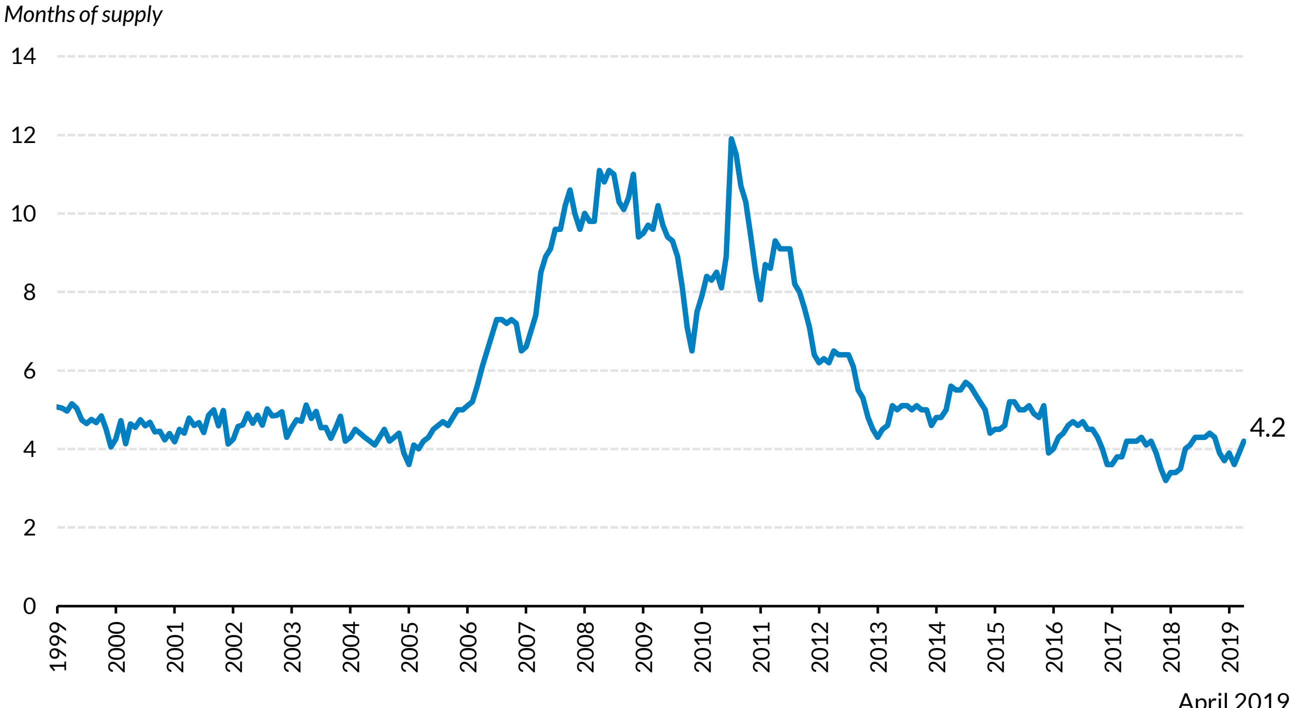
Sources: Federal Reserve Bank of New York, updated monthly and available at this link: http://www.ny.frb.org/research/epr/2013/1113fust.html and Urban Institute.
Note: OPUC is a is a monthly (4-week moving) average as discussed in Fuster et al. (2013).

STATE OF THE MARKET

HOUSING SUPPLY

Strong demand for housing in recent years, coupled with historically low new home construction has shrunk the supply of for-sale homes to 4.2 months in April 2019, although this number is up from 4.0 months in April 2018. Pre-crisis it averaged 4.6 months. Fannie Mae, Freddie Mac, the MBA and the NAHB forecast 2019 housing starts to be 1.23 to 1.26 million units, very similar to 2018. Fannie Mae, Freddie Mac and the MBA predict total home sales in 2019 to outpace 2018, at 6.1-6.2 million units. The NAHB also predicts higher home sales in 2019 at 5.3 million.

Months of Supply



Source: National Association of Realtors and Urban Institute.

Housing Starts and Homes Sales

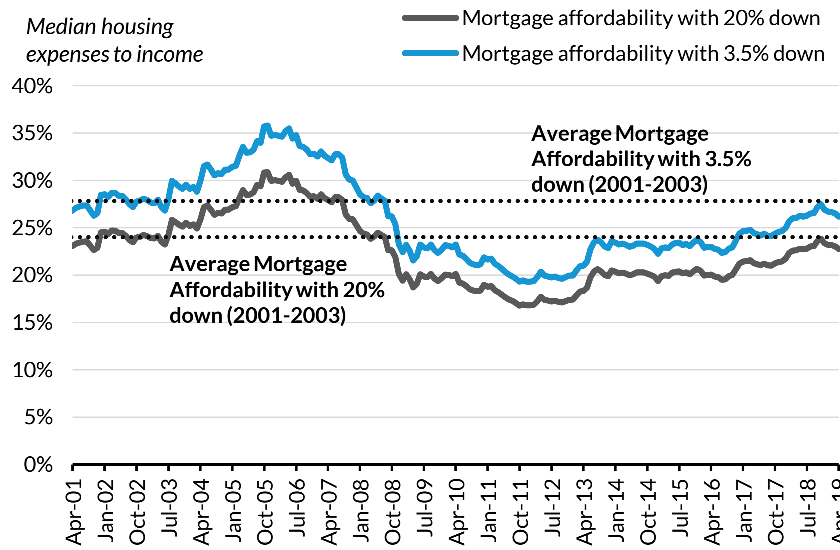
Year	Housing Starts, thousands				Home Sales. thousands			
	Total, FNMA estimate	Total, FHLMC estimate	Total, MBA estimate	Total, NAHB estimate	Total, FNMA estimate	Total, FHLMC estimate	Total, MBA estimate	Total, NAHB estimate
2015	1112	1110	1108	1107	5751	5750	5740	5125
2016	1174	1170	1177	1177	6011	6010	6001	5385
2017	1203	1200	1208	1208	6123	6120	6158	5523
2018	1242	1250	1249	1249	5959	5970	5990	5359
2019	1229	1260	1248	1245	6014	5980	6035	5295
2020	1257	1330	1300	1286	6071	6140	6190	5330

Sources: Mortgage Bankers Association, Fannie Mae, Freddie Mac, National Association of Home Builders and Urban Institute.
Note: Shaded boxes indicate forecasted figures. All figures are estimates for total single-family market; column labels indicate source of estimate. NAHB home sales estimate is for single-family sales only.

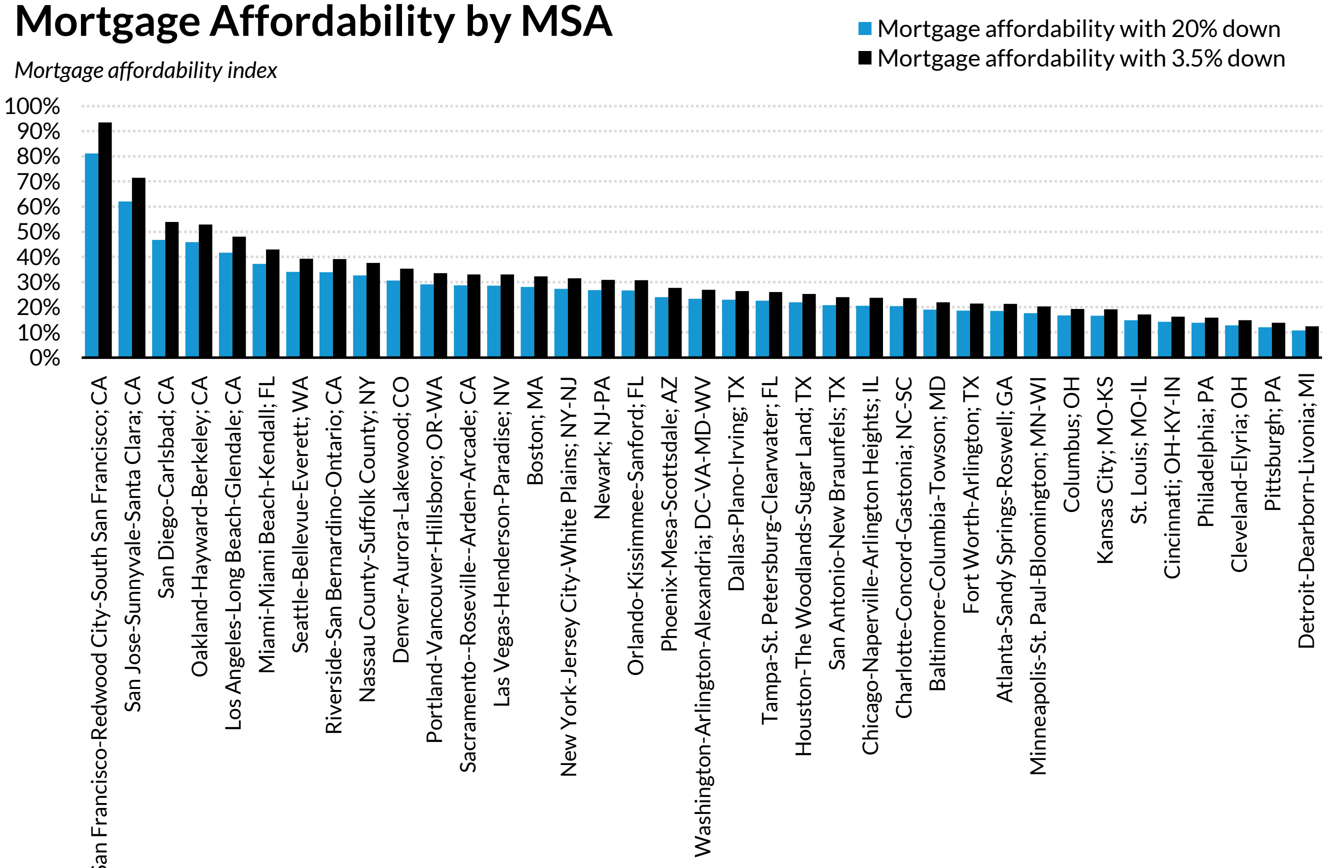
STATE OF THE MARKET
HOUSING AFFORDABILITY

National Mortgage Affordability Over Time

Home prices remain affordable by historical standards, despite price increases over the last 7 years, as interest rates remain relatively low in a historical context. As of April 2019, 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 26.1 percent. Since February, 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

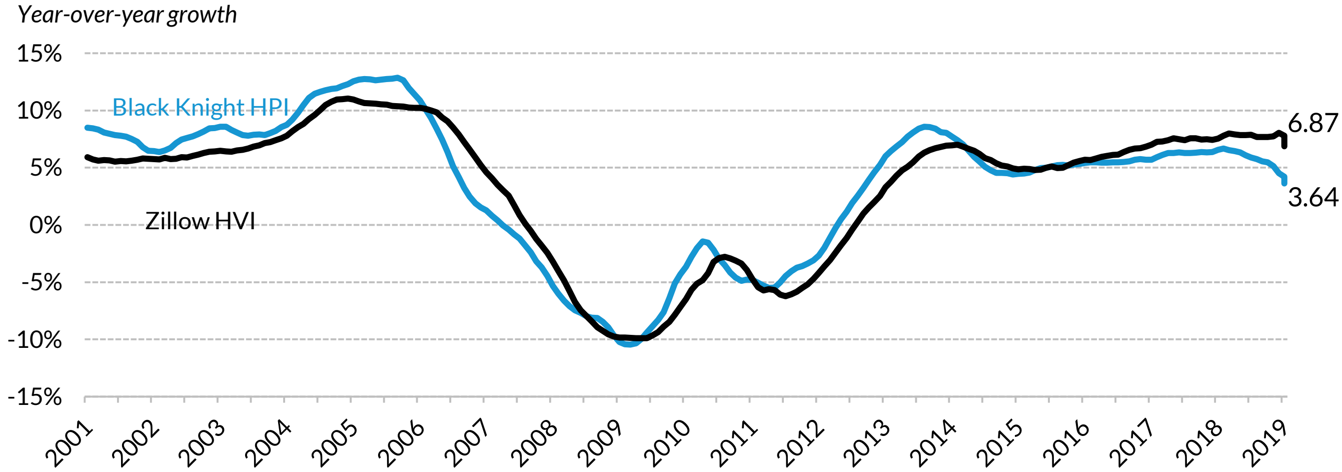


Sources: National Association of Realtors, US Census Bureau, Current Population Survey, American Community Survey, Moody's Analytics, Freddie Mac Primary Mortgage Market Survey, and the Urban Institute.
Note: Mortgage affordability is the share of median family income devoted to the monthly principal, 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 Q4 2018.

HOME PRICE INDICES

National Year-Over-Year HPI Growth

Year-over-year home price appreciation continued to slow in March 2019, as measured by both Black Knight's repeat sales index and Zillow's hedonic index. We will be monitoring home prices carefully as the Spring home buying season is upon us. We would expect the lower end of the market to fair better than the upper end, as low-end inventory is very tight.



Sources: Black Knight, Zillow, and Urban Institute. **Note:** Data as of March 2019.

Changes in Black Knight HPI for Top MSAs

After rising 50.2 percent from the trough, national house prices are now 11.8 percent higher than pre-crisis peak levels. At the MSA level, ten of the top 15 MSAs have exceeded their pre-crisis peak HPI: New York, NY; Los Angeles, CA; Atlanta, GA; Houston, TX; 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 Riverside, CA—are 11.0 and 11.3 percent, respectively, below peak values.

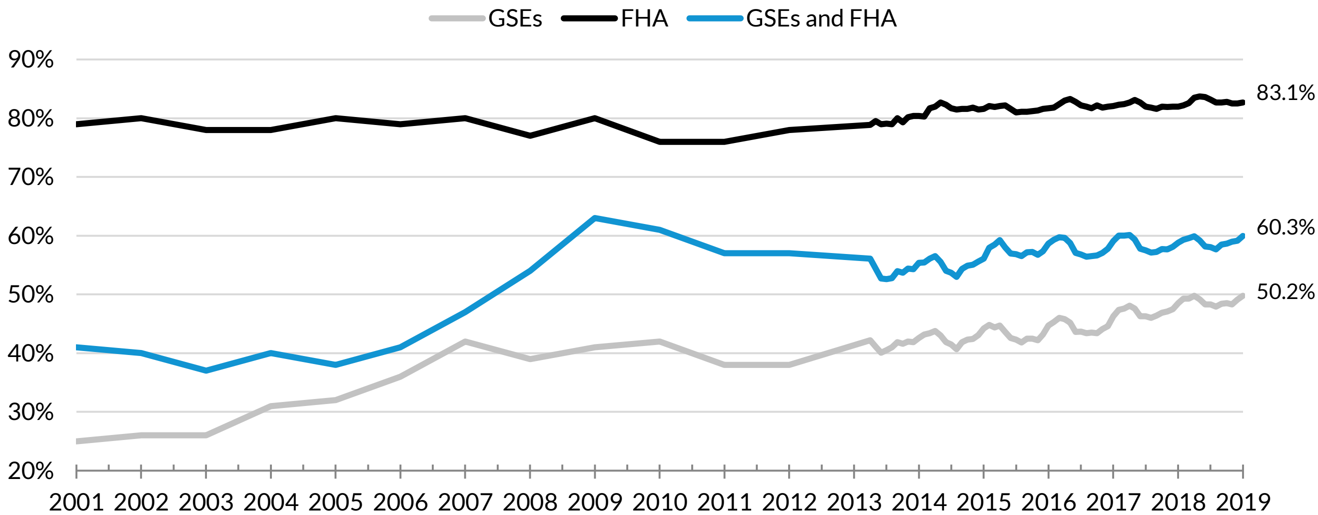
MSA	HPI changes (%)			% above peak
	2000 to peak	Peak to trough	Trough to current	
United States	75.7	-25.6	50.2	11.8
New York-Jersey City-White Plains, NY-NJ	127.8	-22.3	42.4	10.6
Los Angeles-Long Beach-Glendale, CA	180.0	-38.2	80.6	11.7
Chicago-Naperville-Arlington Heights, IL	67.1	-38.4	44.4	-11.0
Atlanta-Sandy Springs-Roswell, GA	32.6	-35.8	75.8	13.0
Washington-Arlington-Alexandria, DC-VA-MD-WV	149.2	-28.3	34.2	-3.8
Houston-The Woodlands-Sugar Land, TX	29.3	-6.7	45.1	35.4
Phoenix-Mesa-Scottsdale, AZ	113.4	-51.2	88.5	-7.8
Riverside-San Bernardino-Ontario, CA	175.8	-51.7	83.5	-11.3
Dallas-Plano-Irving, TX	26.5	-7.2	63.3	51.6
Minneapolis-St. Paul-Bloomington, MN-WI	69.2	-30.2	55.9	8.7
Seattle-Bellevue-Everett, WA	90.6	-33.0	101.5	35.0
Denver-Aurora-Lakewood, CO	34.0	-12.1	88.7	65.9
Baltimore-Columbia-Towson, MD	123.4	-24.1	19.0	-9.7
San Diego-Carlsbad, CA	148.5	-37.6	72.1	7.5
Anaheim-Santa Ana-Irvine, CA	163.4	-35.3	62.6	5.2

Sources: Black Knight HPI and Urban Institute. Data as of March 2019.
Note: This table includes the largest 15 Metropolitan areas by mortgage count.

FIRST-TIME HOMEBUYERS

First-Time Homebuyer Share

In February 2019, the first-time homebuyer (FTHB) share for FHA and GSE purchase loans both increased, with the combined FTHB share reaching 60.3 percent, the highest level in the last decade. The FTHB share for FHA, which has always been more focused on first time homebuyers, stood at 83.1 percent in February 2019. The GSE FTHB share in February was 50.2 percent, a historical high. The bottom table shows that based on mortgages originated in February 2019, 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 and higher DTI, thus paying a higher interest rate.



Sources: eMBS, Federal Housing Administration (FHA) and Urban Institute. February 2019
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

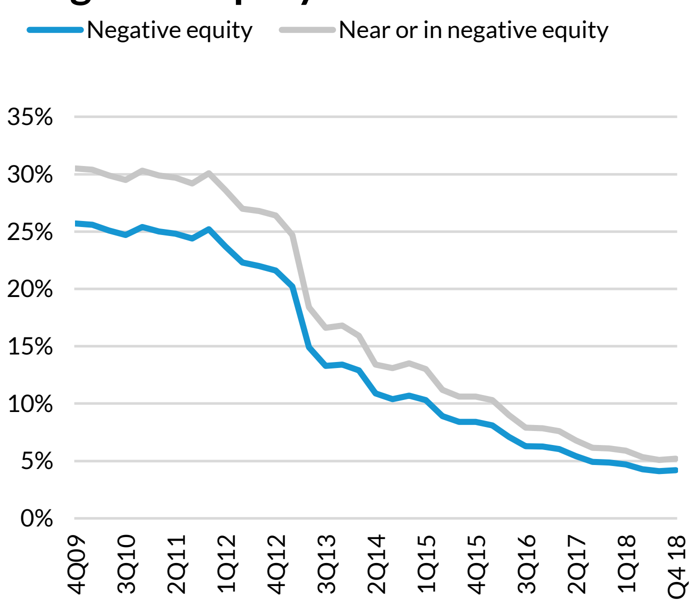
	GSEs		FHA		GSEs and FHA	
Characteristics	First-time	Repeat	First-time	Repeat	First-time	Repeat
Loan Amount ($)	242,142	264,182	210,779	227,046	229,384	258,060
Credit Score	740	755	669	674	711	741
LTV (%)	88	80	96	94	91	82
DTI (%)	36	37	44	45	39	38
Loan Rate (%)	4.73	4.64	4.90	4.80	4.80	4.67

Sources: eMBS and Urban Institute.
Note: Based on owner-occupied purchase mortgages originated in February 2019.

DELINQUENCIES AND LOSS MITIGATION ACTIVITY

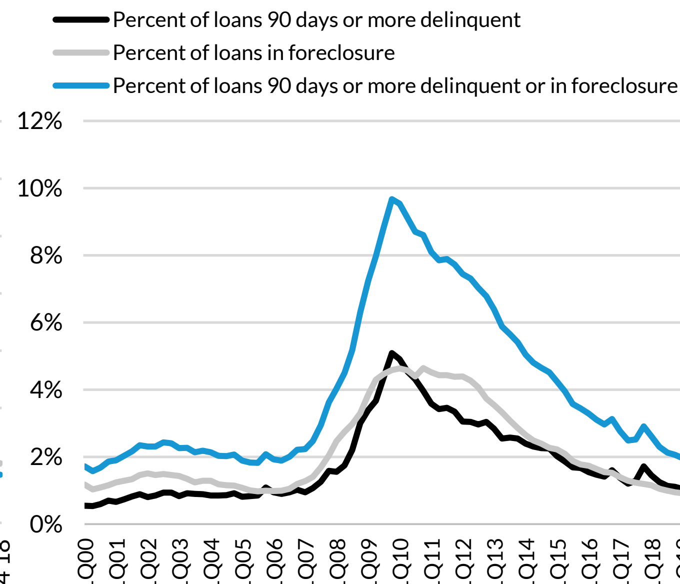
Loans in and near negative equity continued to decline in 2018; 4.1 percent now have negative equity, an additional 1.0 percent have less then 5 percent equity. Loans that are 90 days delinquent or in foreclosure have also been in a long decline, falling to 1.96 percent in the first quarter of 2019. 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 8,491,929 borrowers received a modification from Q3 2007 to Q2 2018, compared with 8,673,435 liquidations in the same period.

Negative Equity Share



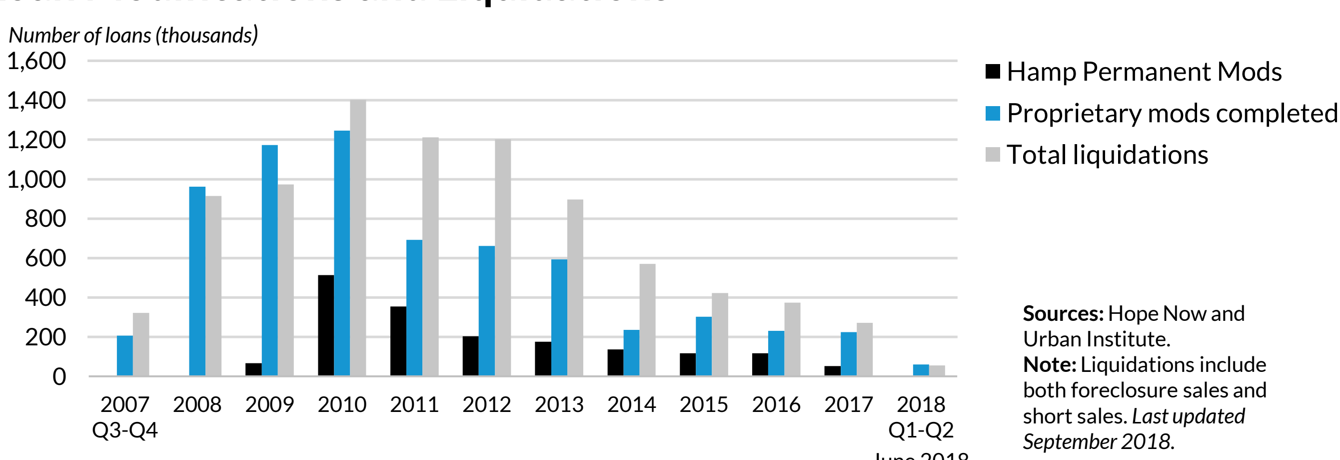
Sources: CoreLogic and Urban Institute.
Note: Loans with negative equity refer to loans above 100 percent LTV. Loans near negative equity refer to loans above 95 percent LTV. *Last updated March 2019.*

Loans in Serious Delinquency/Foreclosure



Sources: Mortgage Bankers Association and Urban Institute. *Last updated May 2019.*

Loan Modifications and Liquidations

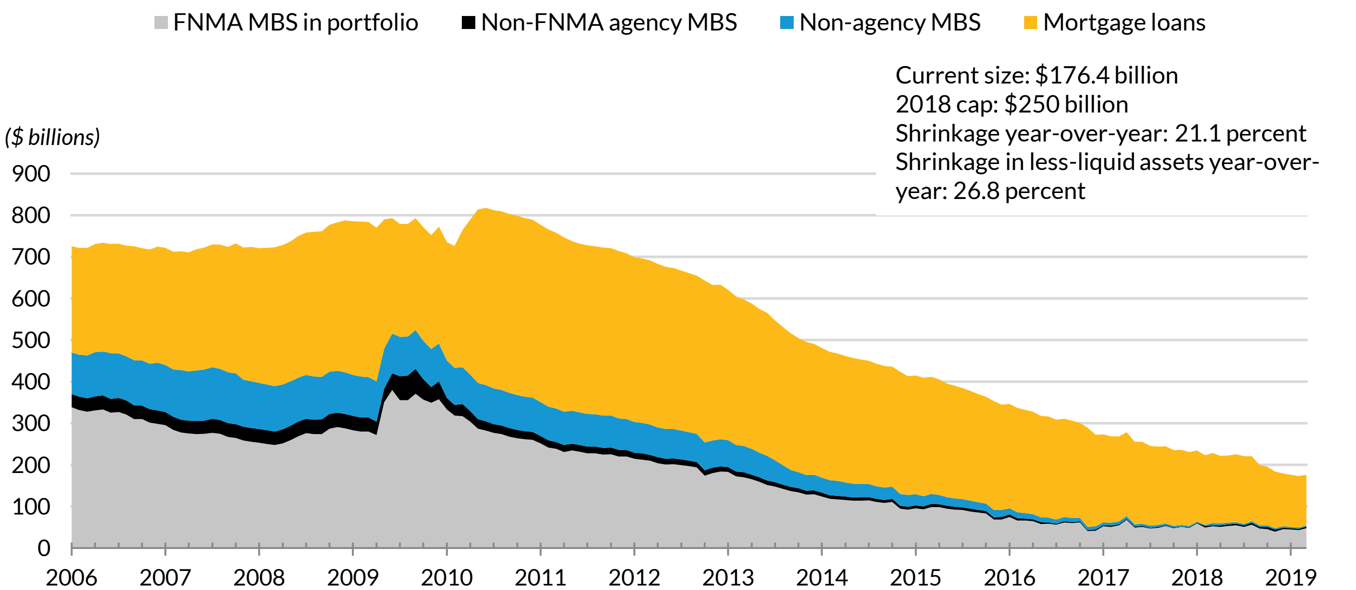


Sources: Hope Now and Urban Institute.
Note: Liquidations include both foreclosure sales and short sales. *Last updated September 2018.*

GSE PORTFOLIO WIND-DOWN

Both GSEs continue to contract their retained portfolios. Since March 2018, Fannie Mae has contracted by 21.1 percent and Freddie Mac by 9.1 percent. They are shrinking their less-liquid assets (mortgage loans and non-agency MBS) faster than they are shrinking their entire portfolio. The Fannie Mae and Freddie Mac portfolios are now both well below the $250 billion maximum portfolio size; they were required to reach this terminal level by year end 2018. Fannie met the target in 2017, Freddie met the target in February 2018.

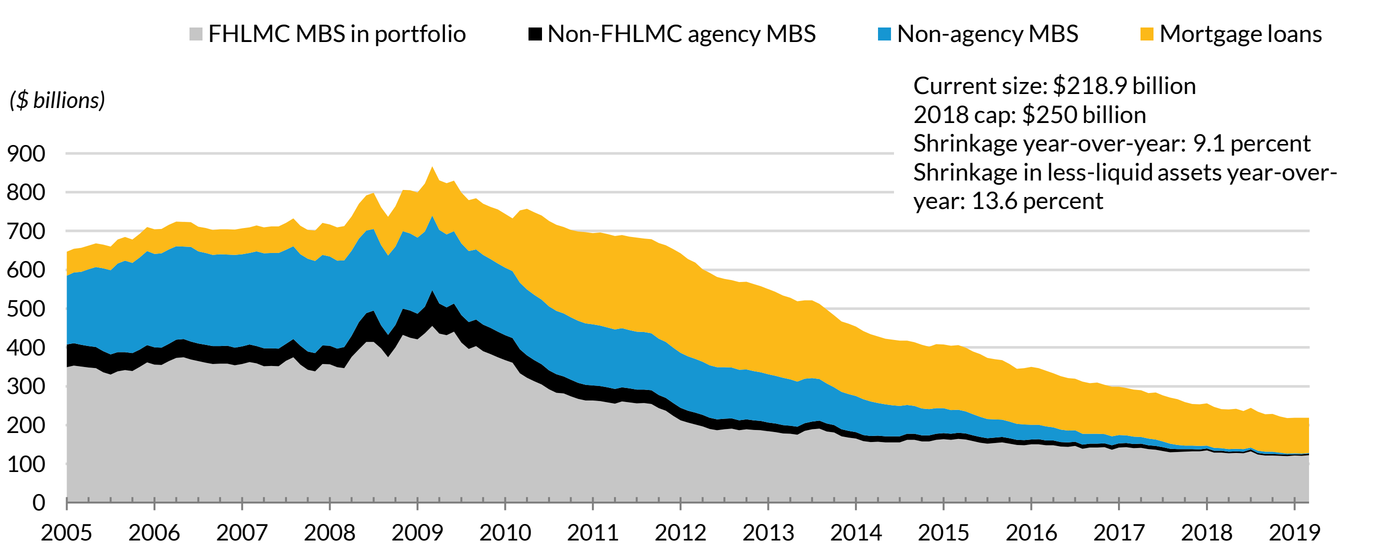
Fannie Mae Mortgage-Related Investment Portfolio Composition



Sources: Fannie Mae and Urban Institute.

March 2019

Freddie Mac Mortgage-Related Investment Portfolio Composition



Sources: Freddie Mac and Urban Institute.

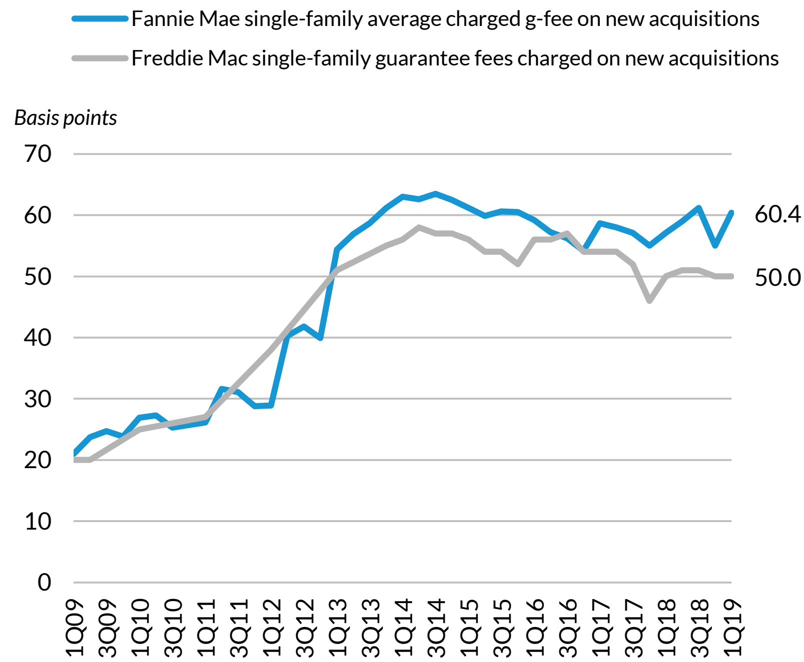
March 2019

EFFECTIVE GUARANTEE FEES

Guarantee Fees Charged on New Acquisitions

Fannie Mae's 2019 10-Q indicates that its average g-fees charged on new acquisitions grew from 55.0 to 60.4 bps in Q1 2019 while Freddie remained at 50.0. This is markedly higher than g-fee levels in 2011 and 2012, and has contributed to the GSEs' earnings. The GSE's latest Loan-Level Pricing Adjustments (LLPAs) took effect in September 2015; the bottom table shows the Fannie Mae LLPAs, which are expressed as upfront charges.

Sources: Fannie Mae, Freddie Mae and Urban Institute.
Last updated May 2019.



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 (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.

GSE RISK-SHARING TRANSACTIONS

Fannie Mae and Freddie Mac have been laying off back-end credit risk through CAS and STACR deals as well as 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 2019 scorecard requires the GSEs to lay off credit risk on 90 percent of newly acquired loans in categories targeted for transfer. Fannie Mae's CAS issuances since inception total $1.245 trillion, while Freddie's STACR totals $1.209 trillion.

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	$213,944	$6,690	3.1
January 2017	CAS 2017 – C01	$43,758	$1,351	3.1
March 2017	CAS 2017 – C02	$39,988	$1,330	3.3
May 2017	CAS 2017 – C03	$41,246	$1,371	3.3
May 2017	CAS 2017 – C04	$30,154	$1,003	3.3
July 2017	CAS 2017 – C05	$43,751	$1,351	3.1
August 2017	CAS 2017 – C06	$31,900	$1,101	3.5
November 2017	CAS 2017– C07	$33,900	$1,200	3.5
February 2018	CAS 2018 – C01	$44,900	$1,494	3.3
March 2018	CAS 2018 - C02	$26,500	$1,007	3.8
May 2018	CAS 2018 - C03	$31,100	$1,050	3.4
June 2018	CAS 2018 - C04	$24,700	$940	3.8
July 2018	CAS 2018 - C05	$28,700	$983	3.4
October 2018	CAS 2018 - C06	$25,700	$918	3.6
October 2018	CAS 2018 - R07	$24,300	$922	3.8
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
Total		**$1,245,172**	**$38,217**	**3.1**

Freddie Mac – Structured Agency Credit Risk (STACR)

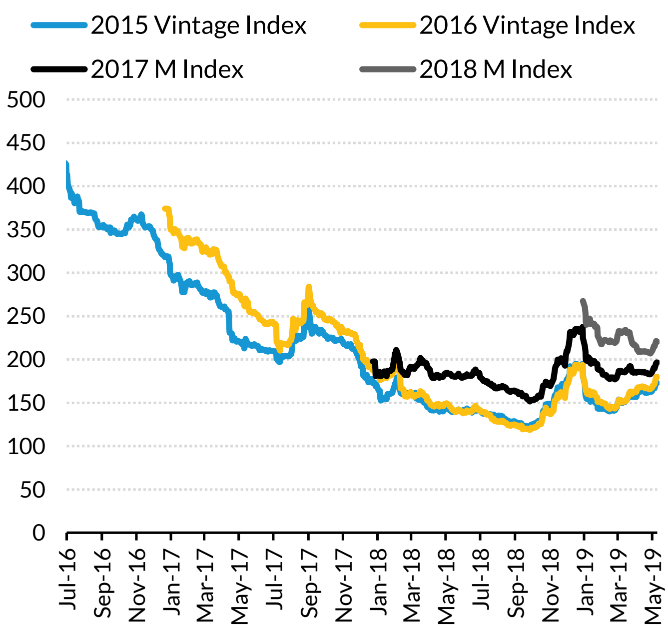
Date	*Transaction*	*Reference Pool Size ($ m)*	*Amount Issued ($m)*	*% of Reference Pool Covered*
2013	STACR 2013 deals	$57,912	$1,130	2.0
2014	STACR 2014 deals	$147,120	$4,916	3.3
2015	STACR 2015 deals	$209,521	$6,658	3.2
2016	STACR 2016 deals	$199,130	$5,541	2.8
January 2017	STACR Series 2017 – DNA1	$33, 965	$802	2.4
February 2017	STACR Series 2017 – HQA1	$29,700	$753	2.5
April 2017	STACR Series 2017 – DNA2	$60,716	$1,320	2.2
June 2017	STACR Series 2017 – HQA2	$31,604	$788	2.5
September 2017	STACR Series 2017 – DNA3	$56,151	$1,200	2.1
October 2017	STACR Series 2017 – HQA3	$21,641	$600	2.8
December 2017	STACR Series 2017 – HRP1	$15,044	$200	1.3
January 2018	STACR Series 2018 – DNA1	$34,733	$900	2.6
March 2018	STACR Series 2018 – HQA1	$40,102	$985	2.5
June 2018	STACR Series 2018 – DNA2	$49,346	$1,050	2.1
September 2018	STACR Series 2018 – DNA3	$30,000	$820	2.7
October 2018	STACR Series 2018 – HQA2	$36,200	$1,000	2.8
November 2018	STACR Series 2018 – HRP2	$26,200	$1,300	5.0
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
Total		**$1,209,035**	**$32,680**	**2.7**

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

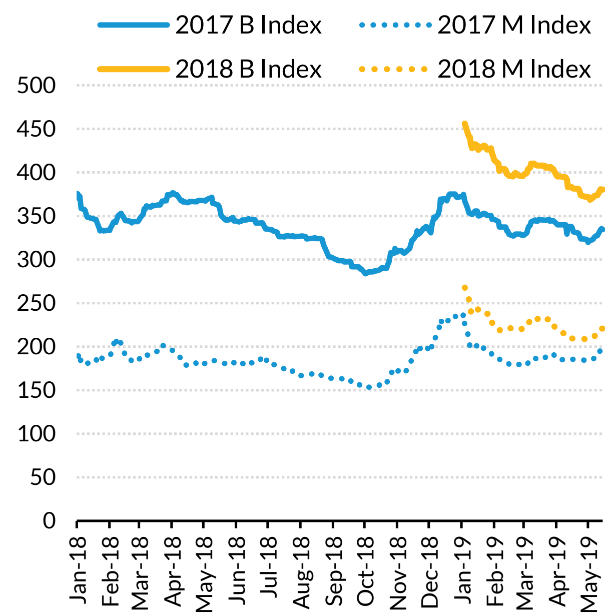
GSE RISK-SHARING INDICES

Spreads on older CRT securities have narrowed considerably through time, despite occasional bouts of volatility. In late 2018, there was considerable spread widening, followed by a sharp spread narrowing in 2019, a pattern also seen in the corporate bond market. The figures below show the spreads on 2015, 2016 and 2017 indices, as priced by dealers. Note that 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 indices contain both the bottom mezzanine tranche as well as the equity tranche (the B tranche), in all deals when the latter was sold.

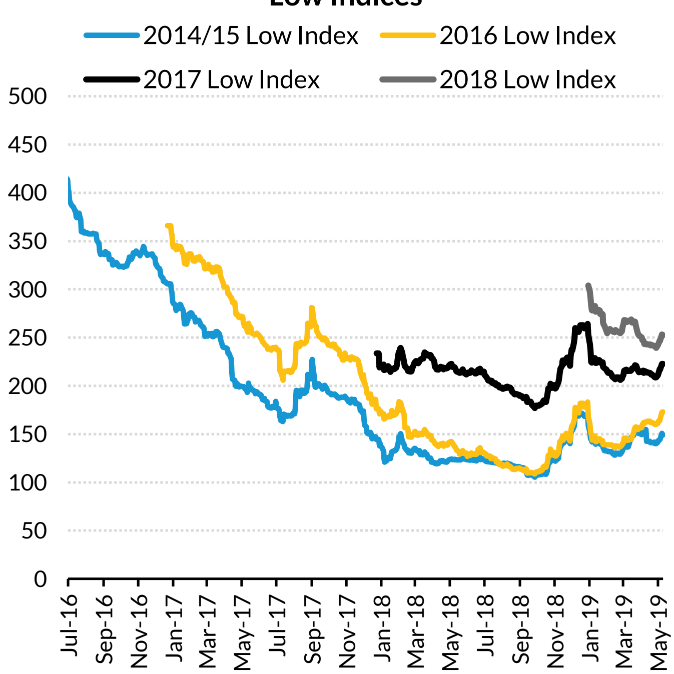
By Vintage



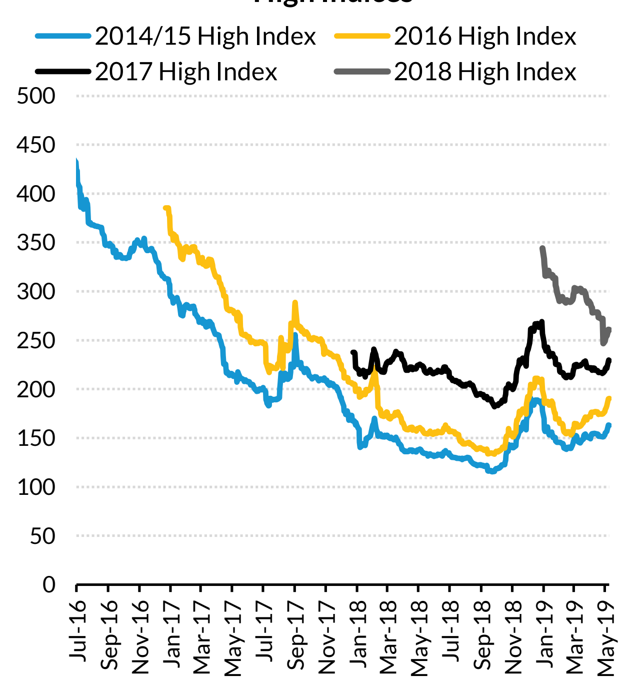
2017 and 2018 Indices



Low Indices



High Indices

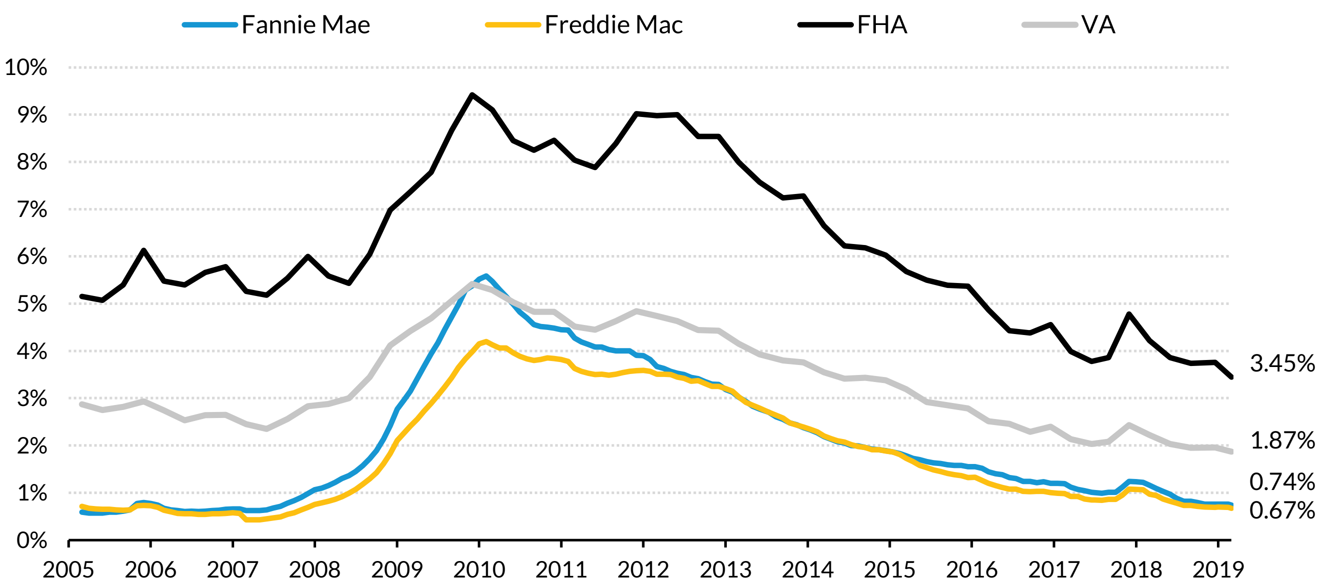


Sources: Vista Data Services and Urban Institute.
Note: Data as of May 15, 2019.

GSES UNDER CONSERVATORSHIP
SERIOUS DELINQUENCY RATES

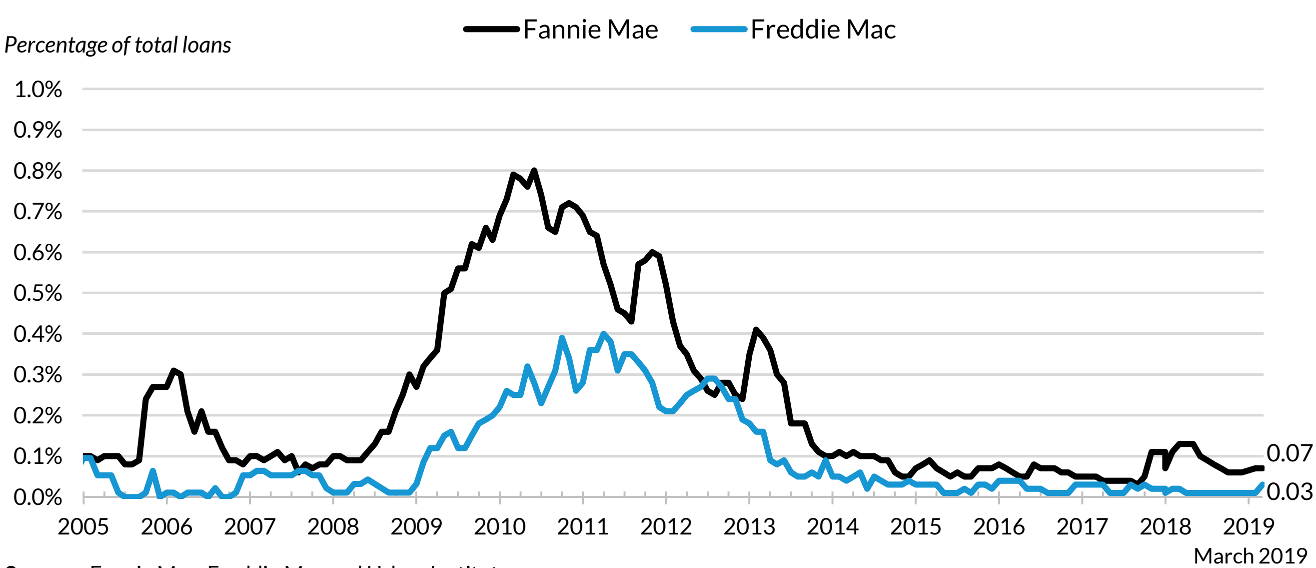
Serious delinquencies for single-family GSE, FHA, and VA loans declined in 2018 and early 2019. GSE delinquencies remain slightly higher relative to 2005-2007, while FHA and VA delinquencies (which are higher than their GSE counterparts) are at levels lower than 2005-2007. GSE multifamily delinquencies 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 2019. GSE delinquencies are reported monthly, last updated May 2019.

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

Gross issuance was $332.5 billion in the first four months of 2019, down 12.3% from the same period in 2018. Issuance in January and February 2019 was much lower than in January and February 2018, while March and April were more on par with the previous year. Net issuance (which excludes repayments, prepayments, and refinances on outstanding mortgages) totaled $65.0 billion in the first four months of 2019, or $195.0 billion on an annualized basis, down 5.5% from the same period in 2018.

Agency Gross Issuance

Issuance Year	GSEs	Ginnie Mae	Total
2000	$360.6	$102.2	$462.8
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 YTD	$220.6	$112.0	$332.5
2019 YTD % Change YOY	-11.7%	-13.5%	-12.3%
2019 Ann.	$661.7	$335.9	$997.6

Agency Net Issuance

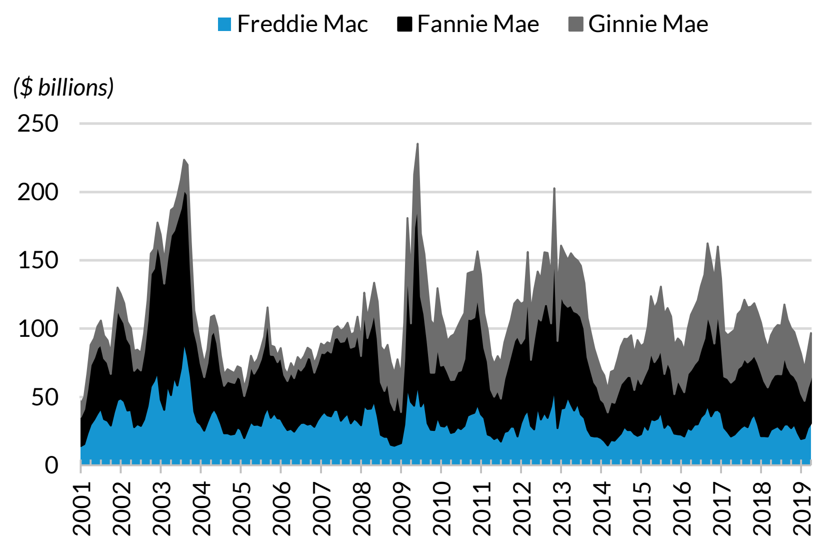
Issuance Year	GSEs	Ginnie Mae	Total
2000	$159.80	$29.30	$189.10
2001	$368.40	-$9.90	$358.50
2002	$357.20	-$51.20	$306.10
2003	$334.90	-$77.60	$257.30
2004	$82.50	-$40.10	$42.40
2005	$174.20	-$42.20	$132.00
2006	$313.60	$0.20	$313.80
2007	$514.90	$30.90	$545.70
2008	$314.80	$196.40	$511.30
2009	$250.60	$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	$30.50	$61.60	$92.10
2015	$75.10	$97.30	$172.50
2016	$135.50	$126.10	$261.60
2017	$168.50	$131.30	$299.70
2018	$147.70	$113.90	$261.60
2019 YTD	$36.6	$28.4	$65.0
2019 YTD % Change YOY	-5.5%	-5.5%	-5.5%
2019 Ann.	$109.7	$85.3	$195.0

Sources: eMBS and Urban Institute.
Note: Dollar amounts are in billions. Data as of April 2019.

AGENCY GROSS ISSUANCE & FED PURCHASES

Monthly Gross Issuance

While FHA, VA and GSE lending have dominated the mortgage market since the 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% to 34.0% in April 2019, reflecting origination increases at FHA and VA. Ginnie's share was also assisted by rising rates since late 2016. Higher rates have curtailed GSE refi volume much more than Ginnie's, boosting Ginnie Mae's share of issuances.

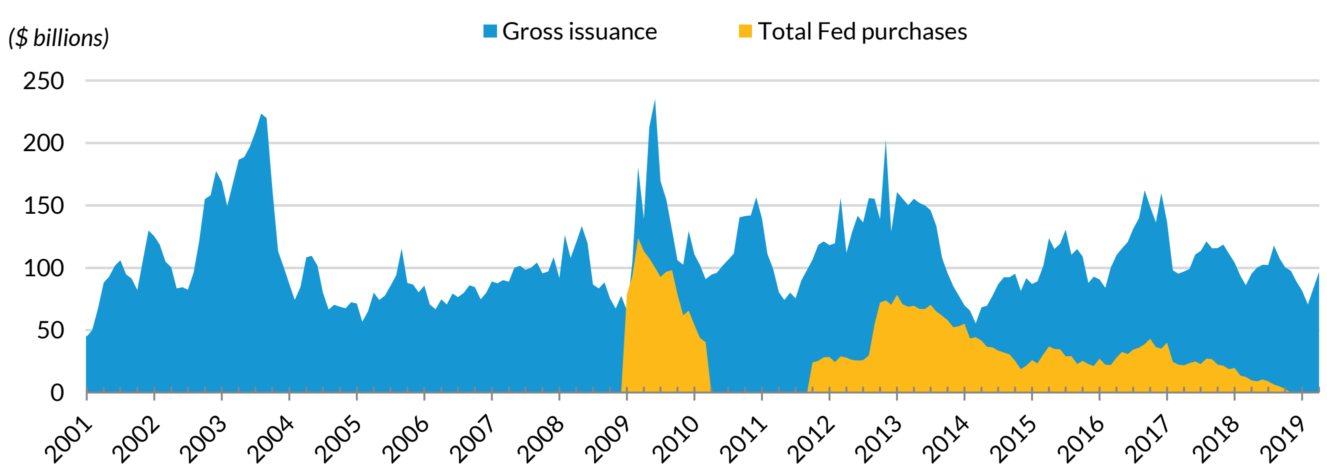


Sources: eMBS, Federal Reserve Bank of New York, and Urban Institute.

April 2019

Fed Absorption of Agency Gross Issuance

The Fed has begun to wind down its portfolio, and we are beginning to see the effects in slower absorption rates. During the period October 2014-September 2017, the Fed ended its purchase program, but was reinvesting funds from mortgages and agency debt into the mortgage market, absorbing 20-30 percent of agency gross issuance. With the wind down, which started in October 2017, the Fed has continued to reinvest, but by less than prepayment and repayments. The amount of the MBS taper (amount permitted to run off each month) hit the $20 billion cap under the current policy in October 2018. Since then the amount of Fed purchases has been tiny; in April 2019 Fed purchases totaled $186 million, corresponding to Fed absorption of gross issuance of 0.19 percent.



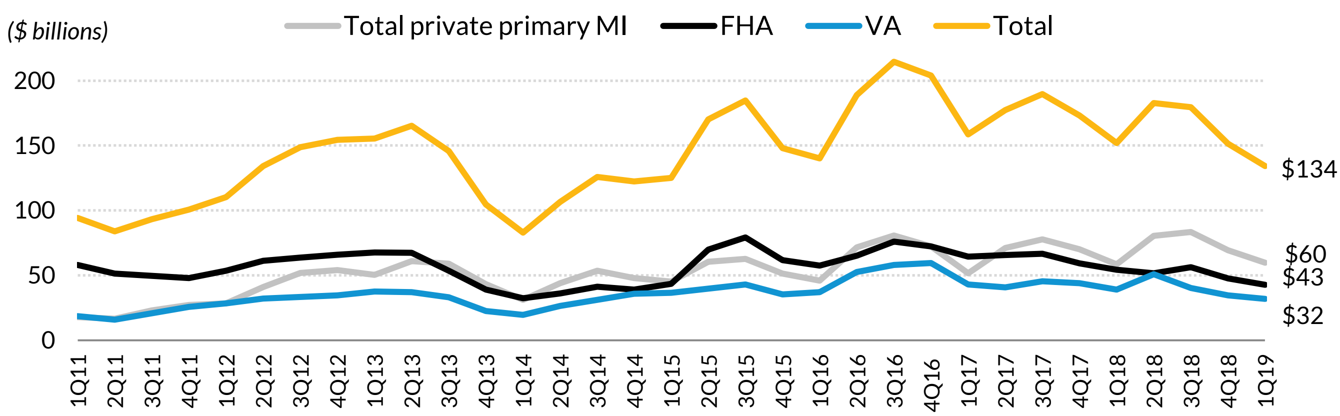
April 2019

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

AGENCY ISSUANCE
MORTGAGE INSURANCE ACTIVITY

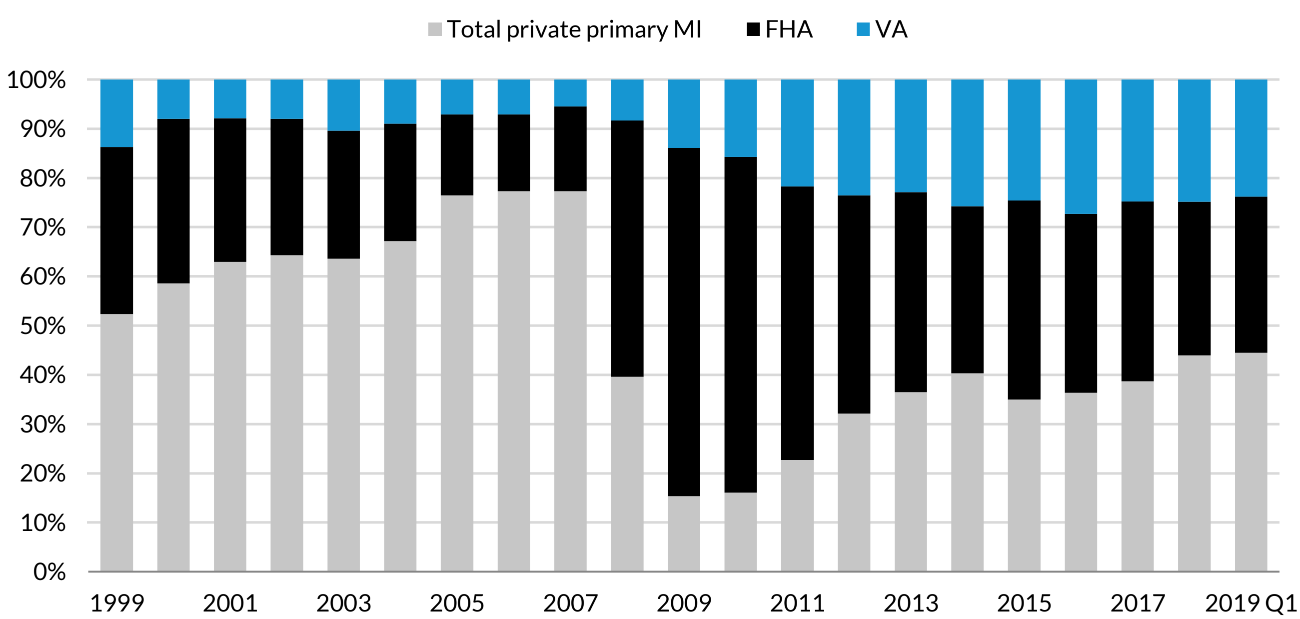
MI Activity

Mortgage insurance activity via the FHA, VA and private insurers declined from $152 billion in Q1 2018 to $134 billion in Q1, 2019, an 11.7 percent drop. In the first quarter of 2019, private mortgage insurance written decreased by $9.69 billion, FHA decreased by $4.98 billion and VA decreased by $2.62 billion from the previous quarter, reflecting seasonality. During this period, the VA share grew from 22.8 percent to 23.8, while the private mortgage insurers share fell from 45.8 to 44.5 percent and the FHA share remained constant compared to the previous quarter.



Sources: Inside Mortgage Finance and Urban Institute. *Last updated May 2019.*

MI Market Share



Sources: Inside Mortgage Finance and Urban Institute. *Last updated May 2019.*

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 high LTV borrowers. 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 will now find FHA more economical except for those with FICO scores of 720 or higher.

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	4.14
FHA	4.34

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	$1,391	$1,391	$1,391	$1,391	$1,391	$1,391	$1,391	$1,391
PMI	$1,646	$1,581	$1,545	$1,457	$1,413	$1,374	$1,333	$1,309
PMI Advantage	-$254	-$190	-$153	-$66	-$21	$17	$34	$58

Sources: Genworth Mortgage Insurance, Ginnie Mae, and Urban Institute.
Note: 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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Authors: Alanna McCargo
Date: May 8, 2019

Building Black Homeownership Bridges
Authors: Alanna McCargo, Jung Hyun Choi, Edward Golding
Date: May 7, 2019

Options for Reforming the Mortgage Servicing Compensation Model
Authors: Karan Kaul, Laurie Goodman, Alanna McCargo, Todd Hill-Jones
Date: April 19, 2019

Small-Dollar Mortgages: A Loan Performance Analysis
Authors: Alanna McCargo, Bing Bai, Sarah Strochak
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The Continued Impact of the Housing Crisis on Self-Employed Households
Authors: Karan Kaul, Laurie Goodman, Jun Zhu
Date: December 17, 2018

Analysis of the FHFA Proposal on Enterprise Capital
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Date: November 28, 2018

Blog Posts

Curtailing Data from the Home Mortgage Disclosure Act Is a Mistake
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Authors: Jung Hyun Choi, Alanna McCargo, Laurie Goodman
Date: February 28, 3019

While less plentiful, multifamily loans pack a bigger CRA punch than single-family loans
Authors: Laurie Goodman, John Walsh, Jun Zhu
Date: February 19, 2019

Four lessons on federal crisis response from ten years of foreclosure counseling
Authors: Corianne Payton Scally, Camille H. Anoll, Patrick Spauster
Date: February 18, 2019

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