



# HOUSING FINANCE AT A GLANCE

A MONTHLY CHARTBOOK

August 2019

## 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](mailto:ataglance@urban.org).

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

## HOUSING FINANCE POLICY CENTER STAFF

**Laurie Goodman**  
Center Vice President

**Alanna McCargo**  
Center Vice President

**Edward Golding**  
Senior Fellow

**Jim Parrott**  
Senior Fellow

**Sheryl Pardo**  
Associate Director of Communications

**Todd Hill**  
Policy Program Manager

**Michael Neal**  
Senior Research Associate

**Karan Kaul**  
Research Associate

**Jung Choi**  
Research Associate

**Jun Zhu**  
Nonresident Fellow

**Sarah Storchak**  
Research Analyst

**John Walsh**  
Research Assistant

**Caitlin Young**  
Research Assistant

**Alison Rincon**  
Director, Center Operations

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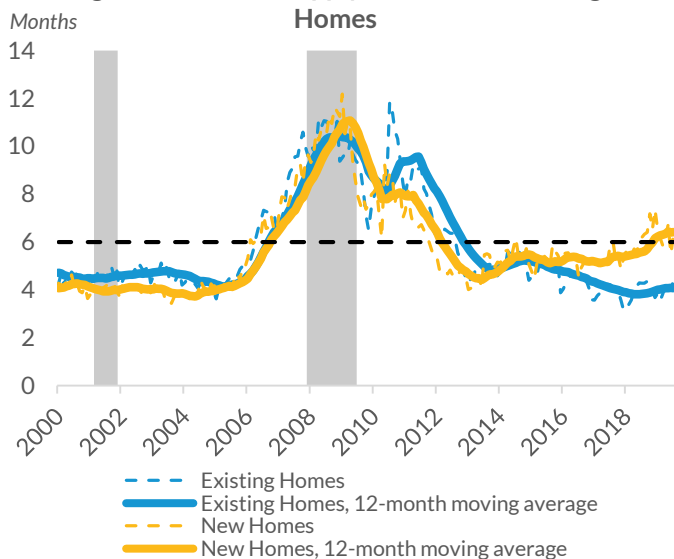
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# INTRODUCTION

## Why is Months' Supply of For-Sale Homes So Low?

Prospects for home-buying demand remain strong overall. Fannie Mae's [Home Purchase Sentiment Index](#), which tracks consumers' attitudes toward home-buying, rose 7.2 points over the last 12 months to a new survey high of 93.7. The increase largely reflected expectations of both lower mortgage rates and solid labor market conditions. However, the supply of for-sale housing remains low. One measure of housing supply is months' supply, which takes the inventory of homes available for sale and scales it by the pace of sales in the current month. This metric provides information about how long it would take to exhaust the supply of housing at the current sales pace. A market is considered balanced at six months of supply of for-sale inventory.

Figure 1: Months' Supply of New and Existing Homes



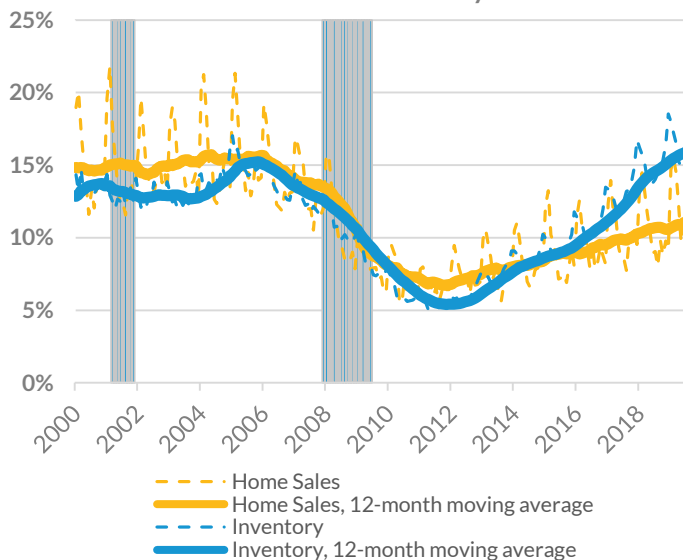
Source: NAR, Census Bureau/HUD, NBER

There are 4.2 months of for-sale inventory of existing homes (page 20 of this chart book). This number has remained below 6.0 since 2012. However, the months' supply of newly built homes, which is a small portion (16 percent) of the total for-sale inventory has been diverging from the months' supply of existing since 2015. The months' supply of existing homes continued to trend downward from 4.5 to 4.2 while the months' supply of new homes increased from 4.8 months to 6.3 months.

The growing gap in months' supply since 2015 could either reflect an increase in the new home share of total for-sale inventory (both new and existing) or a decline in the new home share of total sales. Figure 2 illustrates that it is the former reason. Since 2015, when the months' supply of new and existing homes

began to diverge, new home inventory has grown as a share of total for-sale inventory (blue line) and now at 16 percent, exceeds its pre-bubble peak of 15 percent. Meanwhile, the new home share of total sales (orange line) has also expanded as a share of total home sales since 2015, but it is still running below pre-recession levels.

Figure 2: New Homes Share of Total Home Sales and Total Inventory



Source: NAR, Census Bureau/HUD, NBER

The widening gap in months' supply between new and existing homes is a noteworthy development. However, since new homes are a smaller portion of the overall market, the recent growth in months' supply of new homes has made only a minor dent market-wide. While the increase in the months' supply of new homes indicates that more inventory is available, it also reflects a slower pace of new home sales, which may indicate that the new home market is moderating. Since the average new home price exceeds that of an existing home, then an increase in the months' supply of new homes will have a limited impact on affordability, particularly at the low end where the issue is most acute.

## INSIDE THIS ISSUE

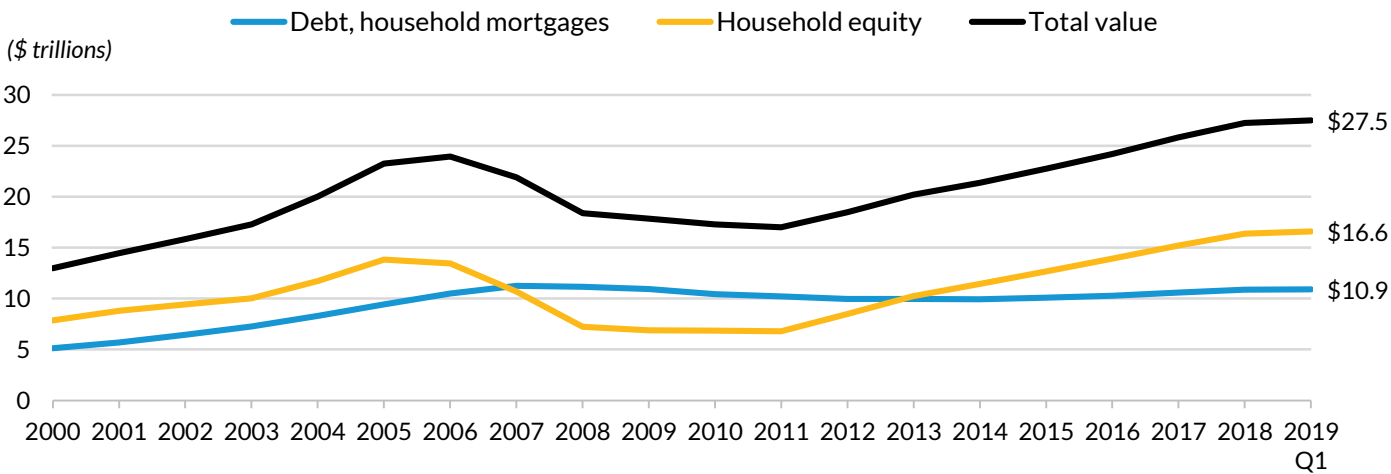
- Portfolio lending accounted for 42.1 percent of total first lien origination volume in 2019 Q2, greater than the GSE share of 38.6 percent; the first time since at least prior to 2001 (page 8).
- Refinances resulting in at least a 5 percent higher loan amount fell in 2019 Q2 to 61 percent, from 76 percent in Q1, as declining mortgage rates resulted in a greater share of rate refs (page 10).
- The first first-time homebuyer share of VA lending was 55.5 percent in May of 2019, slightly above the GSE share of 49.3 percent and well below the FHA share of 83.8 percent (page 23).

## OVERVIEW

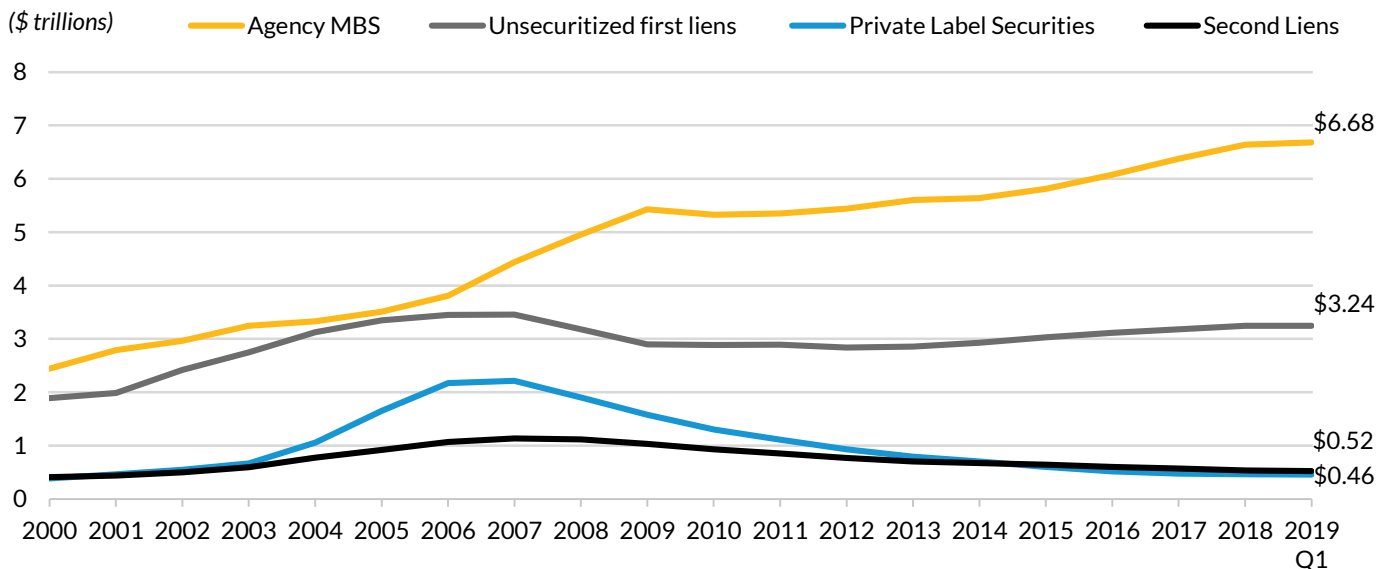
# MARKET SIZE OVERVIEW

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 Q1 2019 was no different. While total mortgage debt outstanding was steady at \$10.9 trillion, household equity ticked up from \$16.4 trillion in Q4 2018 to \$16.6 trillion in Q1 2019, bringing the total value of the housing market to \$27.5 trillion, 14.9 percent higher than the pre-crisis peak in 2006. Agency MBS account for 61.3 percent of the total mortgage debt outstanding, private-label securities make up 4.2 percent, and unsecuritized first liens make up 29.7 percent. Second liens comprise the remaining 4.8 percent of the total.

## Value of the US Housing Market



## Size of the US Residential Mortgage Market

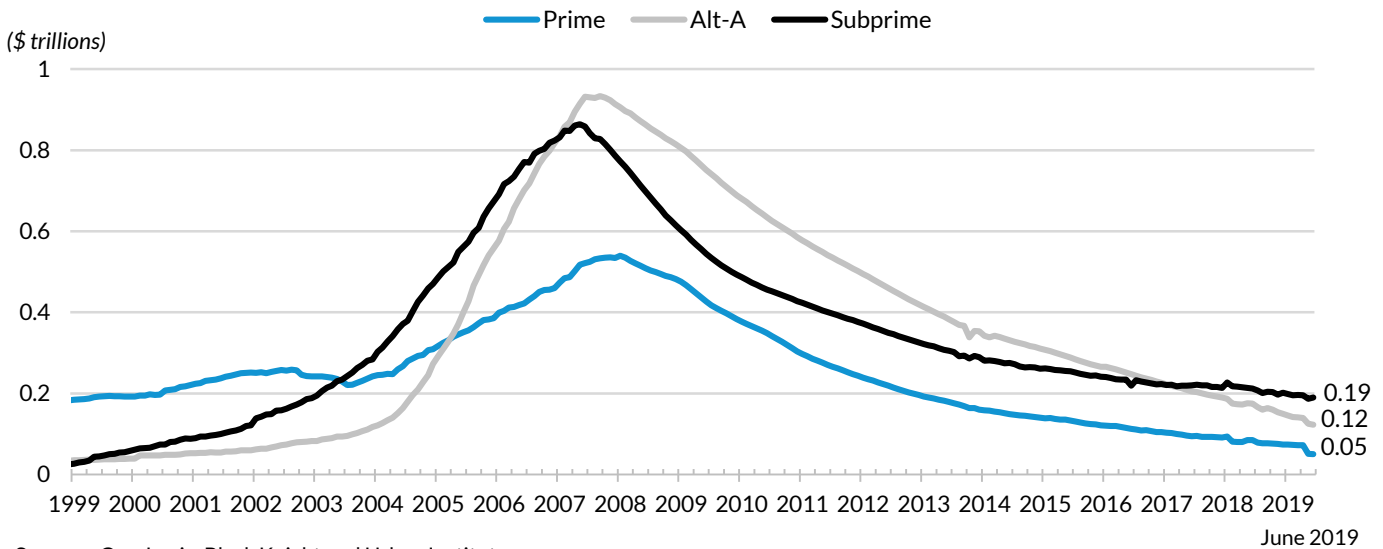


## OVERVIEW

# MARKET SIZE OVERVIEW

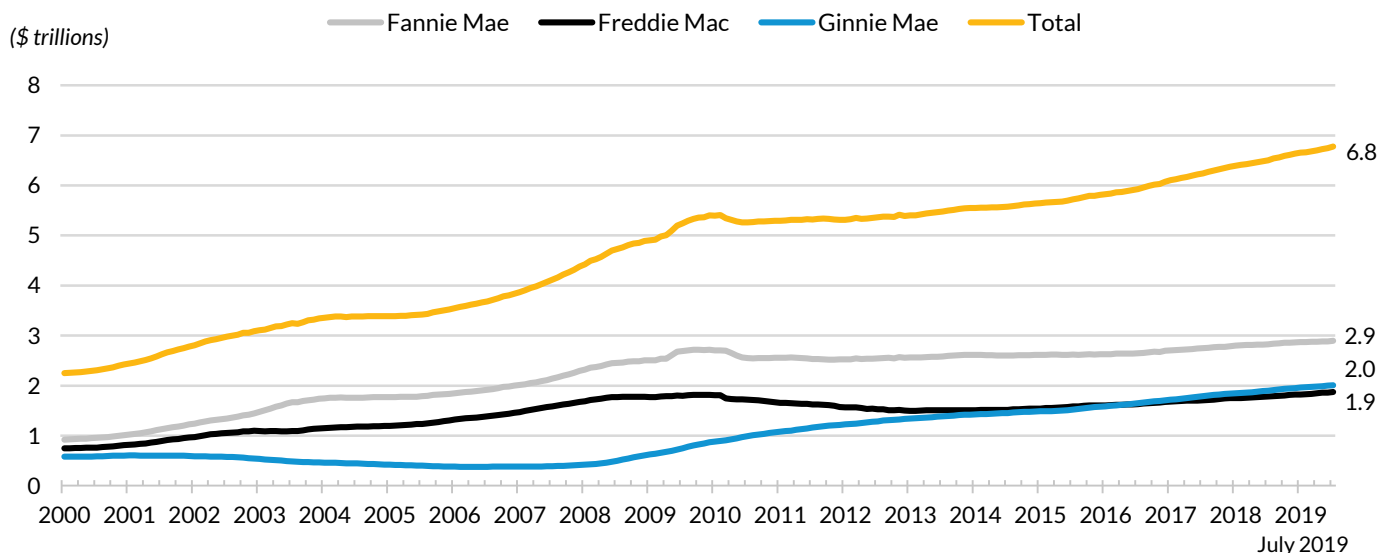
As of June 2019, debt in the private-label securitization market totaled \$363 billion and was split among prime (13.7 percent), Alt-A (33.9 percent), and subprime (52.4 percent) loans. In July 2019, outstanding securities in the agency market totaled \$6.8 trillion, 42.7 percent of which was Fannie Mae, 27.6 percent Freddie Mac, and 29.7 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



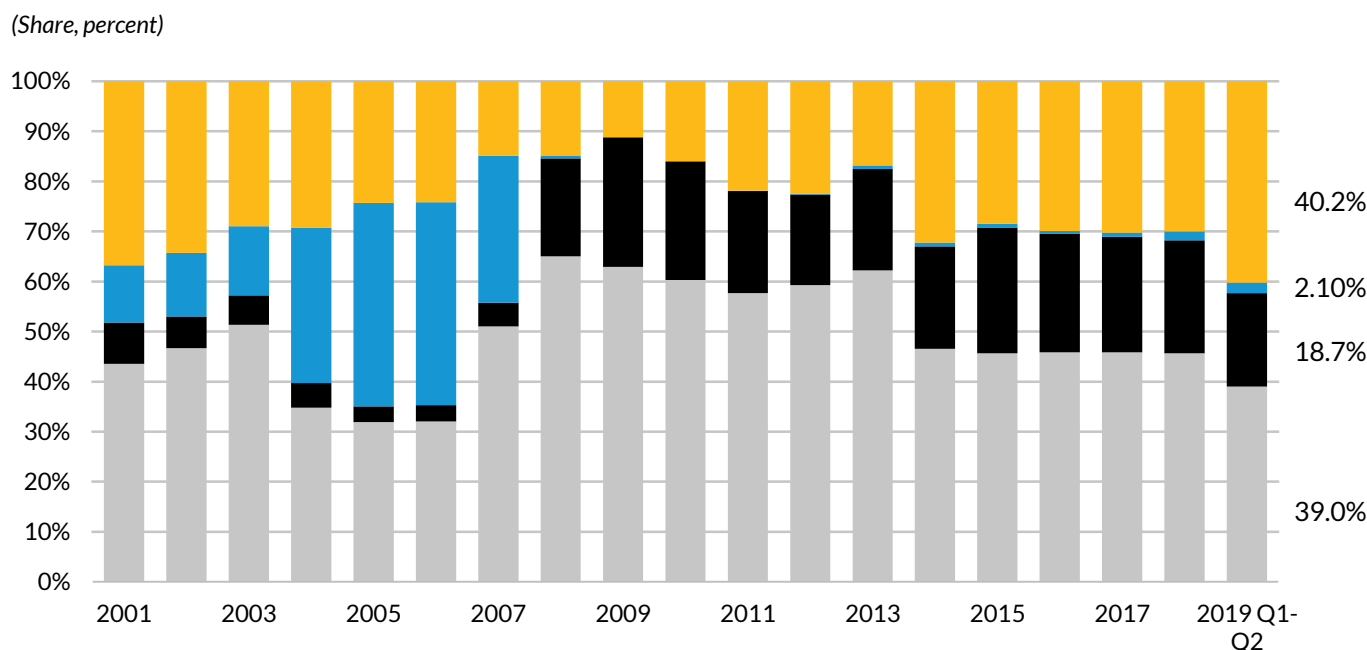
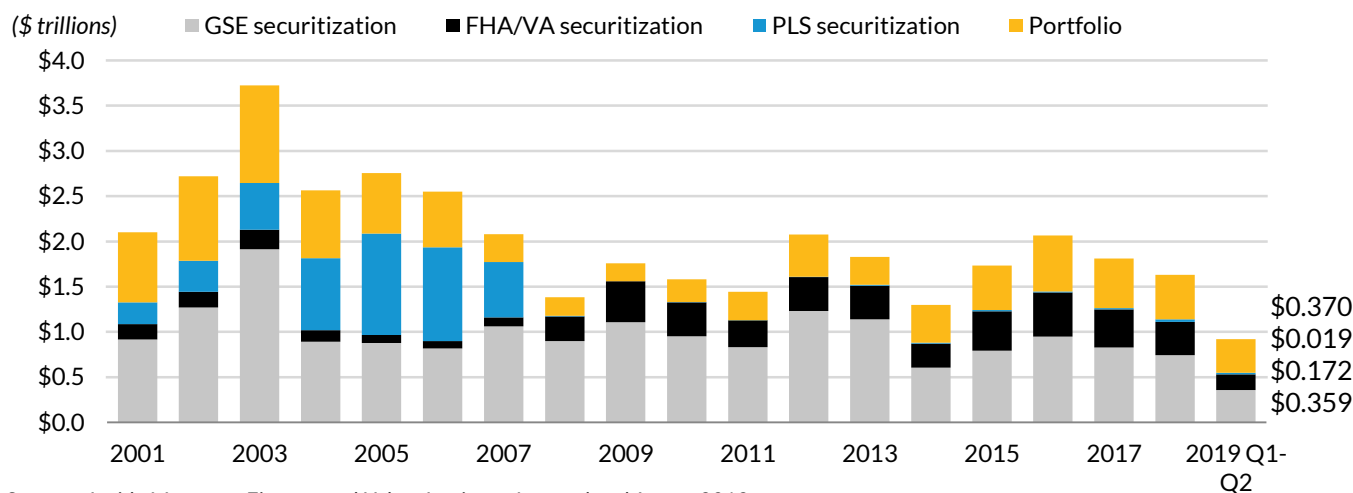
Sources: eMBS and Urban Institute.

## OVERVIEW

# ORIGINATION VOLUME AND COMPOSITION

## First Lien Origination Volume

In the second quarter of 2019, first lien originations totaled \$565 billion, up from \$445 billion in Q1 2018. The share of portfolio originations was 42.1 percent in Q2 2019, up from 35.0 percent in the same period of 2018. The GSE share was down at 38.6 percent, compared to 41.7 percent in Q2 2018. The FHA/VA share fell slightly, at 17.7 percent compared to 21.0 percent in the same period last year. Private-label securitization at 1.6 percent was marginally lower than its 2.0 percent share in 2018 Q2; it remains a fraction of its share in the pre-bubble years.



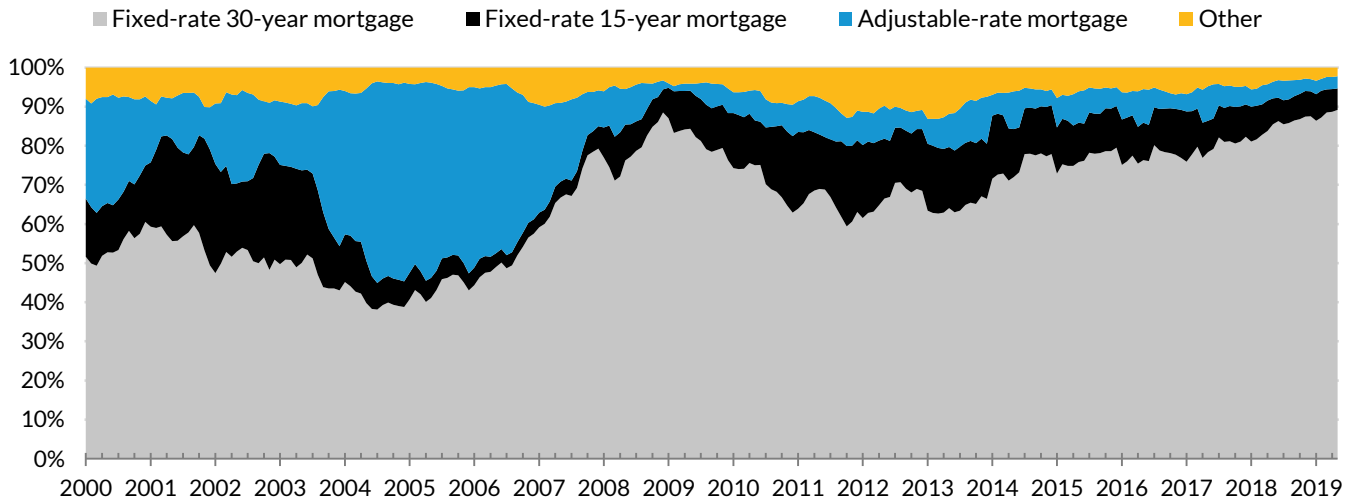


## OVERVIEW

# 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 an historic low of 1 percent in 2009, and then slowly increased to a high of 12 percent in December 2013. The May 2019 share of 3.1 percent is unchanged from last month. The 15-year fixed-rate mortgage, predominantly a refinance product, accounted for 5.5 percent of new originations in May 2019. 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.

## Product Composition

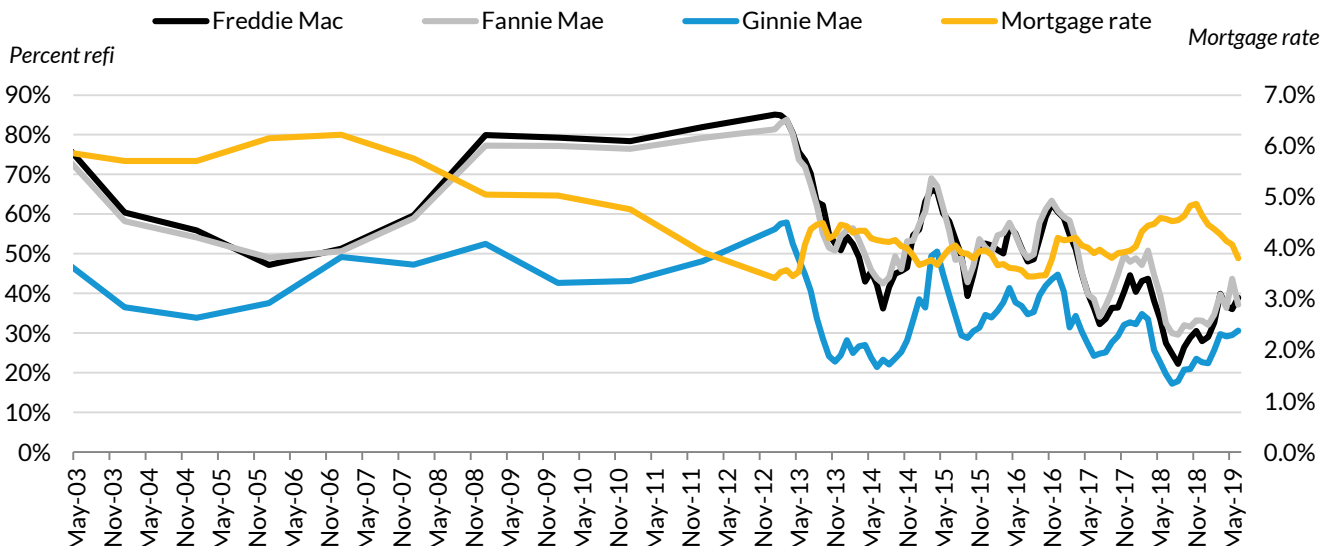


Sources: Black Knight, eMBS, HMDA, SIFMA and Urban Institute.

Note: Includes purchase and refinance originations.

May 2019

## Percent Refi at Issuance



Sources: eMBS and Urban Institute.

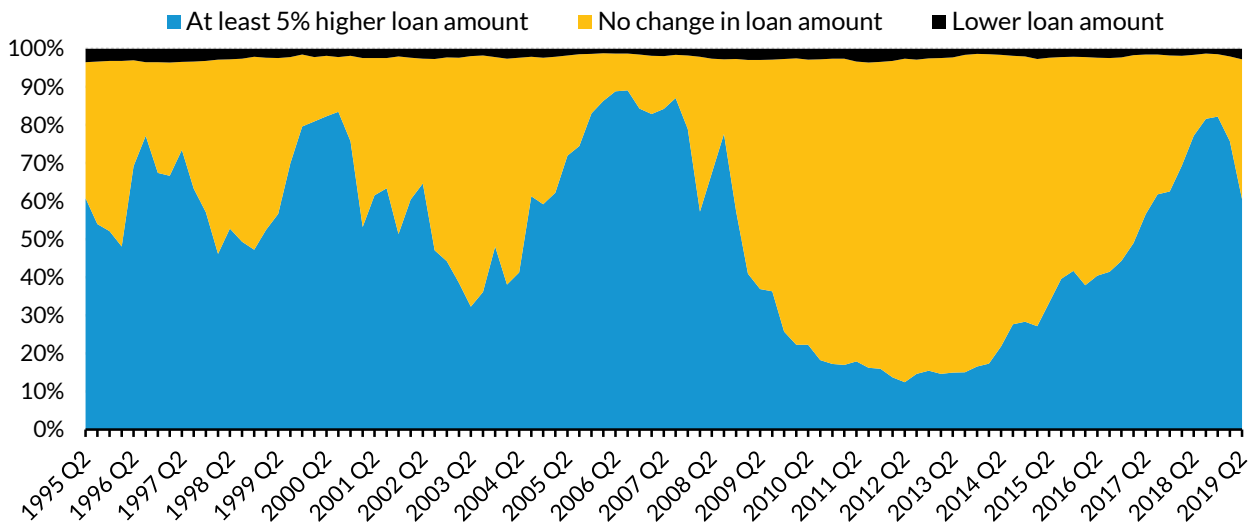
Note: Based on at-issuance balance. Figure based on data from June 2019.

## 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 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 76 percent in the first quarter of 2019 to 61 percent in the second quarter, reflecting increased rate-refi activity due to falling rates in 2019 Q2. 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.

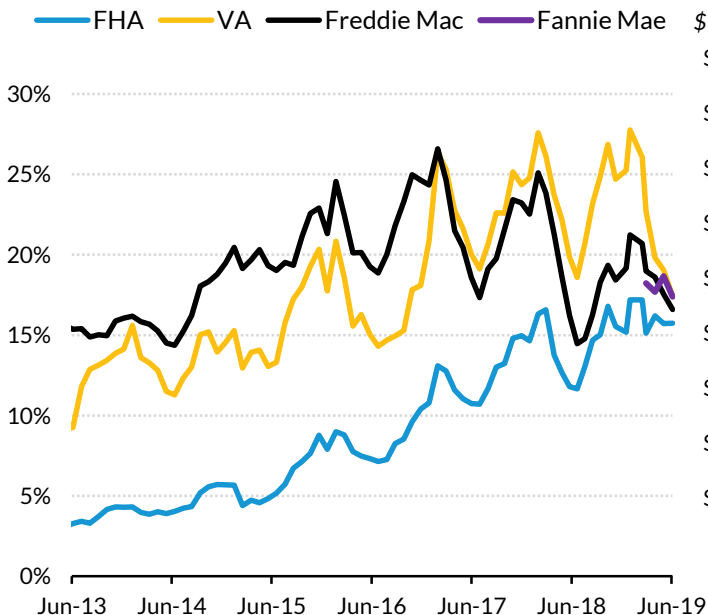
## Loan Amount after Refinancing



Sources: Freddie Mac and Urban Institute.

Note: Estimates include conventional mortgages only.

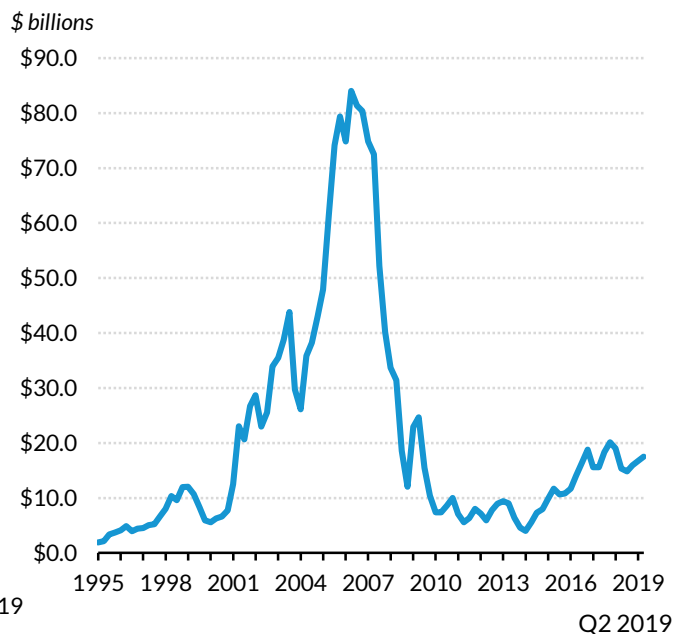
## Cash-out Refi Share of All Originations



Sources: eMBS and Urban Institute.

Note: Data as of June 2019.

## Cash-out Refi Volume



Sources: Freddie Mac and Urban Institute.

Note: Estimates include conventional mortgages only.

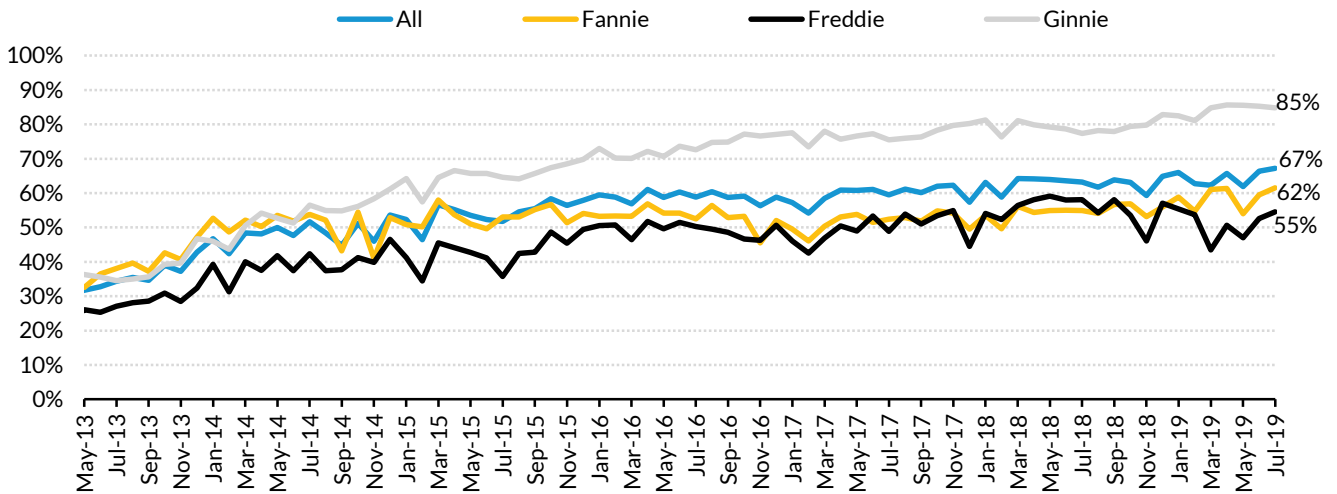
Q2 2019

## OVERVIEW

# AGENCY NONBANK ORIGINATION SHARE

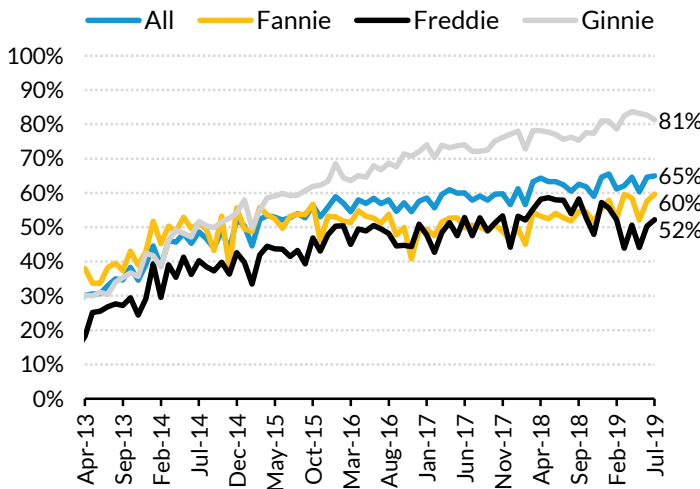
The nonbank origination share has been rising steadily for all three agencies since 2013. The Ginnie Mae nonbank share has been consistently higher than the GSEs, remaining at 85 percent in July 2019, slightly lower than its record high of 86 percent in May. Freddie and Fannie's nonbank shares both rose in July, to 55 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



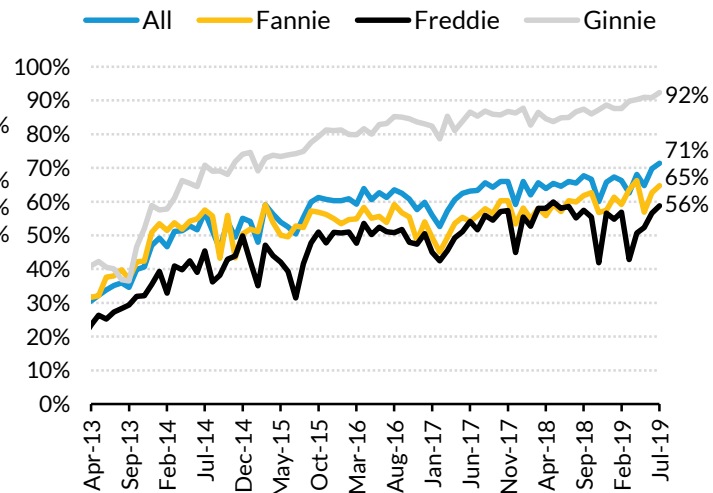
Sources: eMBS and Urban Institute.

## Nonbank Origination Share: Purchase Loans



Sources: eMBS and Urban Institute.

## Nonbank Origination Share: Refi Loans



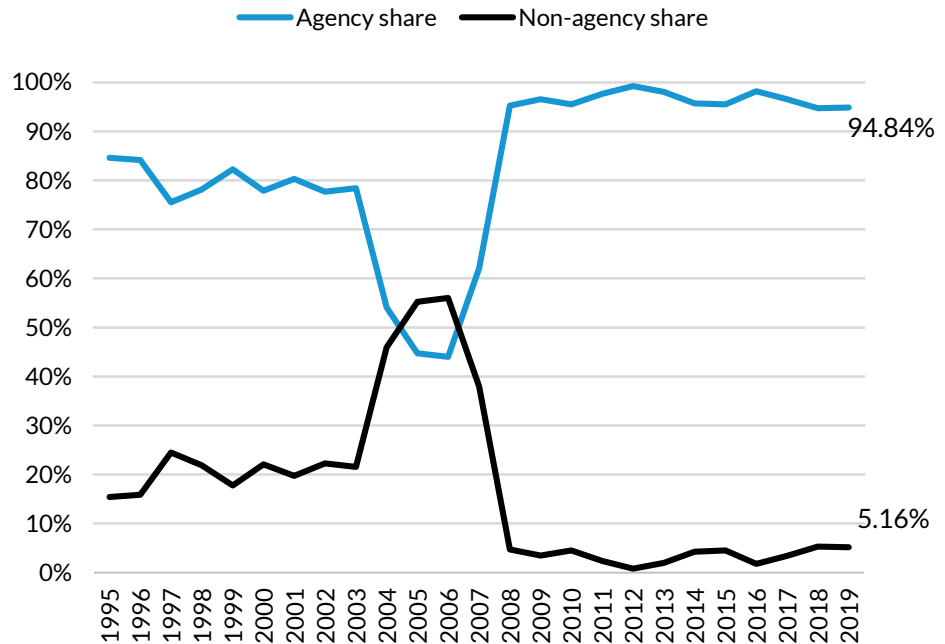
Sources: eMBS and Urban Institute.

## OVERVIEW

# SECURITIZATION VOLUME AND COMPOSITION

## Agency/Non-Agency Share of Residential MBS Issuance

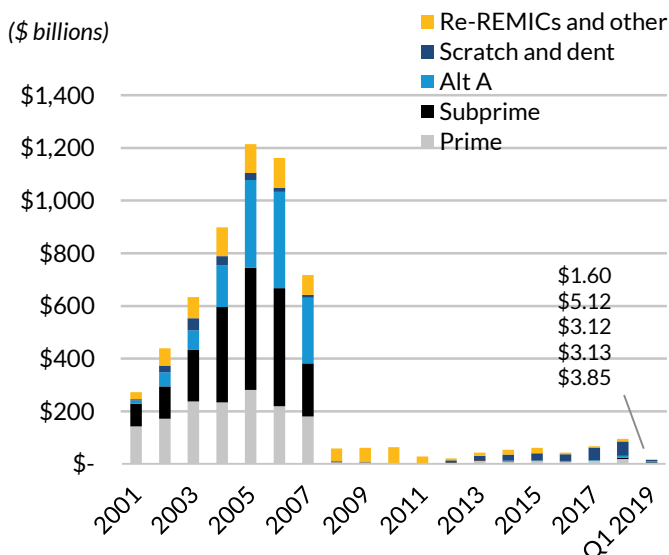
The non-agency share of mortgage securitizations has increased gradually over the post-crisis years, from 1.8 percent in 2016 to 4.4 percent in 2018. It was even higher, 5.16 percent, as of July 2019. Non-agency securitization volume totaled \$16.83 billion for Q1 2019, slightly higher than the \$16.79 billion in Q1 2018, with 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.

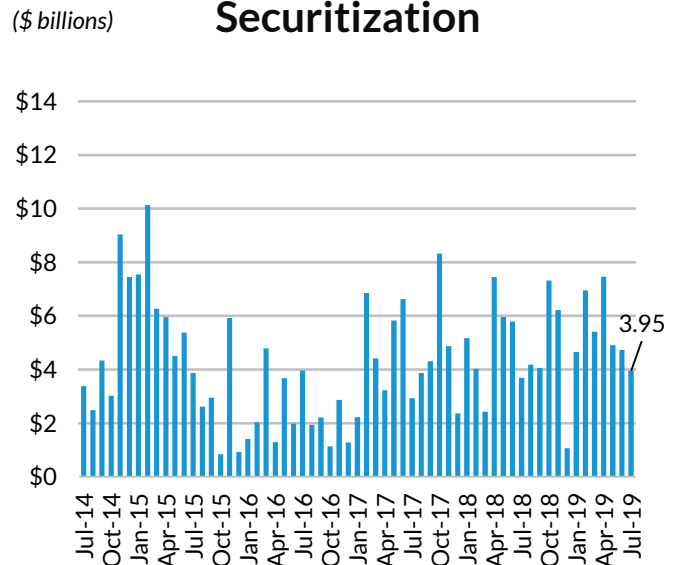
Note: Based on data from June 2019.

## Non-Agency MBS Issuance



Sources: Inside Mortgage Finance and Urban Institute.

## Monthly Non-Agency Securitization



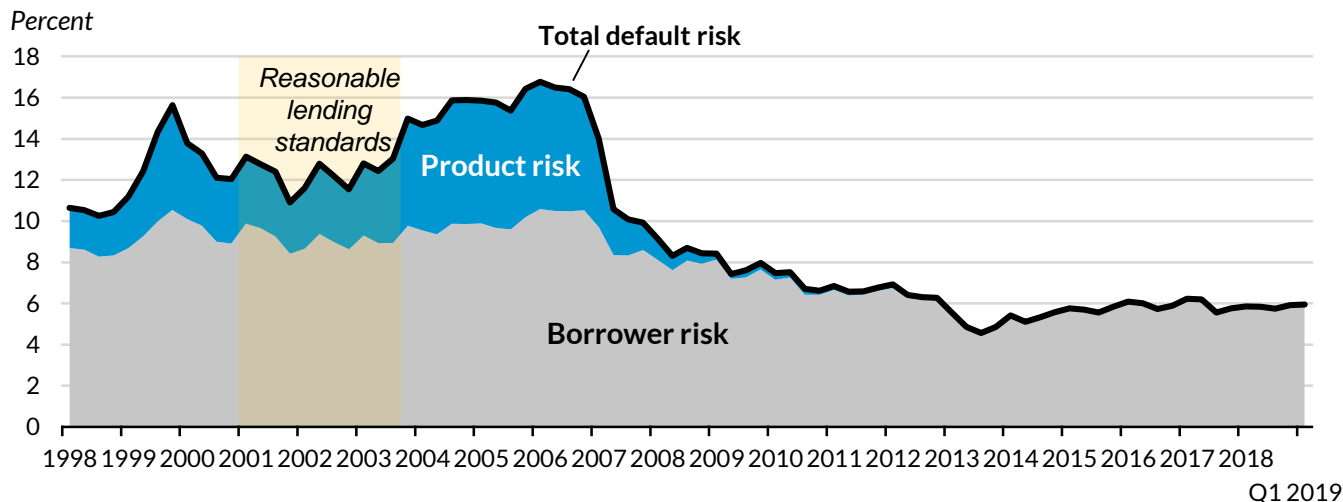
Sources: Inside Mortgage Finance and Urban Institute.

## CREDIT BOX

# HOUSING CREDIT AVAILABILITY INDEX

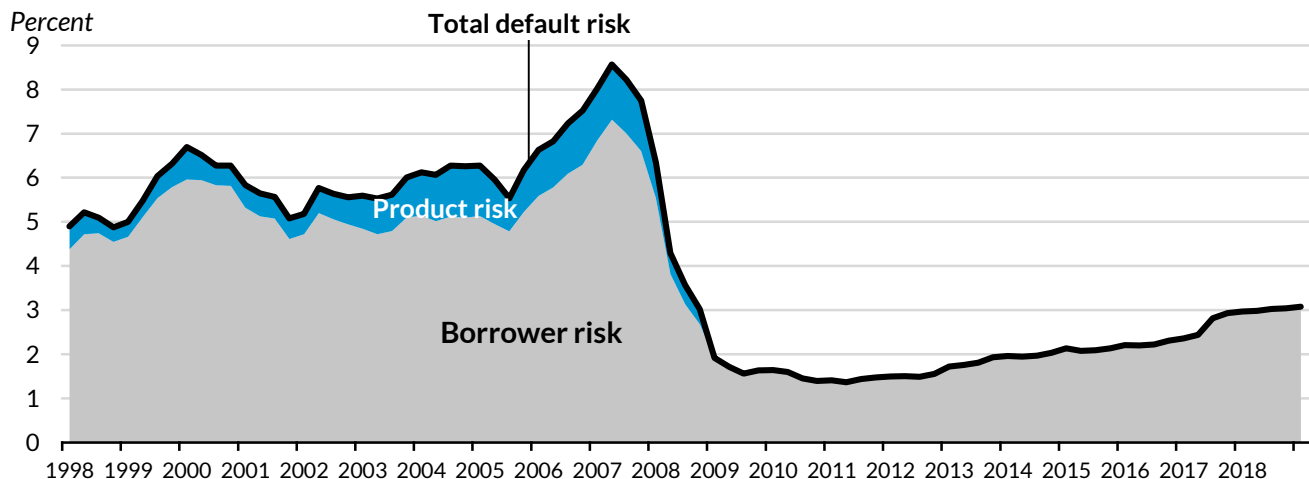
The Urban Institute's Housing Credit Availability Index (HCAI) assesses lenders' tolerance for both borrower risk and product risk, calculating the share of owner-occupied purchase loans that are likely to go 90+ days delinquent over the life of the loan. The latest HCAI shows that mortgage credit availability increased to 5.95 percent in the first quarter of 2019 (Q1 2019), up marginally from 5.75% the previous quarter. This is the highest level since 2013. This quarter's increase was caused by an increase in risk taken in the portfolio and private-label securities channel. Credit also expanded in both the GSE and government channels, but by a smaller margin. 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 Q1 2019, the total risk taken by the GSE channel has more than doubled, from 1.4 percent to 3.1 percent.



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

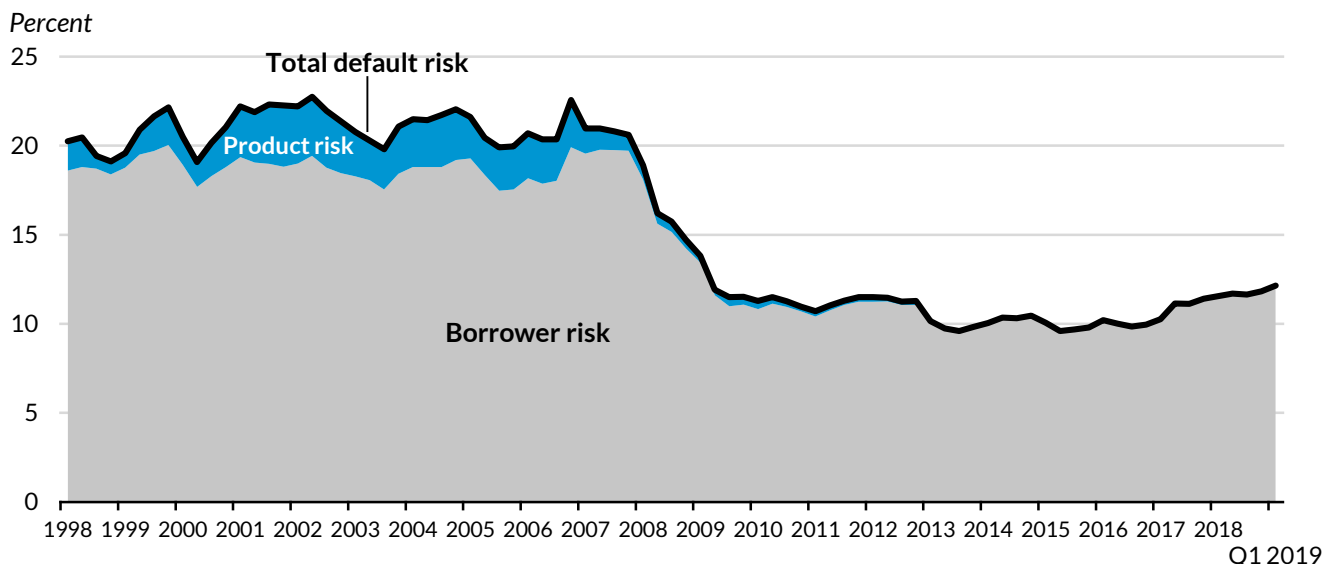
Note: Default is defined as 90 days or more delinquent at any point. Last updated July 2019.

## CREDIT BOX

# HOUSING CREDIT AVAILABILITY INDEX

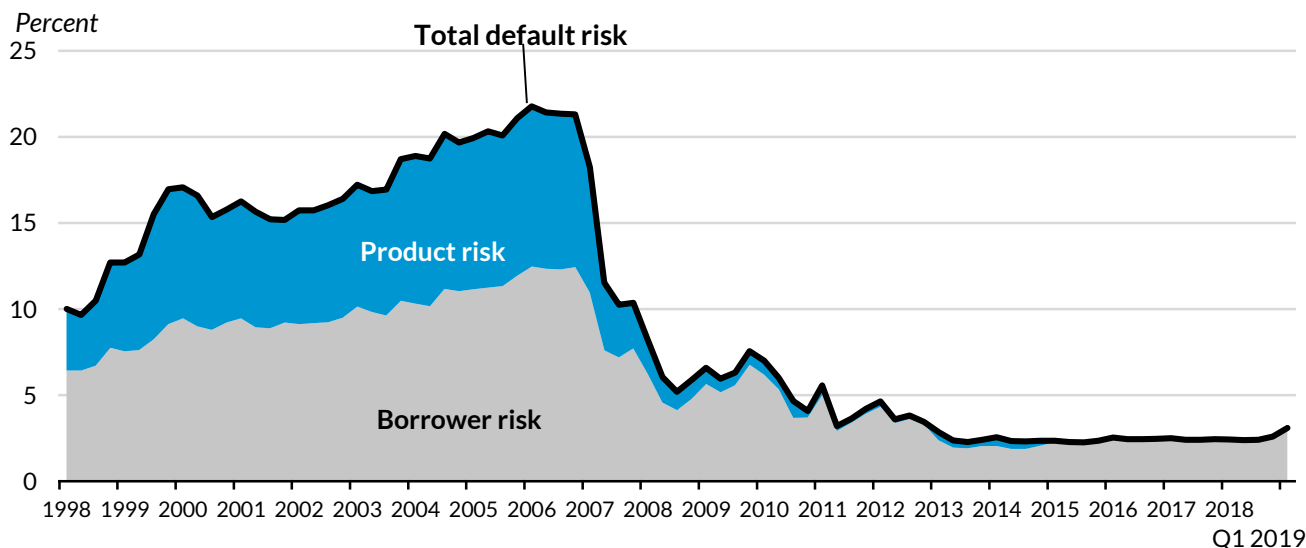
## Government Channel

The total default risk the government loan channel is willing to take bottomed out at 9.6 percent in Q3 2013. In the past ten quarters starting in Q4 2016, the risk in the government channel has increased from 9.9 to 12.1 percent, the highest level since 2009, but still around half the pre-bubble level of 19 – 23 percent.



## Portfolio and Private Label Securities Channels

The portfolio and private-label securities (PP) channel took on more product risk than the government and GSE channels during the bubble. After the crisis, 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 around 2.0 percent. Borrower risk increased in the first quarter of 2019, reaching 3.1 percent, driven primarily by a decline in FICO scores and an increase in high-LTV lending.



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

Note: Default is defined as 90 days or more delinquent at any point. Last updated July 2019.

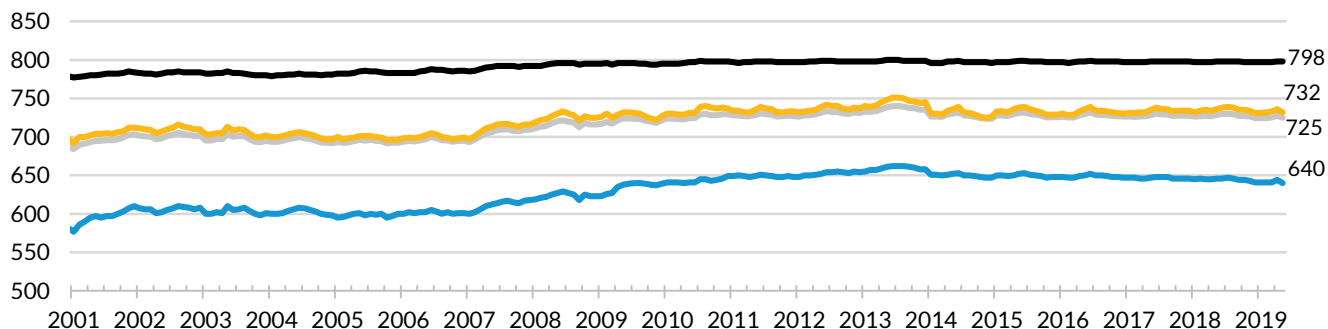
# CREDIT AVAILABILITY FOR PURCHASE LOANS

Access to credit remains tight, especially for lower FICO borrowers. The 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, fell slightly to 640 in May 2019, compared to low-600s pre-bubble. The 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

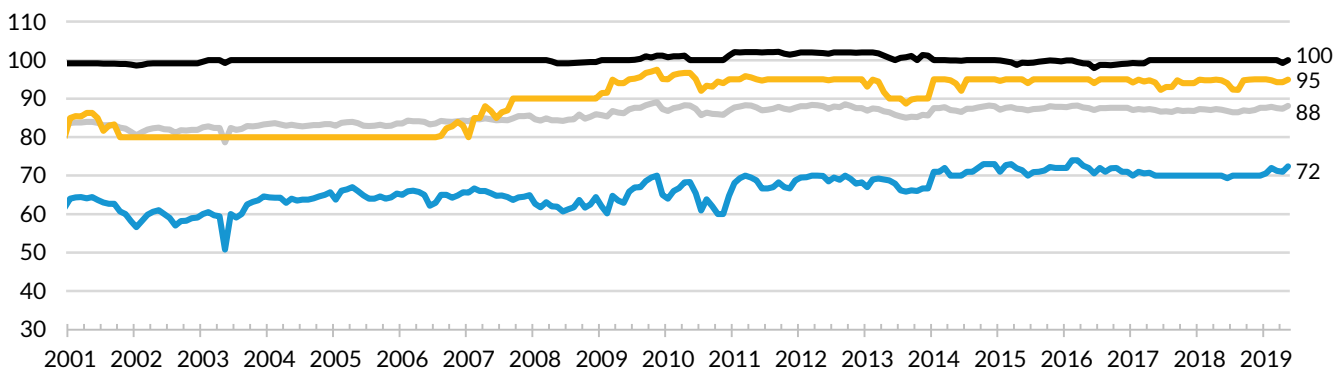
## Borrower FICO Score at Origination

FICO Score



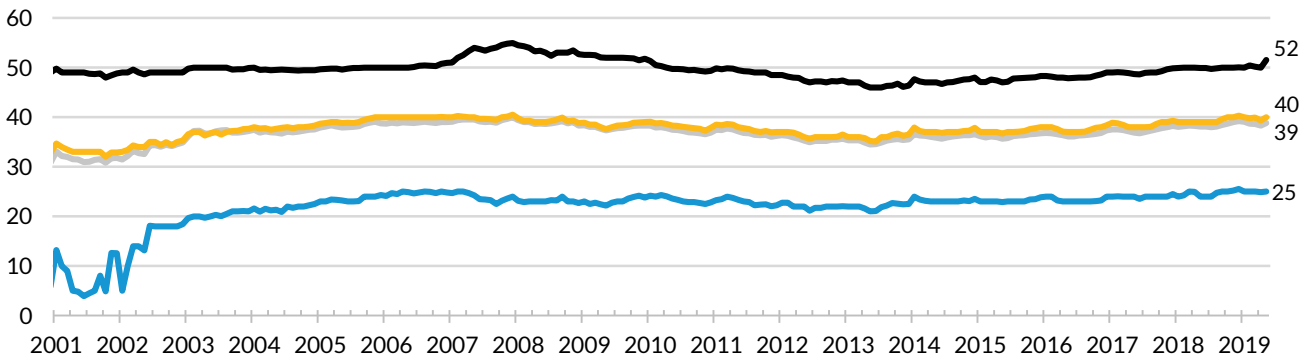
## Combined LTV at Origination

LTV



## DTI at Origination

DTI



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

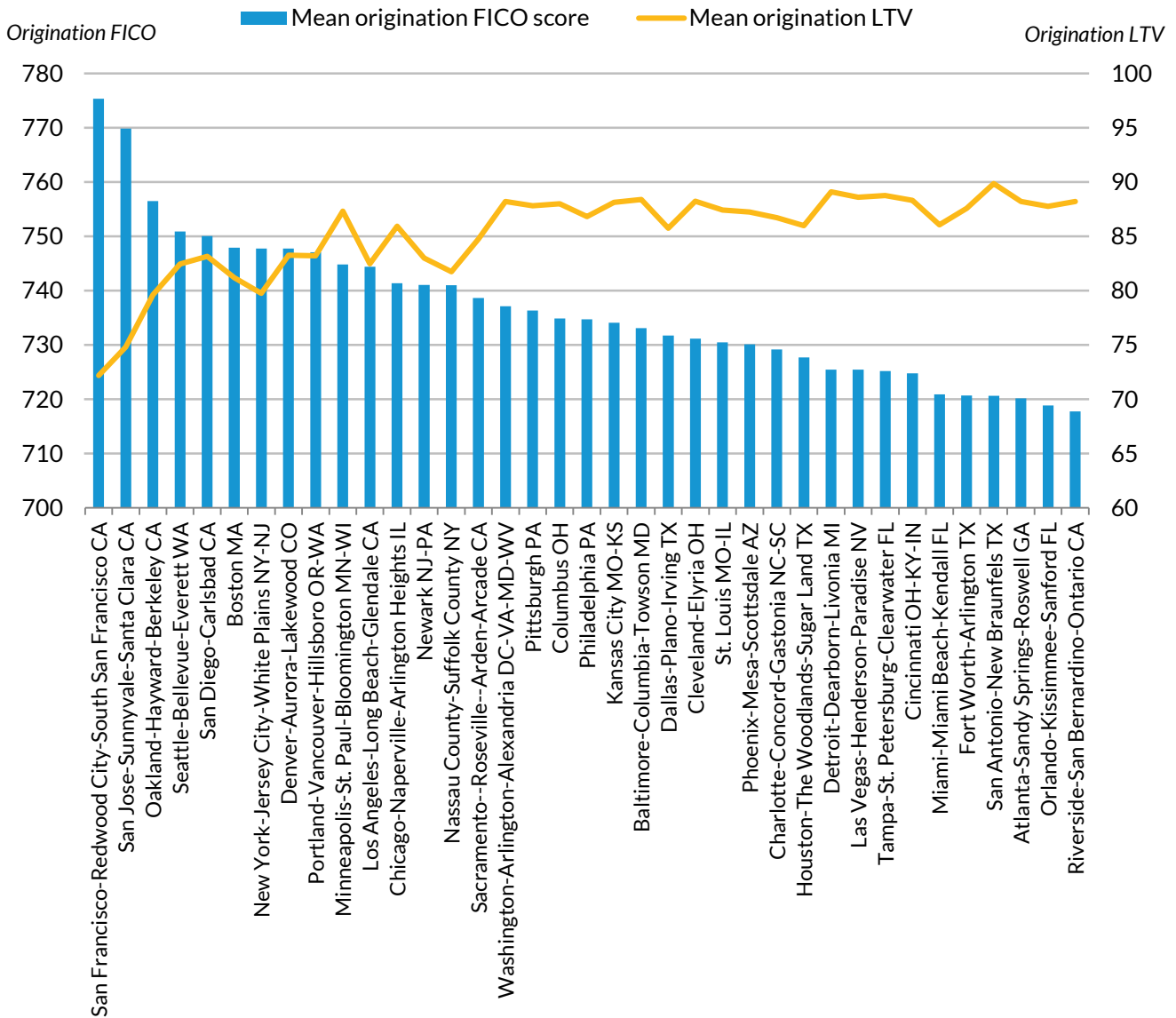
Note: Includes owner-occupied purchase loans only. DTI data prior to April 2018 is from CoreLogic; after that date, it is from Black Knight. Data as of May 2019.

## 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.

## Origination FICO and LTV



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

Note: Includes owner-occupied purchase loans only. Data as of May 2019.

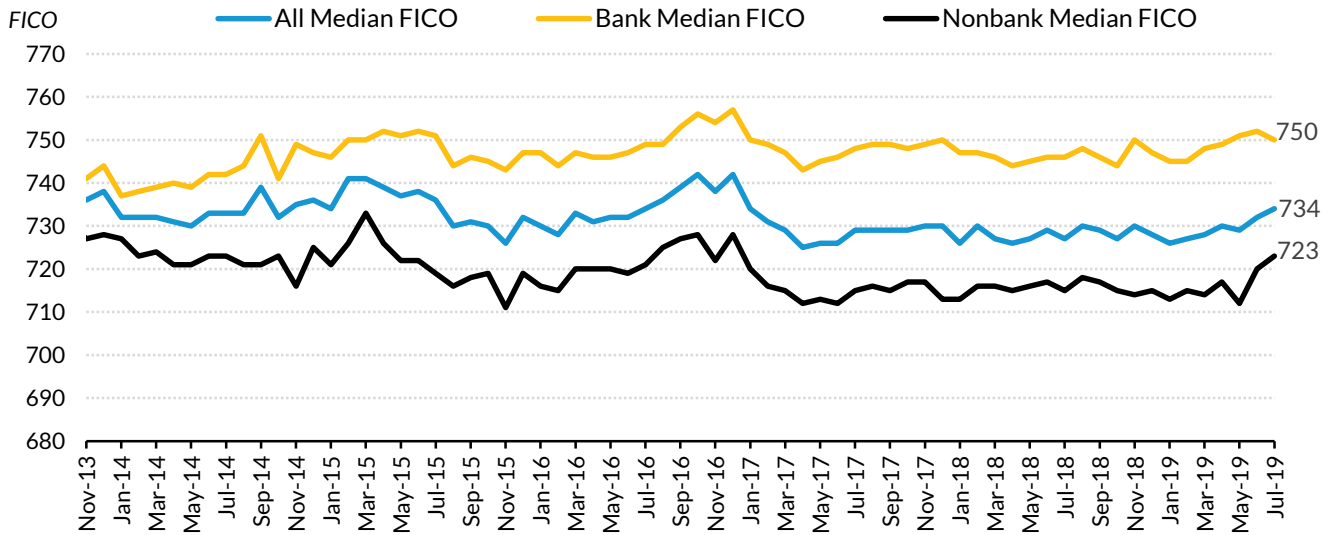


## CREDIT BOX

# AGENCY NONBANK CREDIT BOX

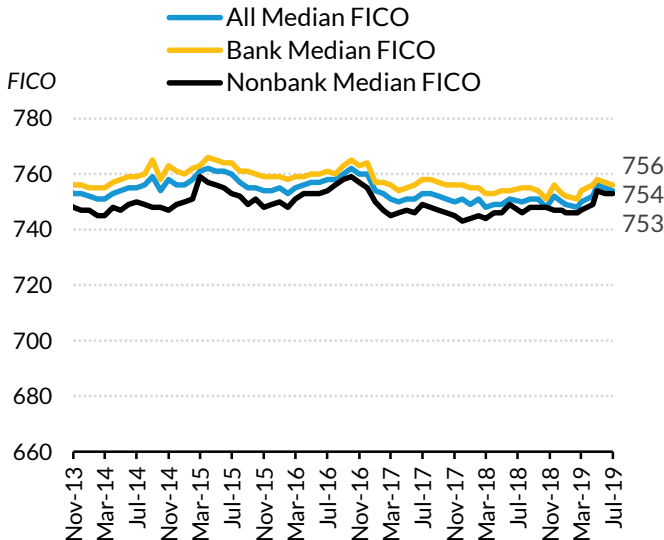
Nonbank originators have played a key role in opening access to credit. Median GSE and Ginnie Mae FICO's for nonbank originations are lower than their bank counterparts, with a larger differential in the Ginnie Mae market. Within the GSE space, bank FICO's have declined slightly since 2014 and nonbank FICO's are up slightly. By contrast, for Ginnie Mae originations, FICO scores for bank originations rose while nonbank FICO's fell since 2014, reflecting a sharp cut-back in FHA lending by many banks. As pointed out on page 11, banks comprise only about 15 percent of Ginnie Mae originations. Many banks temporarily relaxed their overlays in Spring 2019, causing FICO's to drift down to 690 in April '19. Since May '19, Ginnie Mae Bank FICO's have increased to 699, a level last seen in late 2018.

### Agency FICO: Bank vs. Nonbank



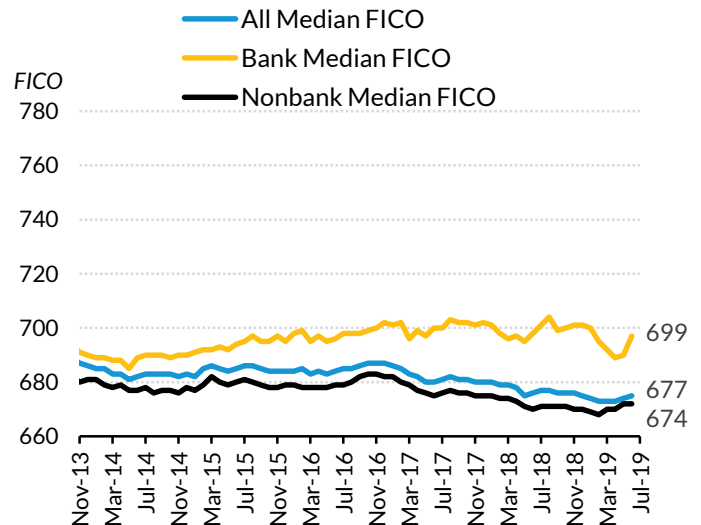
Sources: eMBS and Urban Institute.

### GSE FICO: Bank vs. Nonbank



Sources: eMBS and Urban Institute.

### Ginnie Mae FICO: Bank vs. Nonbank



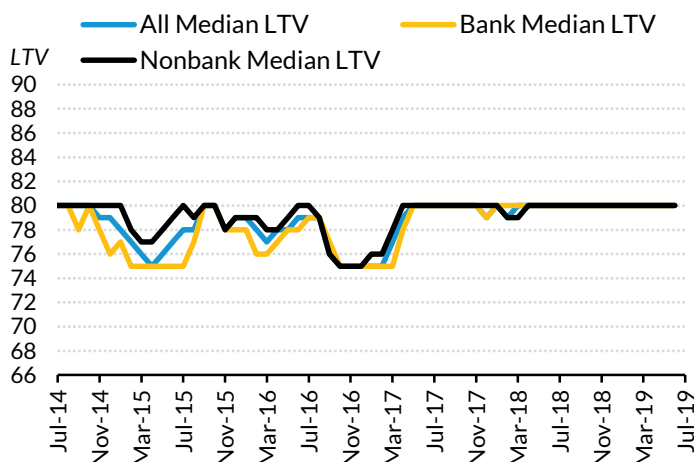
Sources: eMBS and Urban Institute.

## CREDIT BOX

# AGENCY NONBANK CREDIT BOX

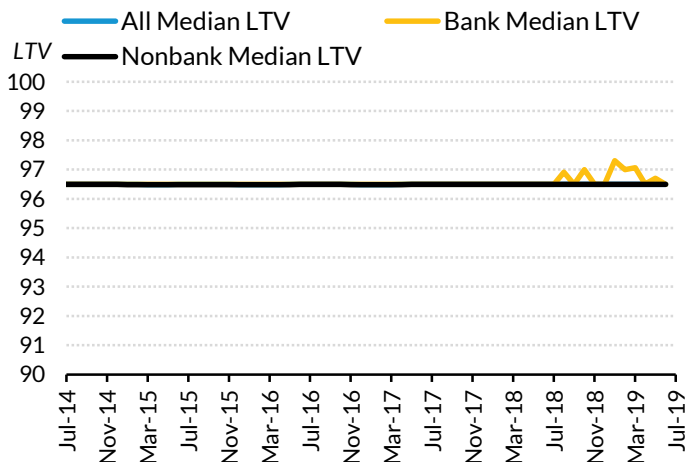
The median LTVs for nonbank and bank originations are comparable, while the median DTI for nonbank loans is higher than for bank loans, indicating that nonbanks are more accommodating in both this and the FICO dimension. Since early 2017, there has been a substantial increase in DTIs, which has partially 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 2019, DTIs have come down measurably, more so for banks.

### GSE LTV: Bank vs. Nonbank



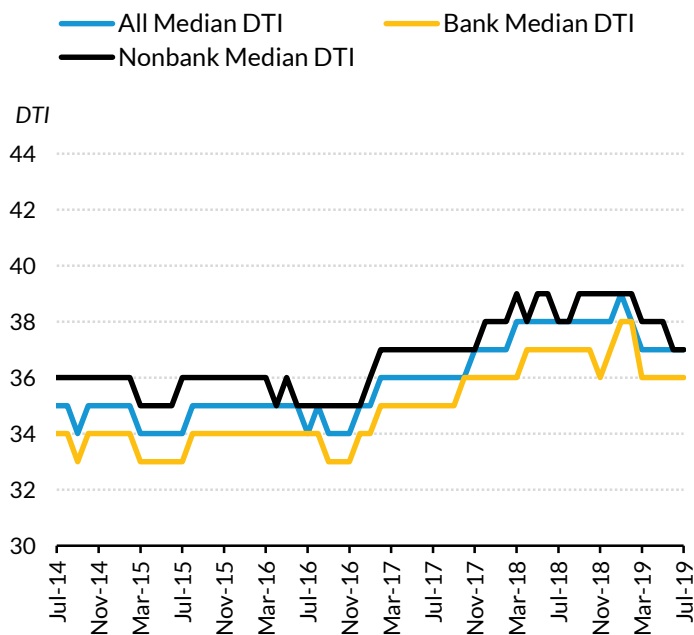
Sources: eMBS and Urban Institute.

### Ginnie Mae LTV: Bank vs. Nonbank



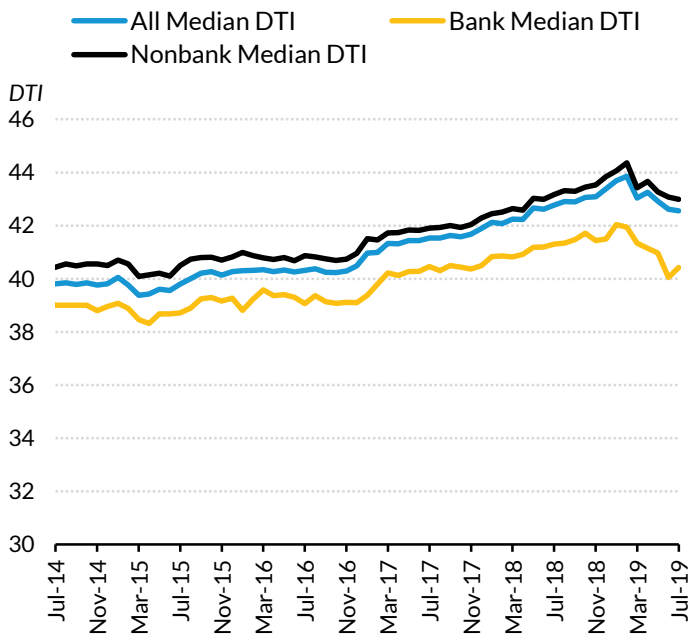
Sources: eMBS and Urban Institute.

### 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 estimate 2019 volume to be between \$1.79-\$1.9 trillion, which is higher than the \$1.64 trillion in 2018. This increased origination estimate follows drops in origination volumes, due to declining 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	326	355	325	33	36	30
2019 Q2	502	520	501	30	35	29
2019 Q3	568	500	605	40	34	38
2019 Q4	443	421	461	35	31	35
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	1839	1796	1892	35	34	33
2020	1699	1715	1729	27	28	26

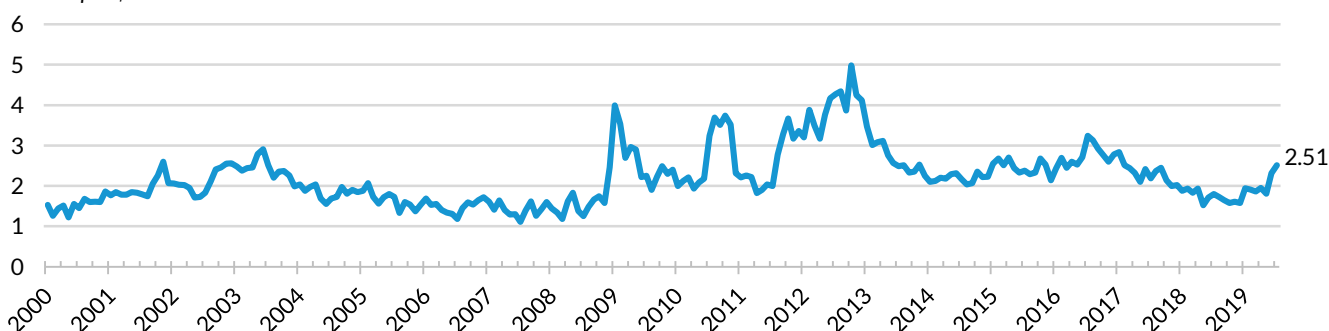
Sources: Fannie Mae, Freddie Mac, Mortgage Bankers Association and Urban Institute.

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 4.0, 4.1, and 3.7 percent.

## Originator Profitability and Unmeasured Costs

In July 2019, Originator Profitability and Unmeasured Costs (OPUC) stood at \$2.51 per \$100 loan, which is near the lower end of the range for the past 10 years, but still up from 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 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.

Note: OPUC 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 led to a low, 4.2 month, supply of for-sale homes in July 2019. This level is marginally lower than the 4.3 months in July 2018. Pre-crisis it averaged 4.6 months. Fannie Mae, Freddie Mac, the MBA and the NAHB forecast 2019 housing starts to be 1.24 to 1.26 million units, very similar to 2018. Fannie Mae, Freddie Mac and the MBA predict total home sales of 6.1 million units in 2019, outpacing 2018 by 80,000 to 120,000 units. The NAHB predicts homes sales to be roughly flat to 2018.

### Months of Supply

*Months of supply*



Source: National Association of Realtors and Urban Institute.

July 2019

### 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	1250	1250	1250	1249	5957	5960	5958	5359
2019	1241	1260	1244	1243	5994	6000	6020	5295
2020	1243	1340	1264	1286	6075	6120	6116	5331

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

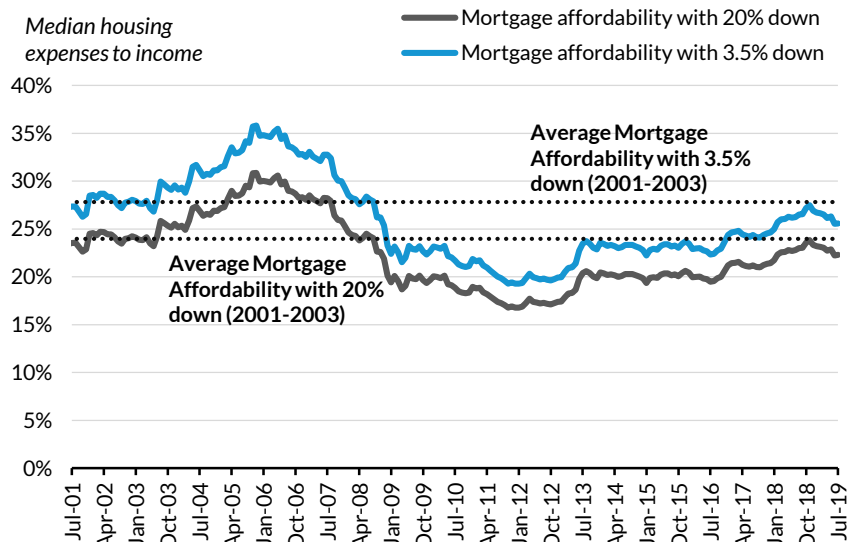
**Note:** Shaded boxes indicate forecasted figures; column labels indicate source of estimate. NAHB home sales estimate is for single-family structures only, it excludes condos and co-ops. Other figures include all single-family sales.

# STATE OF THE MARKET

## HOUSING AFFORDABILITY

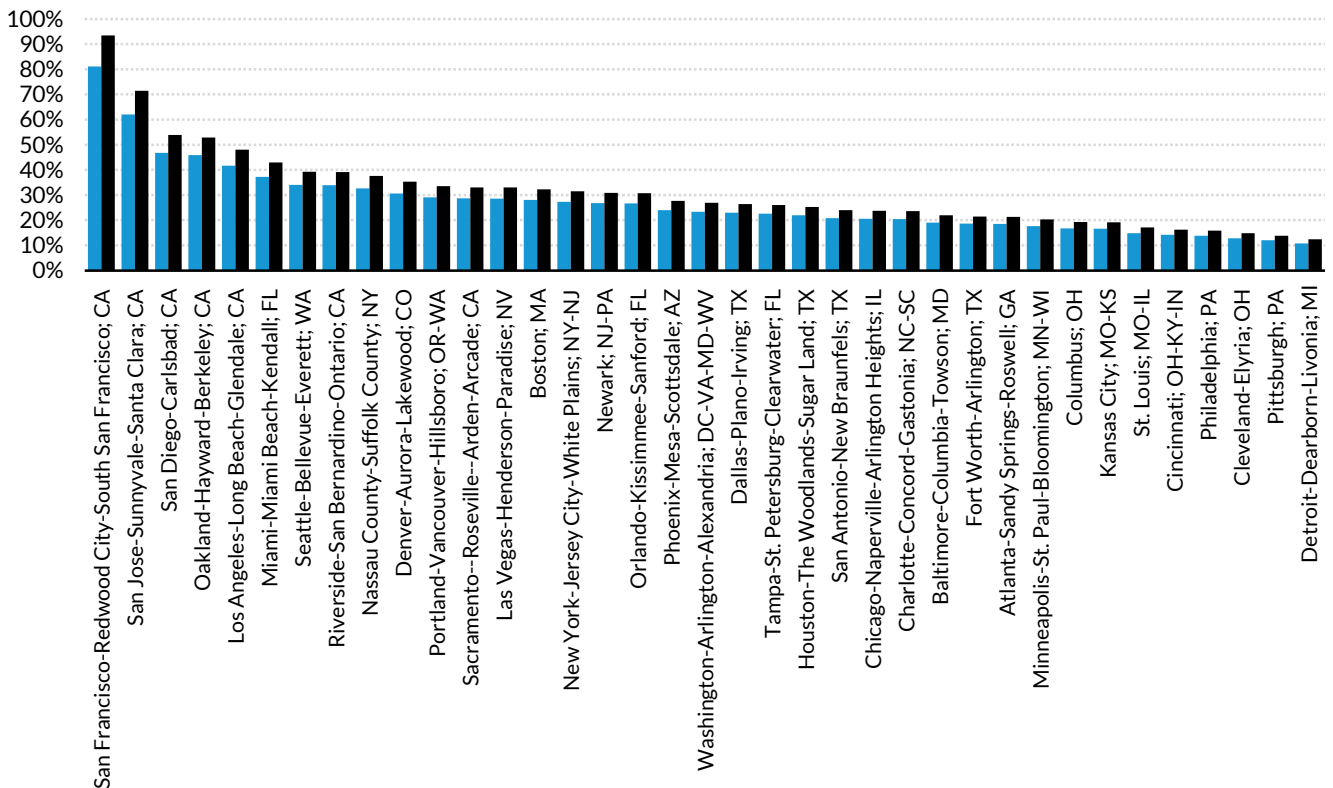
### National Mortgage Affordability Over Time

Home prices remain affordable by historic standards, despite price increases over the last 7 years, as interest rates remain relatively low in an historic context. As of July 2019, with a 20 percent down payment, the share of median income needed for the monthly mortgage payment stood at 22.3 percent; with 3.5 down, it is 25.6 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

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 Q4 2018.

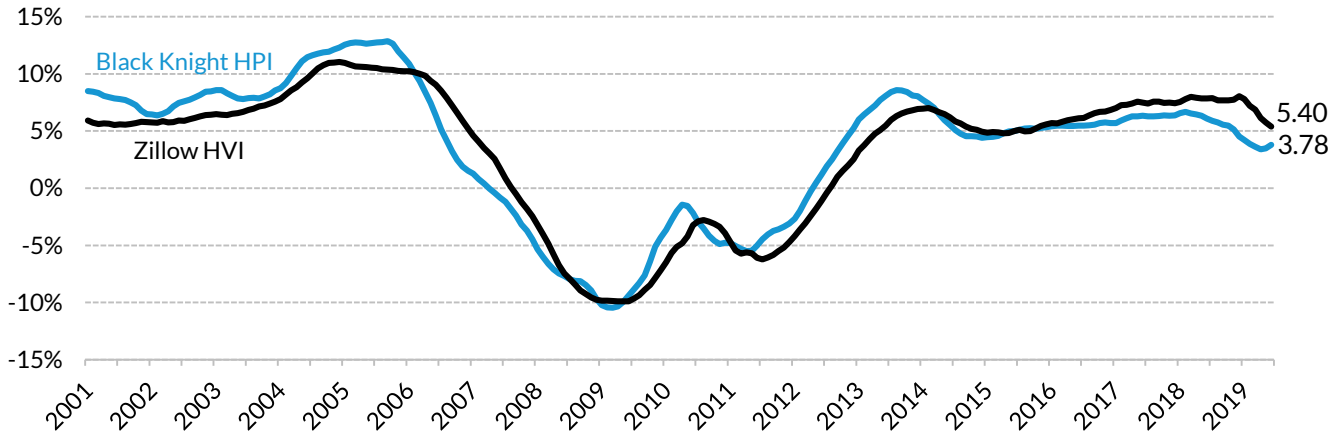
# STATE OF THE MARKET

## HOME PRICE INDICES

### National Year-Over-Year HPI Growth

Year-over-year home price appreciation continued to slow in June 2019, as measured by Zillow's hedonic index but picked up slightly according to Black Knight's repeat sales index. Although housing affordability remains constrained, especially at the lower end of the market, recent declines in rates serve as a partial offset. We would expect the lower end of the market to continue to appreciate more than the upper end, as low-end inventory is very tight.

Year-over-year growth



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

### Changes in Black Knight HPI for Top MSAs

After rising 54.3 percent from the trough, national house prices are now 14.9 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 8.8 and 9.1 percent, respectively, below peak values.

MSA	HPI changes (%)			% above peak
	2000 to peak	Peak to trough	Trough to current	
United States	75.6	-25.5	54.3	14.9
New York-Jersey City-White Plains, NY-NJ	127.9	-22.4	44.3	12.0
Los Angeles-Long Beach-Glendale, CA	180.0	-38.1	84.1	13.9
Chicago-Naperville-Arlington Heights, IL	67.0	-38.4	48.0	-8.8
Atlanta-Sandy Springs-Roswell, GA	32.5	-35.6	80.3	16.1
Washington-Arlington-Alexandria, DC-VA-MD-WV	149.3	-28.4	36.7	-2.1
Houston-The Woodlands-Sugar Land, TX	29.3	-6.6	47.8	38.1
Phoenix-Mesa-Scottsdale, AZ	113.2	-51.1	92.9	-5.7
Riverside-San Bernardino-Ontario, CA	175.4	-51.7	88.3	-9.1
Dallas-Plano-Irving, TX	26.4	-7.2	66.5	54.6
Minneapolis-St. Paul-Bloomington, MN-WI	69.3	-30.3	61.5	12.6
Seattle-Bellevue-Everett, WA	90.5	-33.1	105.4	37.5
Denver-Aurora-Lakewood, CO	34.0	-12.1	92.6	69.3
Baltimore-Columbia-Towson, MD	123.3	-24.2	23.7	-6.3
San Diego-Carlsbad, CA	148.4	-37.5	76.1	10.1
Anaheim-Santa Ana-Irvine, CA	163.3	-35.3	64.1	6.2

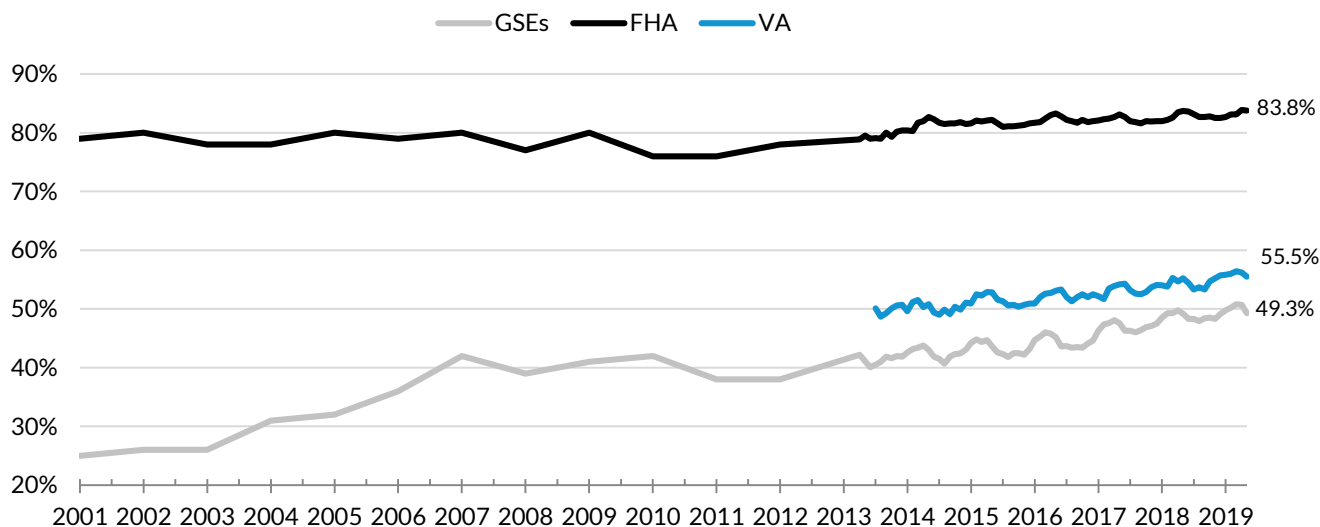
Sources: Black Knight HPI and Urban Institute. Data as of June 2019.

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

# FIRST-TIME HOMEBUYERS

## First-Time Homebuyer Share

In May 2019, the FTHB share for FHA, which has always been more focused on first time homebuyers, fell very slightly to 83.8 percent in May 2019. The FTHB share of VA lending also fell in May, to 55.5 percent. The GSE FTHB share in May was 49.3 percent. The bottom table shows that based on mortgages originated in April 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.

May 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

Characteristics	GSEs		FHA		GSEs and FHA	
	First-time	Repeat	First-time	Repeat	First-time	Repeat
Loan Amount (\$)	245,843	273,378	214,548	237,064	233,478	268,209
Credit Score	742	757	668	673	713	745
LTV (%)	88	80	96	94	91	82
DTI (%)	36	36	43	44	39	37
Loan Rate (%)	4.42	4.33	4.59	4.48	4.49	4.35

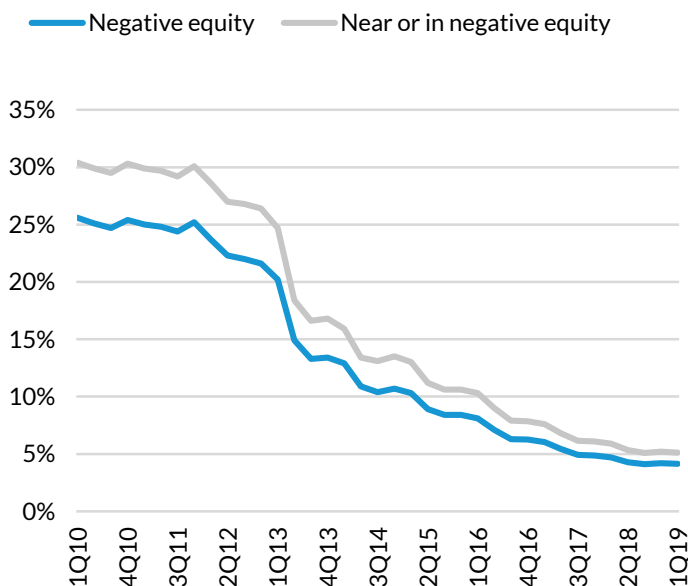
Sources: eMBS and Urban Institute.

Note: Based on owner-occupied purchase mortgages originated in May 2019.

# DELINQUENCIES AND LOSS MITIGATION ACTIVITY

Loans in and near negative equity continued to decline in 2019; 4.1 percent now have negative equity, an additional 1.0 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 1.95 percent in the second 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 8,582,314 borrowers received a modification from Q3 2007 to Q1 2019, compared with 8,807,889 liquidations in the same period.

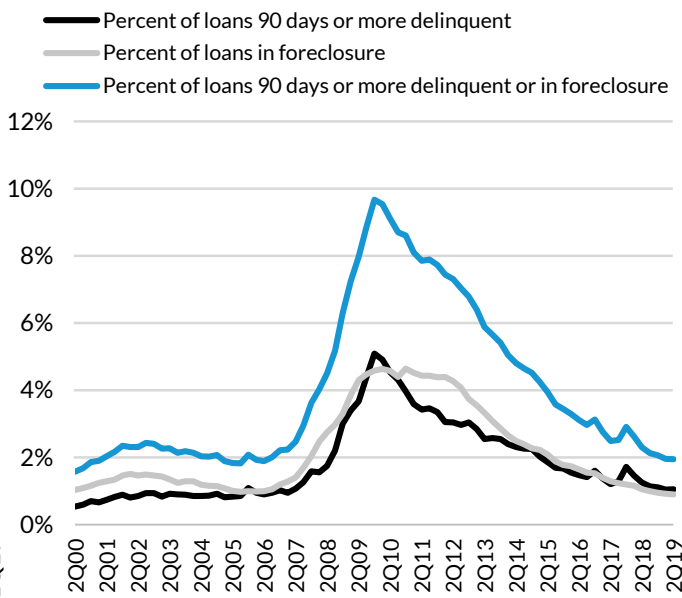
## Negative Equity Share



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 July 2019.

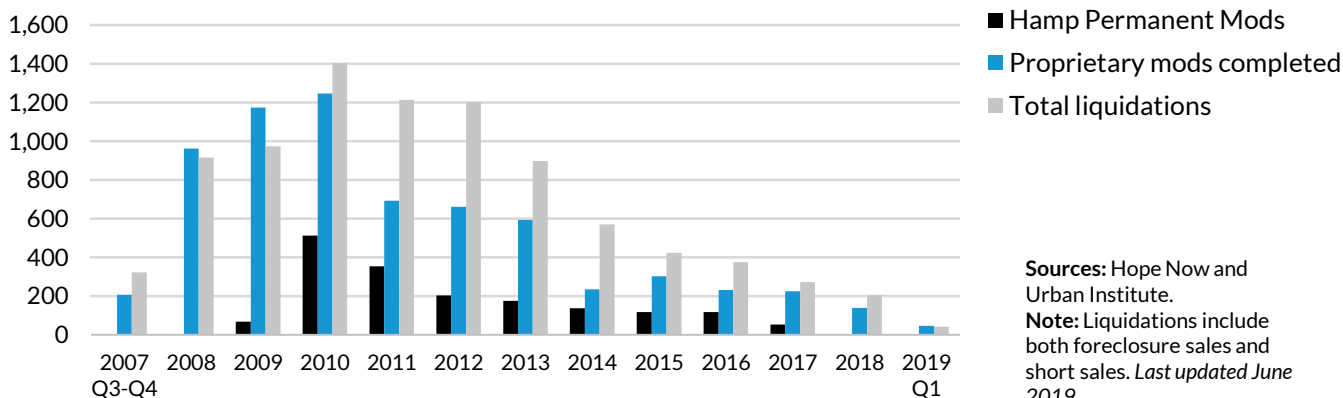
## Loans in Serious Delinquency/Foreclosure



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

## 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 June 2019.

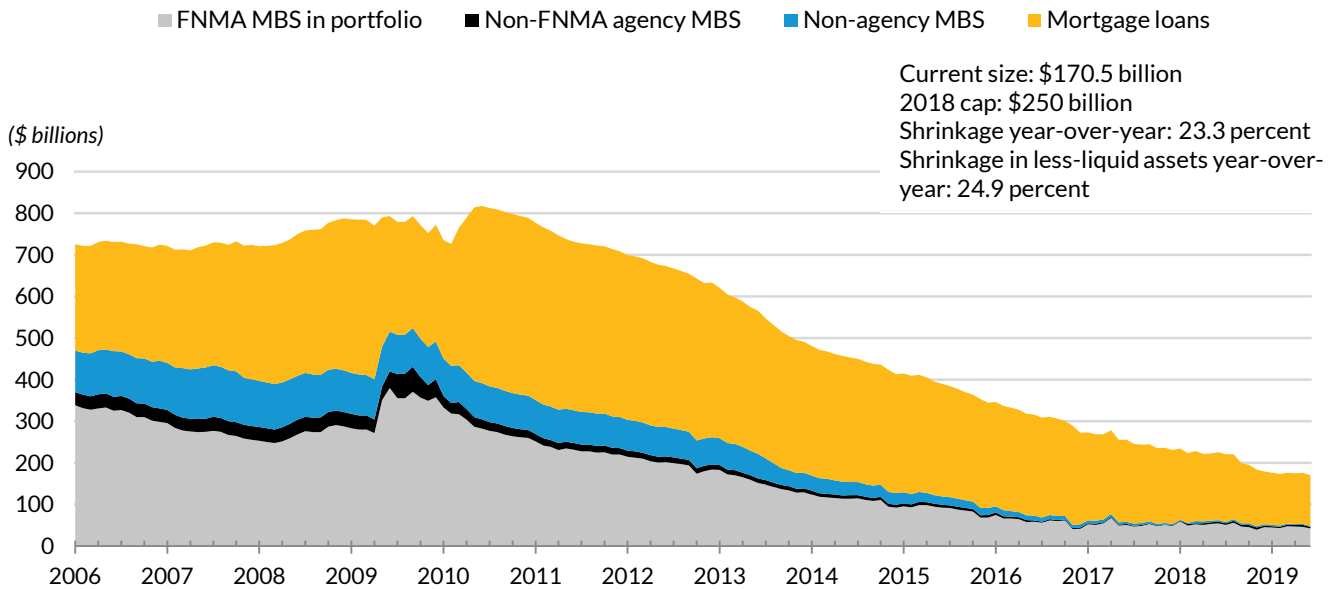


## GSES UNDER CONSERVATORSHIP

# GSE PORTFOLIO WIND-DOWN

Both GSEs continue to contract their retained portfolios. Since June 2018, Fannie Mae has contracted by 23.3 percent and Freddie Mac by 7.4 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.

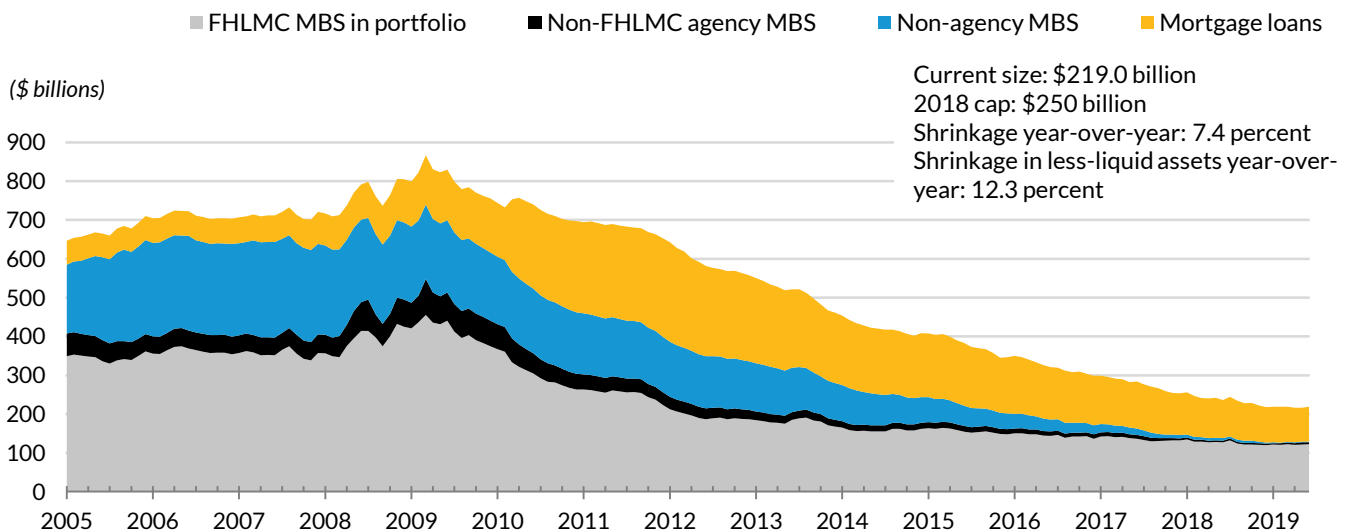
## Fannie Mae Mortgage-Related Investment Portfolio Composition



Sources: Fannie Mae and Urban Institute.

June 2019

## Freddie Mac Mortgage-Related Investment Portfolio Composition



Sources: Freddie Mac and Urban Institute.

June 2019

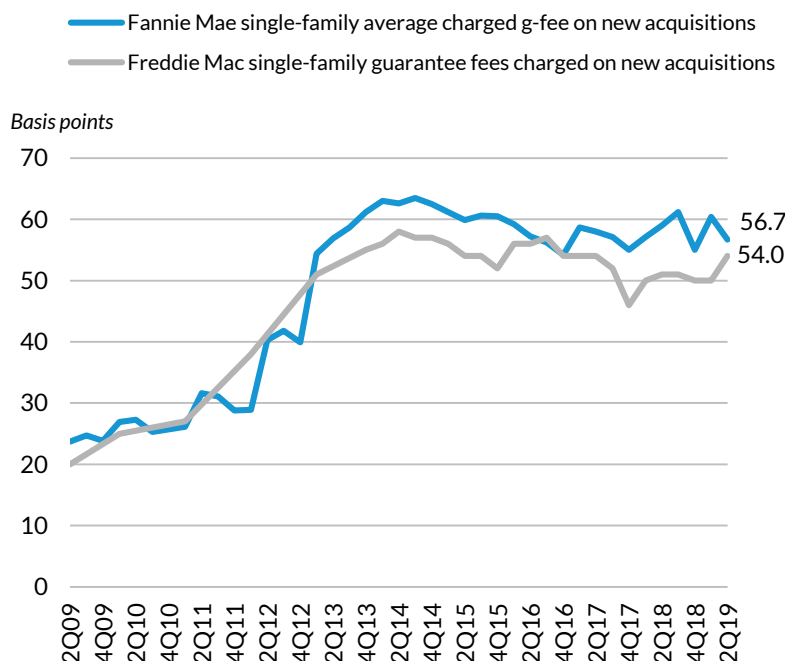
## GSES UNDER CONSERVATORSHIP

# 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 fell from 60.4 to 56.7 bps in Q2 2019, while Freddie rose from 50.0 to 54.0. These are markedly higher than g-fee levels in 2011 and 2012, and have 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 August 2019.



## 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
<b>Product Feature (Cumulative)</b>									
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 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 \$1.294 trillion; Freddie's STACR totals \$1.302 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
2017	CAS 2017 deals	\$264,697	\$8,707	3.3
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
June 2019	CAS 2019 - R04	\$25,000	\$1,000	4.0
July 2019	CAS 2019 - R05	\$24,000	\$993	4.1
<b>Total</b>		<b>\$1,294,172</b>	<b>\$40,210</b>	<b>3.1</b>

### 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
2017	STACR 2017 deals	\$248,821	\$5,663	2.3
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
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
<b>Total</b>		<b>\$1,302,927</b>	<b>\$34,001</b>	<b>2.6</b>

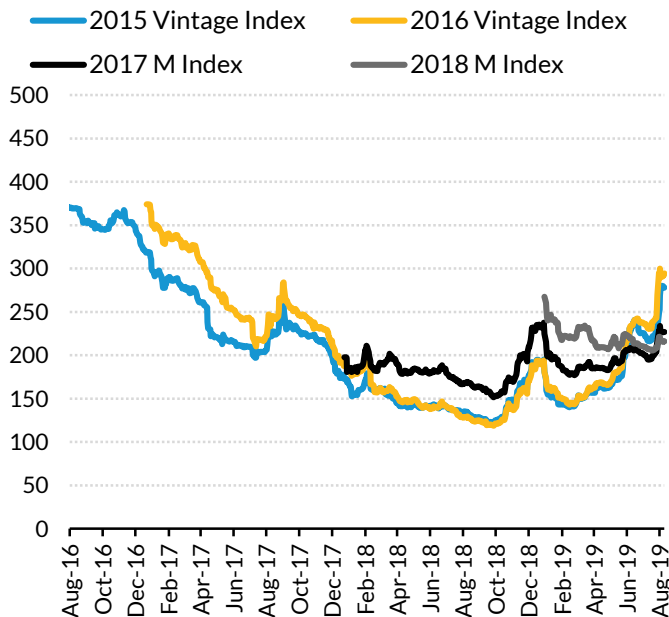
**Sources:** Fannie Mae, Freddie Mac and Urban Institute. **Note:** Classes A-H, M-1H, M-2H, and B-H are reference tranches only. These classes are not issued or sold. The risk is retained by Fannie Mae and Freddie Mac. "CE" = credit enhancement.

# GSES UNDER CONSERVATORSHIP

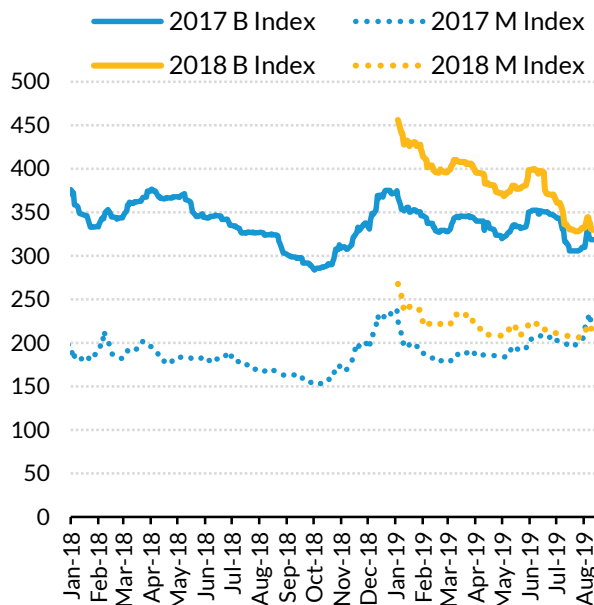
## GSE RISK-SHARING INDICES

The figures below show the spreads on the 2015, 2016, 2017 and 2018 indices, as priced by dealers. Note that the spreads on the older indices (2015 and 2016) have skyrocketed recently, while the newer indices have increased much less. This reflects the fact that the older indices have narrowed since issuance, and hence are at considerable price premiums. The drop in interest rates has generated faster prepayment speeds; spreads have widened to compensate investors for a loss in the value of their premium bonds. 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 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.

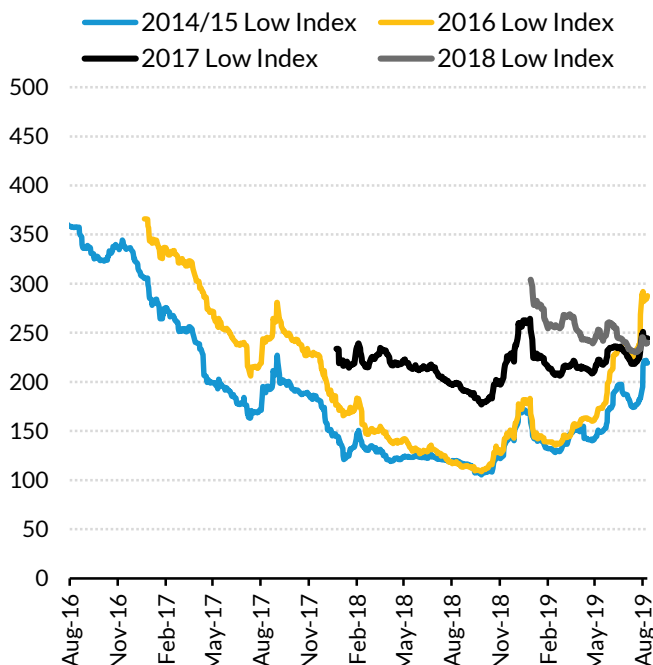
**By Vintage**



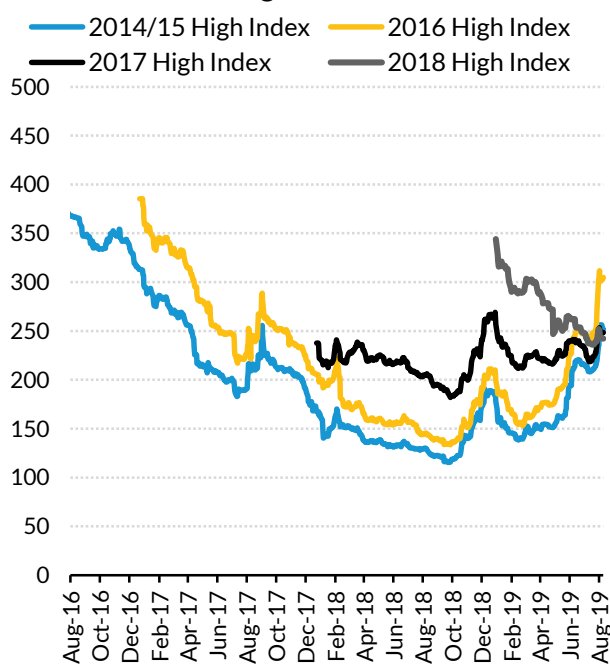
**2017 and 2018 Indices**



**Low Indices**



**High Indices**



Sources: Vista Data Services and Urban Institute.

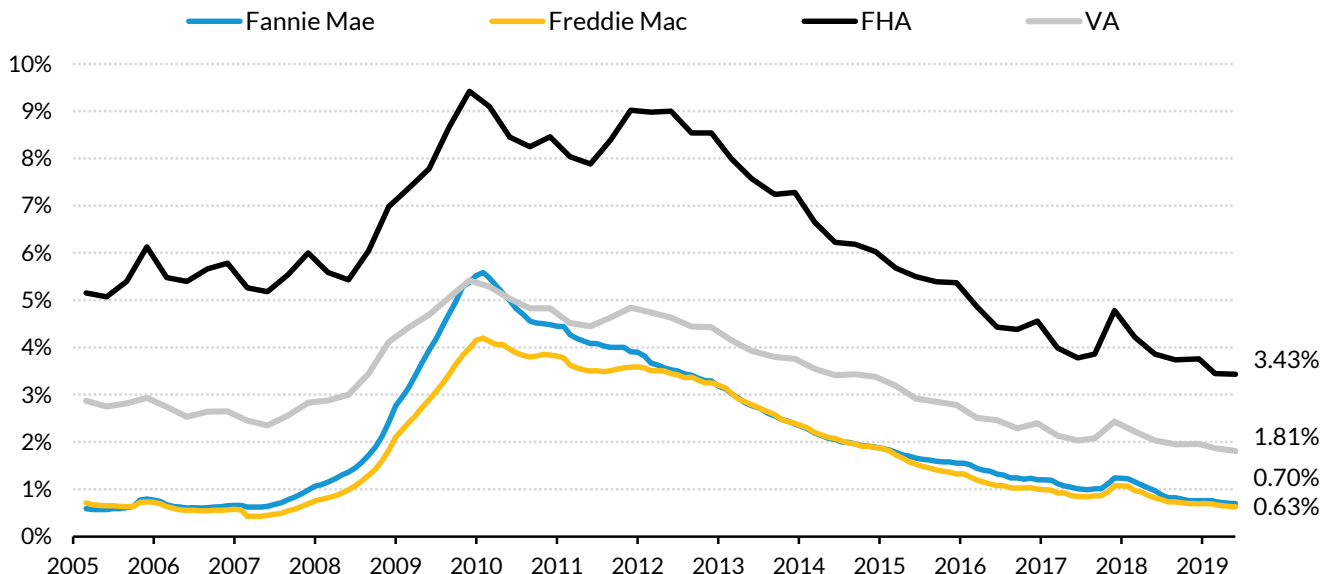
Note: Data as of August 19, 2019.

# GSES UNDER CONSERVATORSHIP

## SERIOUS DELINQUENCY RATES

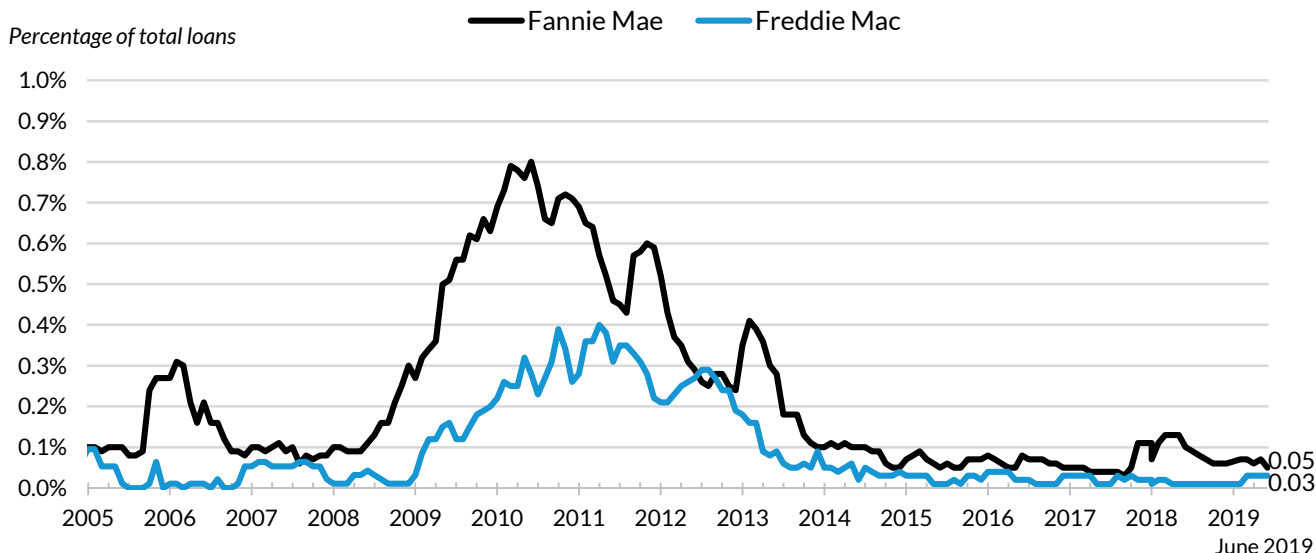
Serious delinquencies for single-family GSE, FHA, and VA loans declined in 2018 and this trend continued in the second quarter of 2019. GSE delinquencies remain slightly higher relative to 2005-2007, while FHA and VA delinquencies (which are higher than their GSE counterparts) are at levels lower than 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 August 2019. GSE delinquencies are reported monthly, last updated August of 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

Agency gross issuance was \$706.5 billion in the first seven months of 2019, up 3.3 percent from the same period in 2018. Issuance in January and February 2019 was much lower than in January and February 2018, however April through July has outpaced the previous year. Net issuance (which excludes repayments, prepayments, and refinances on outstanding mortgages) totaled \$140.0 billion in the first seven months of 2019, or \$240 billion on an annualized basis, up 8.3 percent 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	\$466.5	\$240.0	\$706.5
2019 YTD % Change YOY	3.7%	2.4%	3.3%
2019 Ann.	\$799.7	\$411.4	\$1,211.1

### 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	\$82.2	\$57.8	\$140.0
2019 YTD % Change YOY	21.9%	-6.6%	8.3%
2019 Ann.	\$140.9	\$99.1	\$240.1

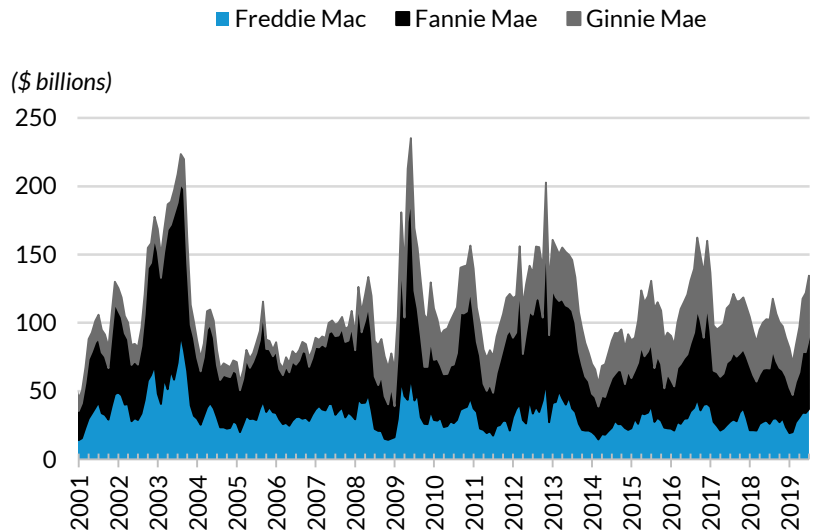
Sources: eMBS and Urban Institute.

Note: Dollar amounts are in billions. Data as of July 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 percent to 34.2 percent in July 2019. This share increase reflected both increases in the purchase share and in the refi share. More precisely, when interest rates rose, there was a proportionately sharper curtailment in GSE refis than in Ginnie Mae refis. The recent drop in rates has not been large enough to alter that pattern.

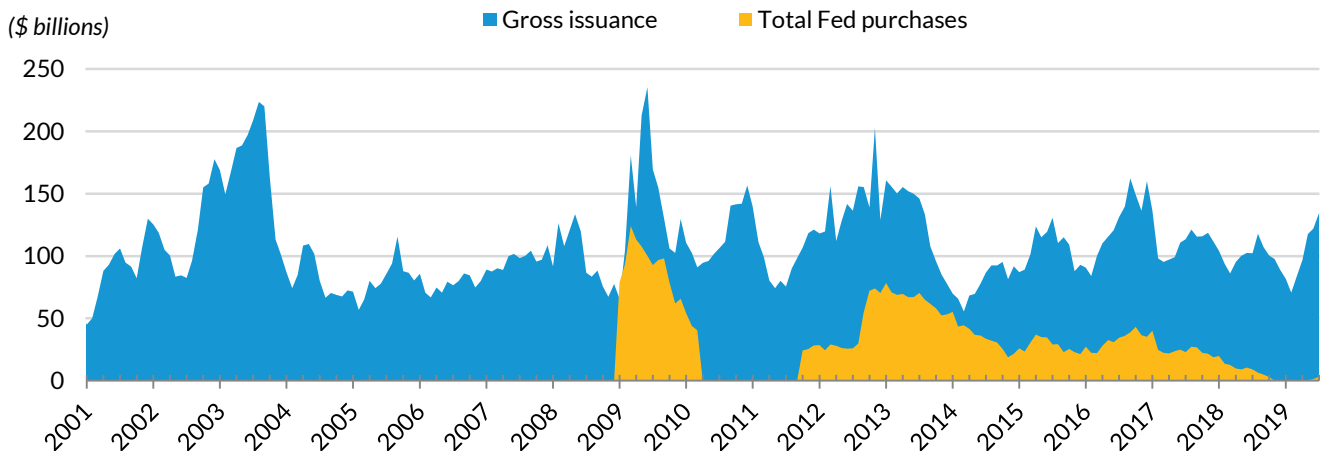


Sources: eMBS, Federal Reserve Bank of New York, and Urban Institute.

July 2019

## Fed Absorption of Agency Gross Issuance

The Fed is winding down its MBS portfolio; new MBS purchases are minimal. During the period October 2014 to 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. The portfolio wind down started in October 2017, with the Fed allowing a pre-established amount of MBS to run off each month. From October 2017 to September 2018, the Fed was still reinvesting, but by less than the prepayments and repayments. In October 2018, the amount of MBS permitted to run off each month (MBS taper) hit the \$20 billion cap. Since then the amount of Fed purchases has been tiny; in July 2019 Fed purchases totaled \$3.3 billion, corresponding to Fed absorption of gross issuance of 2.45 percent.



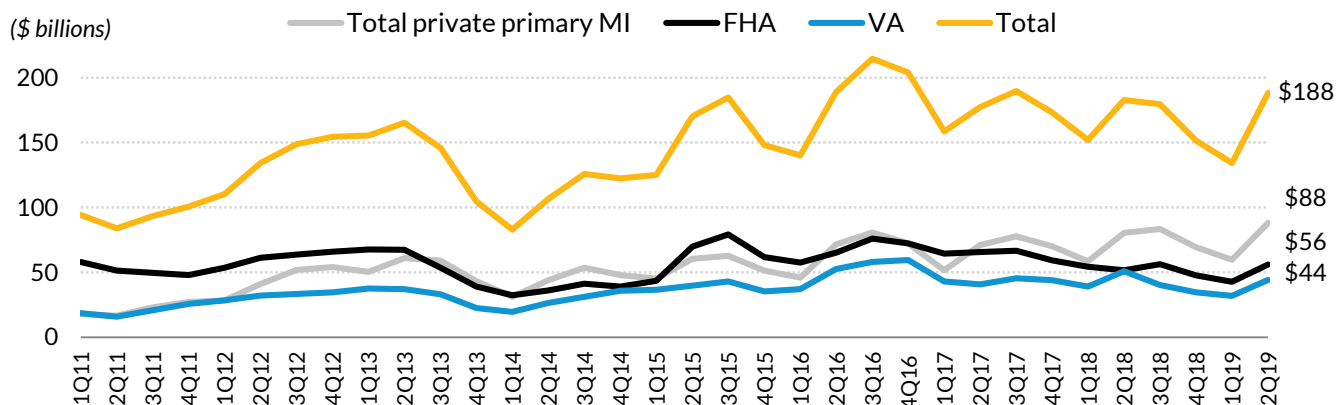
Sources: eMBS, Federal Reserve Bank of New York and Urban Institute.

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# MORTGAGE INSURANCE ACTIVITY

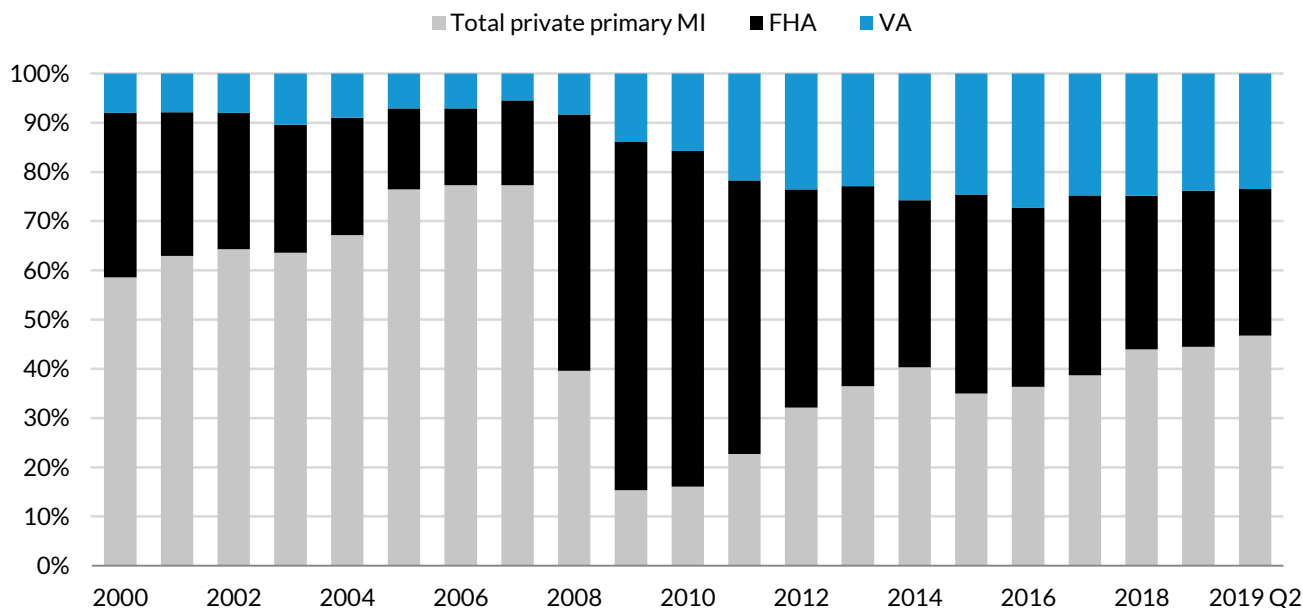
## MI Activity

Mortgage insurance activity via the FHA, VA and private insurers increased from \$183 billion in Q2 2018 to \$188 billion in Q2 2019, a 2.9 percent increase. In the second quarter of 2019, private mortgage insurance written increased by \$28.31 billion, FHA increased by \$13.44 billion and VA increased by \$12.17 billion from the previous quarter, reflecting seasonal increases driven by busy spring homebuying. During this period, the VA share fell slightly from 23.8 to 23.4 percent and the FHA share similarly fell from 31.7 to 28.8 percent, while the private mortgage insurers share grew from 44.5 to 46.8 percent compared to the previous quarter.



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

## MI Market Share



Sources: Inside Mortgage Finance and Urban Institute. Last updated July 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 740 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 <sup>a</sup>	175	125
4/1/2013 - 1/25/2015 <sup>b</sup>	175	135
Beginning 1/26/2015 <sup>c</sup>	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.

<sup>a</sup> Applies to purchase loans less than or equal to \$625,500. Those over that amount have an annual premium of 150 bps.

<sup>b</sup> Applies to purchase loans less than or equal to \$625,500. Those over that amount have an annual premium of 155 bps.

<sup>c</sup> 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	3.77
FHA	3.84

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	\$1,320	\$1,320	\$1,320	\$1,320	\$1,320	\$1,320	\$1,320	\$1,320
PMI	\$1,592	\$1,528	\$1,492	\$1,405	\$1,361	\$1,323	\$1,281	\$1,257
PMI Advantage	-\$272	-\$208	-\$172	-\$85	-\$40	-\$2	\$39	\$63

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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