HOUSING FINANCE POLICY CENTER

HOUSING FINANCE AT A GLANCE

A MONTHLY CHARTBOOK

September 2018

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.

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

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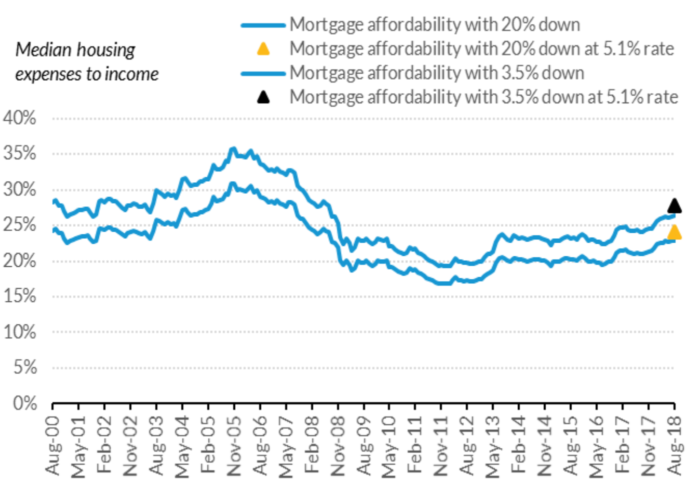
INTRODUCTION

Each month, we monitor housing affordability at the national and MSA level, by comparing incomes with home prices. Specifically, we look at what share of the median income would be devoted to a monthly mortgage payment on the median priced home at the current mortgage interest rate. We make a set of assumptions- that the borrower would take out a 30-year, fixed-rate mortgage at the prevailing Freddie Mac Primary Mortgage Market Survey (PMMS) rate, and that taxes and insurance would cost 1.75% of the value of the home. This way, we could use the measure to capture how changes in both home prices and interest rates affect affordability.



With collapsing homes prices following the housing crisis, housing expenses as a share of income fell as low as 16.7 percent by the end of 2011, assuming a 20 percent down payment (page 19). Since then, this share has been on a continued rise as home prices bounced back and surpassed their pre-crisis level. While historically low interest rates have helped keep mortgage payments low, recent hikes in rates have also started to put a squeeze on affordability. In August 2018, assuming a 20 percent down payment, the monthly payment on the median priced home would take up 22.9 percent of median income. If we assume a 3.5 percent down payment, this rises to 26.4. This is only slightly below the 2001-2003 averages of 24.0 and 27.8 percent, respectively. The current PMMS rate is 4.55 percent, but if rates rose to 5.1 percent, we would see affordability return to the 2001-2003 averages, and any further increases would indicate that affordability is worse than 2001-2003 at the national level.

While the national metric is important, is does not accurately portray affordability conditions in every city. On page 19, the bottom figure shows how widely affordability ranges. For instance, in San Francisco- Redwood City- South San Francisco, CA, the median mortgage payment would take up 69.1 percent of median income, but in Detroit-Dearborn-Livonia, MI, that number is only 10.0 percent. Currently, in 20 of the 17 MSAs that we look at, affordability is lower than the national level. In the nine most expensive MSAs, the median mortgage payment would require at least an additional 10 percent of median income above the national level- and in most of these places, home price appreciation is not slowing down.

Our recent blog post uses the same metrics to compare the cost of homeownership and renting, which allows us to see where homeownership is still the cheaper option.

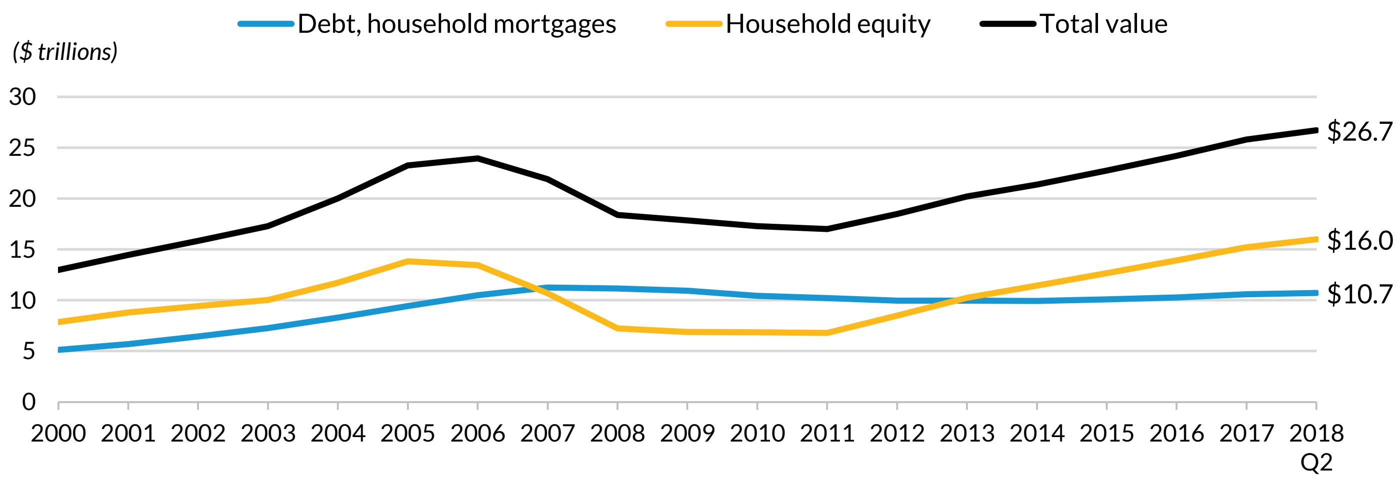
INSIDE THIS ISSUE

- The total value of the US Housing Market continued to rise in Q2 2018, driven by a $252 billion increase in household equity over the last quarter (page 6).
- While the non-agency MBS issuance remained low, the prime non-agency securitization grew 200 percent YOY in H1 2018 (page 10).
- Both Fannie Mae and Freddie Mac revised down their forecasted origination volume in FY 2018 (page 15).
- The share of loans in negative equity continued the decline to 4.3 percent in Q2 2018 (page 22).
- Spreads on GSE CRT securities continued to narrow in September 2018 (page 27).

MARKET SIZE OVERVIEW

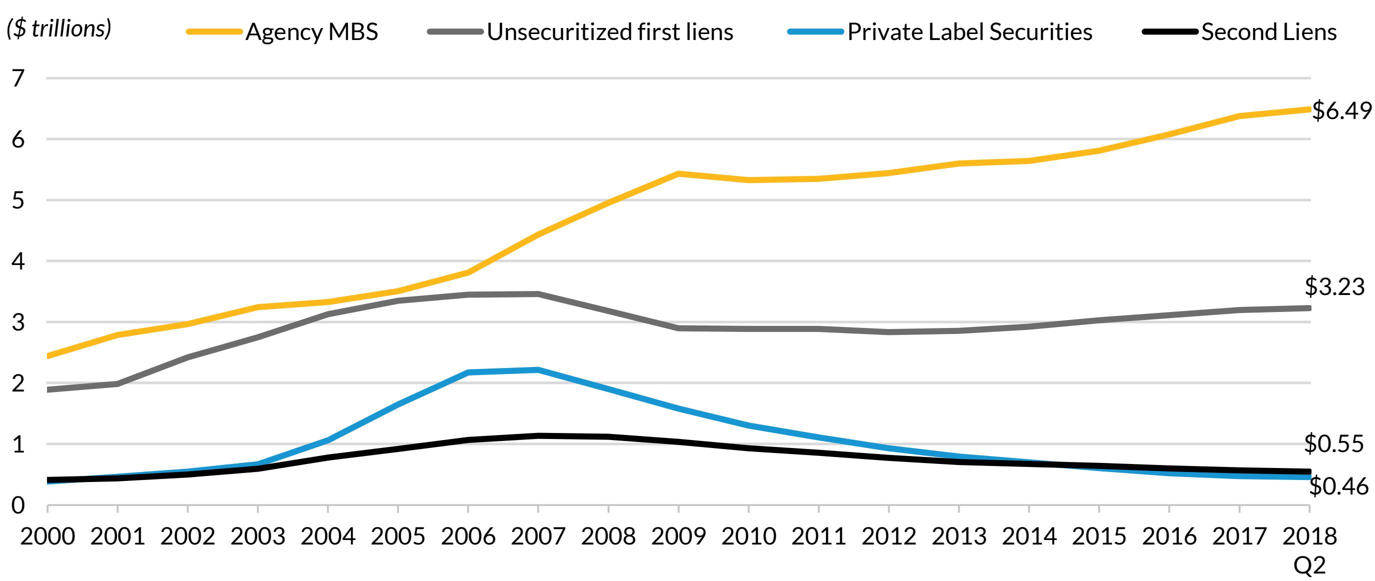
The Federal Reserve's Flow of Funds report has consistently indicated an increasing total value of the housing market driven by growing household equity since 2012, and 2018 Q2 was no different. While total debt and mortgages was stable at $10.7 trillion, household equity reached a new high of $16.0 trillion, bringing the total value of the housing market to $26.7 trillion, 10 percent higher than the pre-crisis peak in 2006. Agency MBS make up 61.0 percent of the total mortgage market, private-label securities make up 4.3 percent, and unsecuritized first liens at the GSEs, commercial banks, savings institutions, and credit unions make up 30.1 percent. Second liens comprise the remaining 5.1 percent of the total.

Value of the US Housing Market



Sources: Federal Reserve Flow of Funds and Urban Institute. *Last updated September 2018.*

Size of the US Residential Mortgage Market

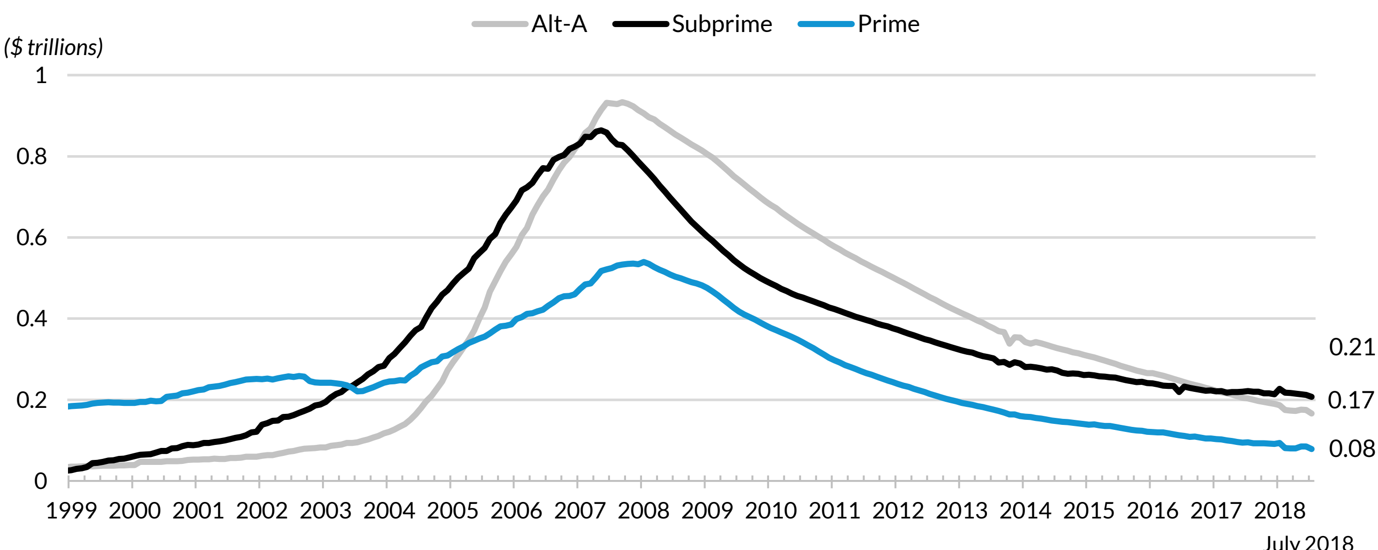


Sources: Federal Reserve Flow of Funds, Inside Mortgage Finance, Fannie Mae, Freddie Mac, eMBS and Urban Institute. *Last updated September 2018.* **Note:** Unsecuritized first liens includes loans held by commercial banks, GSEs, savings institutions, and credit unions.

OVERVIEW
MARKET SIZE OVERVIEW

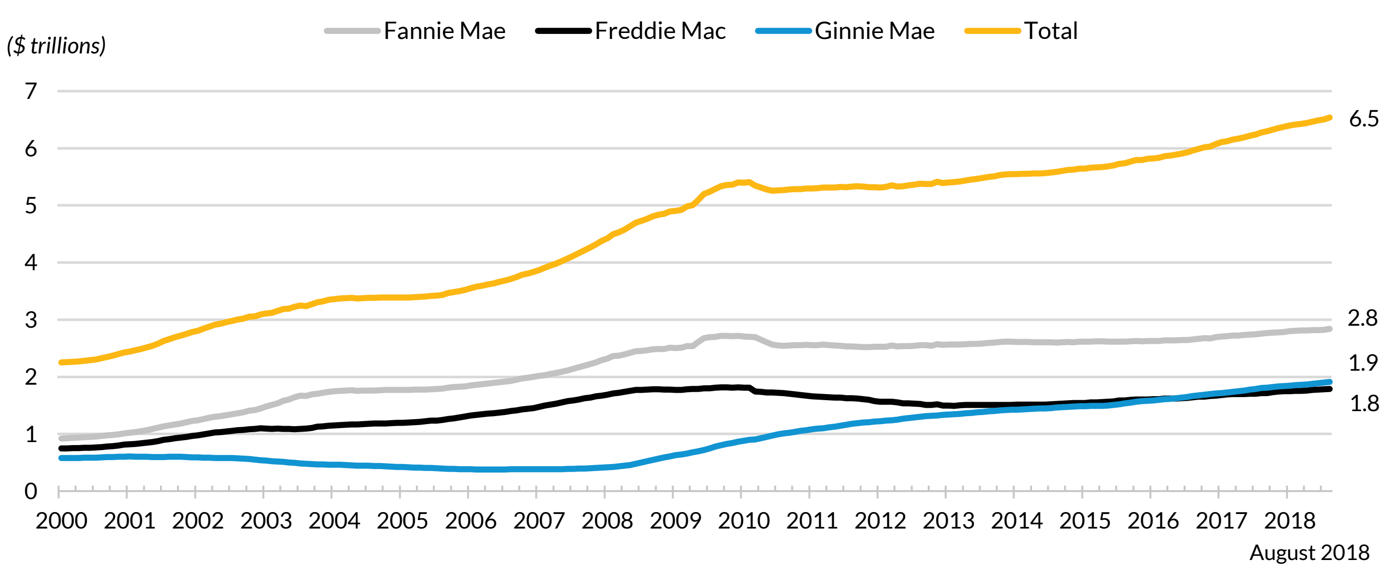
As of July 2018, debt in the private-label securitization market totaled $451 billion and was split among prime (17.4 percent), Alt-A (36.7 percent), and subprime (45.8 percent) loans. In August 2018, outstanding securities in the agency market totaled $6.5 trillion and were 43.4 percent Fannie Mae, 27.3 percent Freddie Mac, and 29.2 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



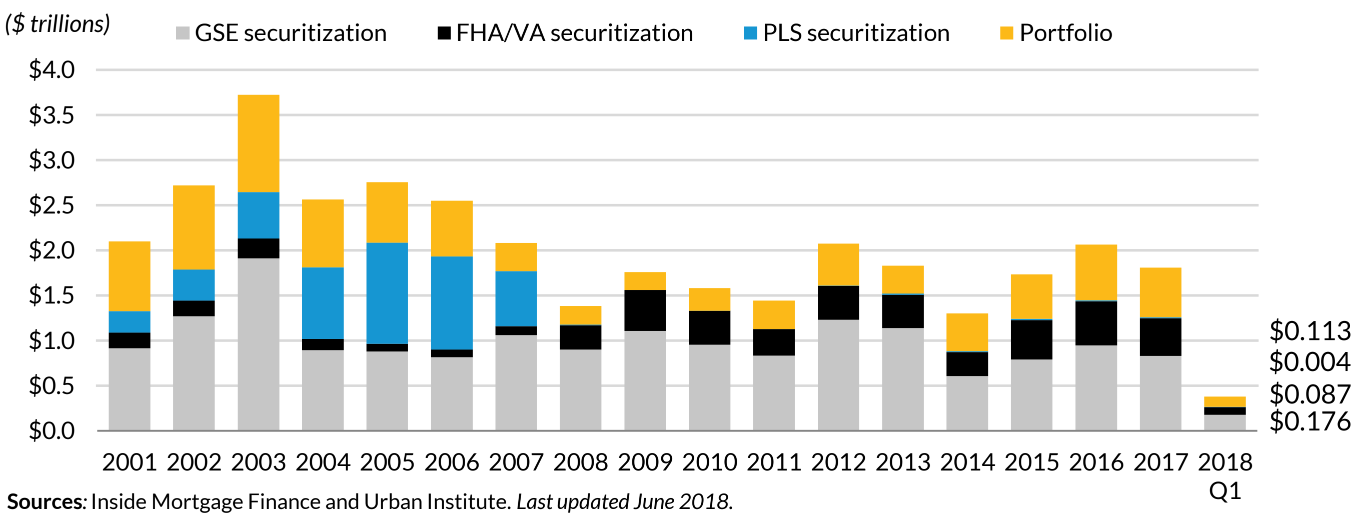
Sources: eMBS and Urban Institute.

OVERVIEW

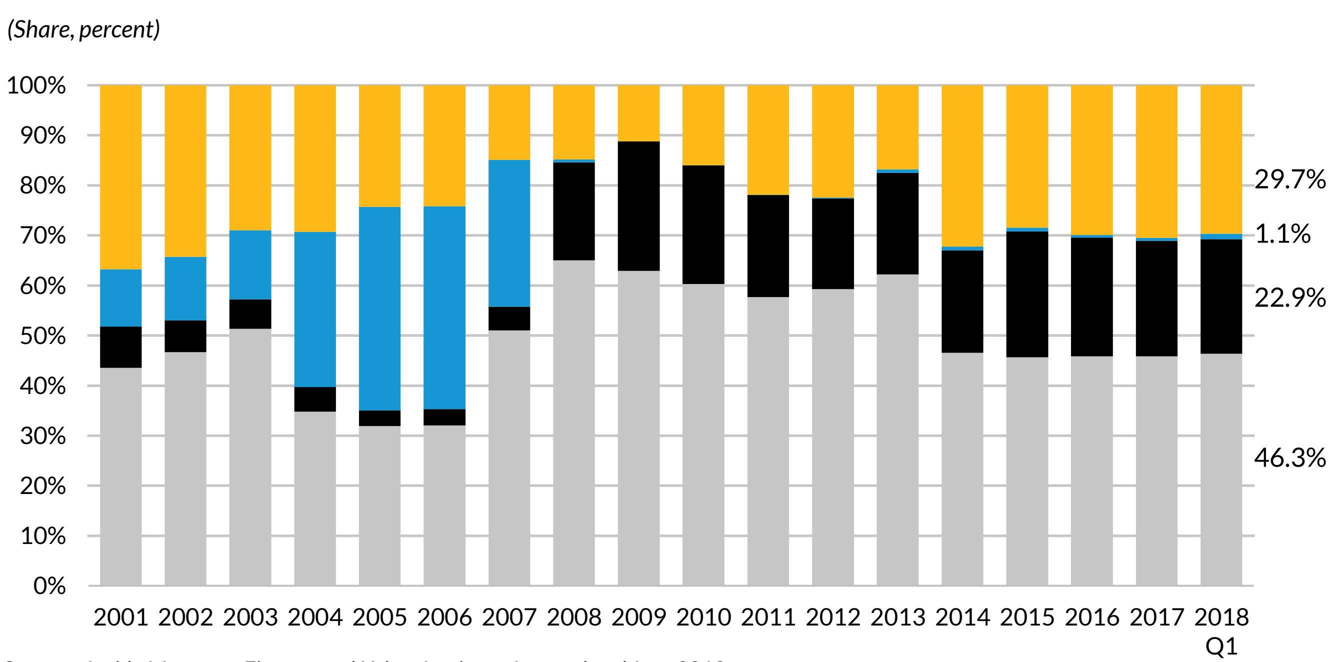
ORIGINATION VOLUME AND COMPOSITION

First Lien Origination Volume

First lien originations totaled $380 billion in Q1 2018, down 16 percent from the first quarter of 2017, mostly due to higher interest rates. The portfolio originations share was 28 percent, the GSE share was around 46 percent, and the FHA/VA share was around 23 percent, all consistent with 2017 shares. Origination of private-label securities was under just over 1 percent, slightly higher than the 2017 share.



Sources: Inside Mortgage Finance and Urban Institute. *Last updated June 2018.*



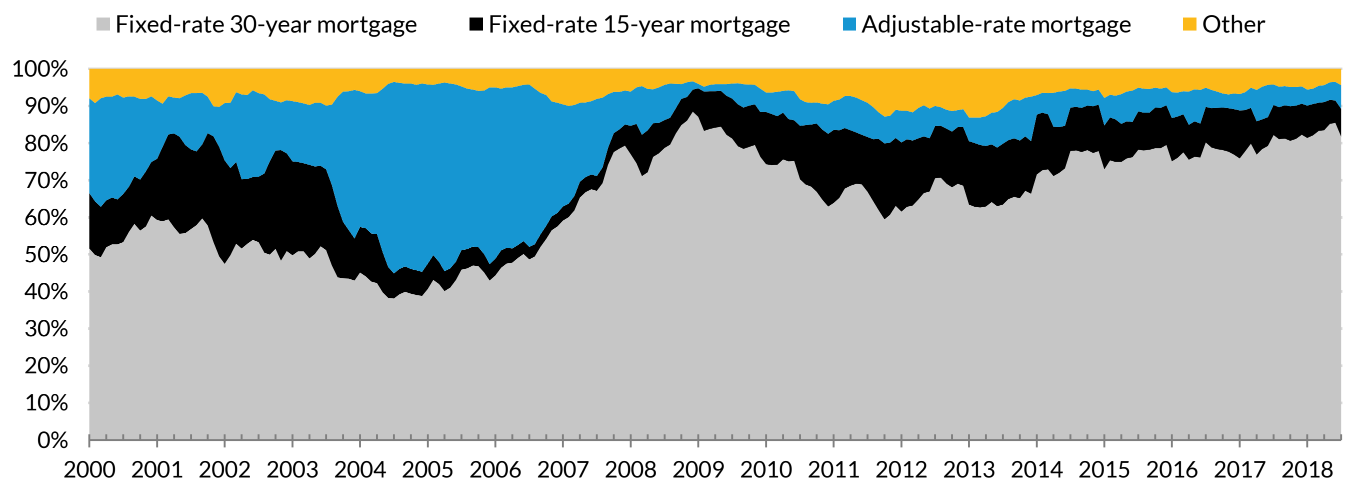
Sources: Inside Mortgage Finance and Urban Institute. *Last updated June 2018.*

OVERVIEW

MORTGAGE ORIGINATION PRODUCT TYPE

Adjustable-rate mortgages (ARMs) accounted for as much as 52 percent of all new originations during the peak of the 2005 housing bubble (top chart). The ARMs fell to an historic low of 1 percent in 2009, and then slowly grew to a high of 12 percent in December 2013. Since then, ARMs have begun to decline again to 6.4 percent in July 2018. The 15-year fixed-rate mortgage (FRM), predominantly a refinance product, accounted for 7.5 percent of new originations in July 2018. If we exclude refinances (bottom chart), the share of 30-year FRMs in July 2018 stood at 87.7 percent, 15-year FRMs at 4.5 percent, and ARMs at 6.1 percent.

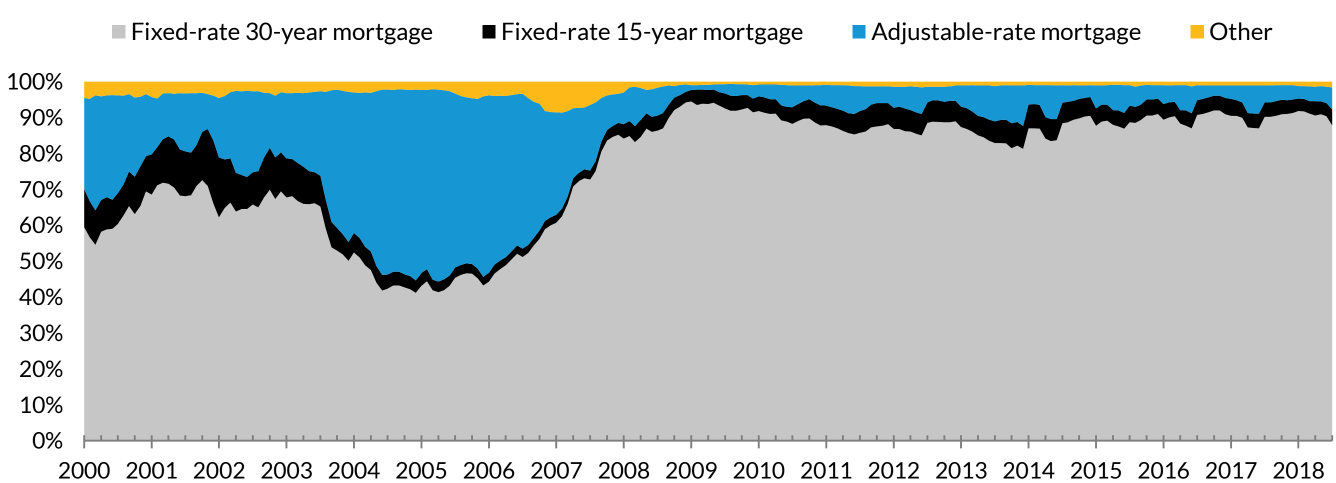
All Originations



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

July 2018

Purchase Loans Only



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

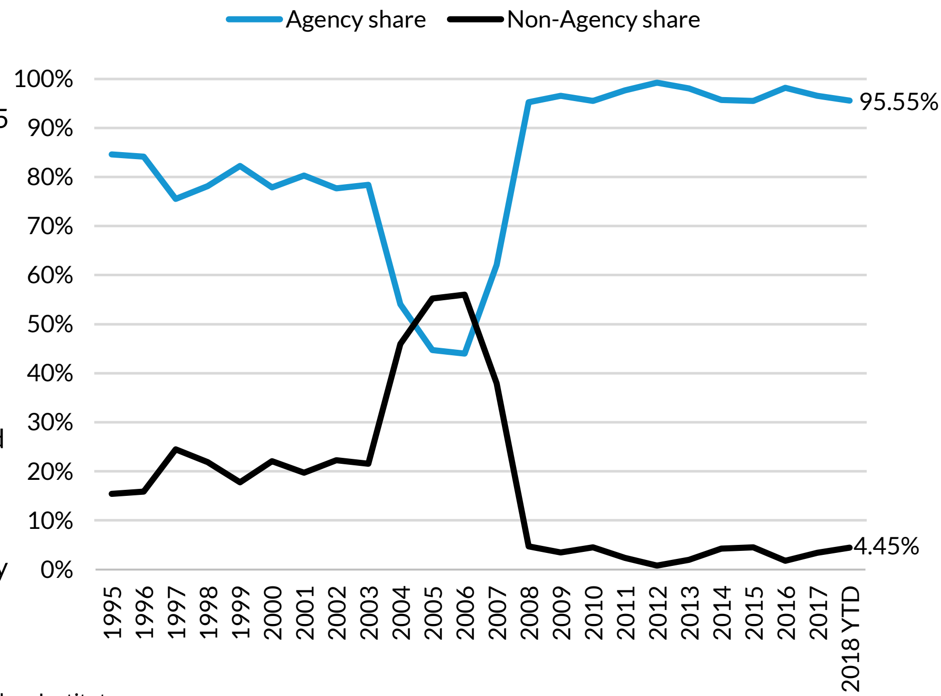
July 2018

OVERVIEW

SECURITIZATION VOLUME AND COMPOSITION

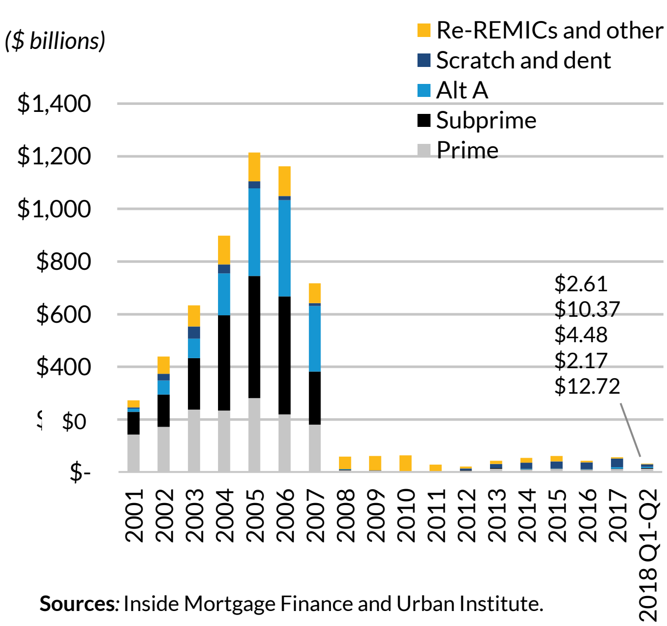
Agency/Non-Agency Share of Residential MBS Issuance

The non-agency share of mortgage securitizations in the first eight months of 2018 was 4.5 percent, above the 3.4 percent share in 2017. The non-agency securitization volume totaled $32.34 billion in the first two quarters of 2018, a 7 percent increase over the same period in 2017, but there is a change in the mix. Prime securitizations continued to surge through the second quarter, while scratch and dent and re-REMICs and other were down from the same period in 2017. Non-agency securitizations continue to be tiny compared to pre-crisis levels.



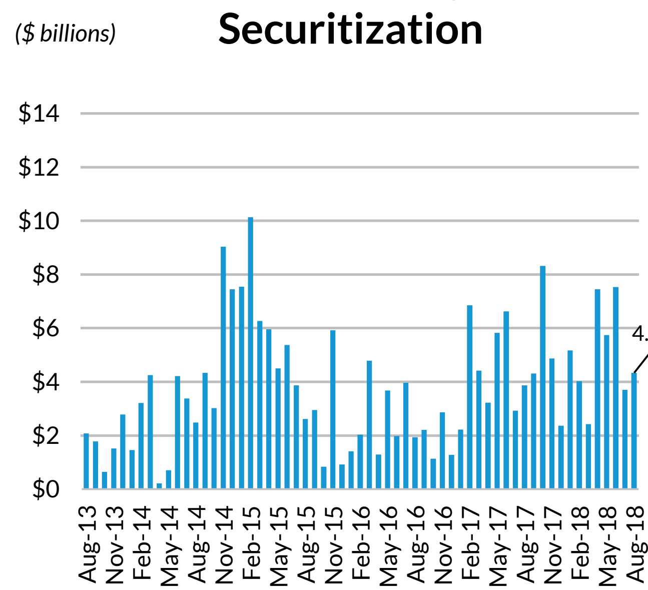
Sources: Inside Mortgage Finance and Urban Institute.
Note: Based on data from August 2018.

Non-Agency MBS Issuance



Sources: Inside Mortgage Finance and Urban Institute.

Monthly Non-Agency Securitization



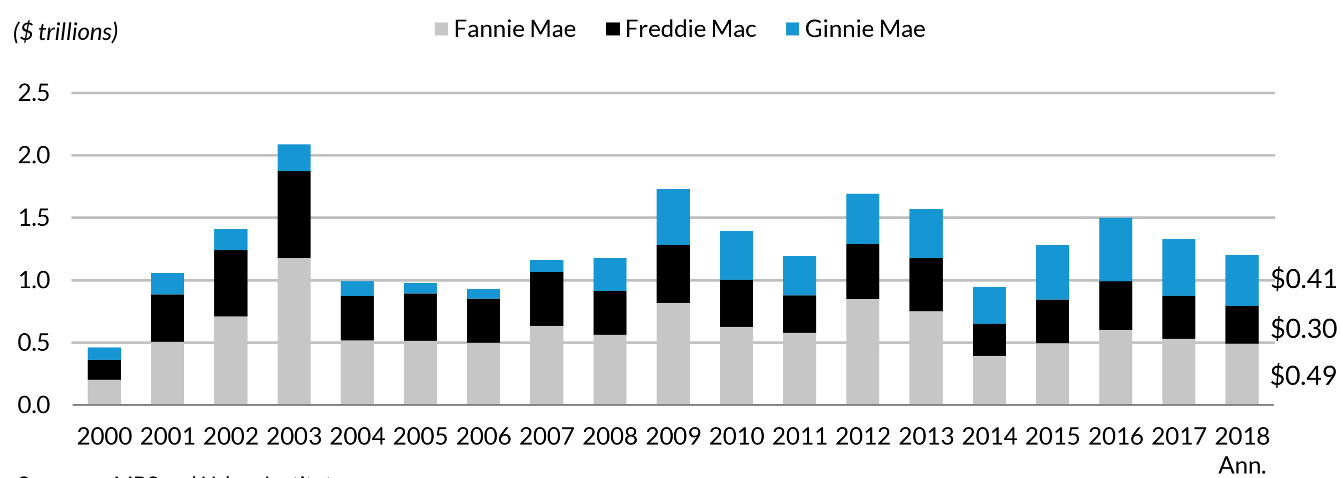
Sources: Inside Mortgage Finance and Urban Institute.

OVERVIEW

AGENCY ACTIVITY: VOLUMES AND PURCHASE/ REFI COMPOSITION

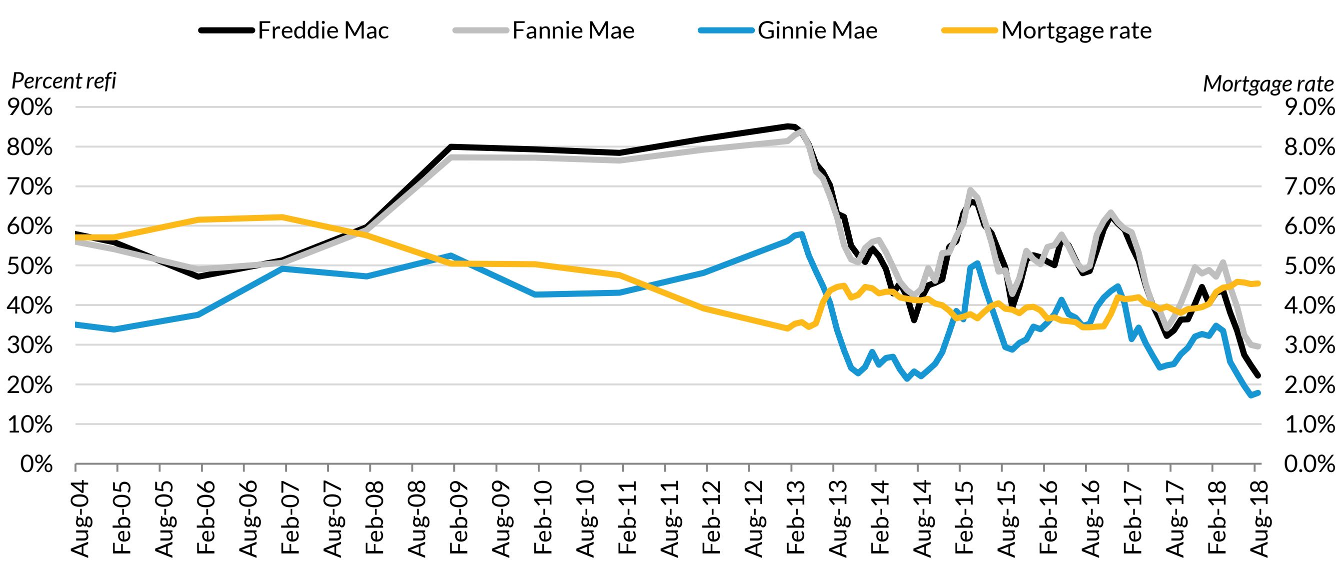
Agency issuance totaled $801.4 billion in the first eight months of 2018, $1.201 trillion on an annualized basis. This is down about 8.0 percent from the first eight months of 2017. The refi share for all three agencies has been falling sharply due to rising interest rates and seasonal upticks in purchase activity over the past few months, but the decline slowed in August. With the end of the summer surge in purchase activity, we would expect some increase in the refi share over the next few months. Loans sold into GSE pools in August are based on June and July home sales.

Agency Gross Issuance



Sources: eMBS and Urban Institute.
Note: Annualized figure based on data from August 2018.

Percent Refi at Issuance



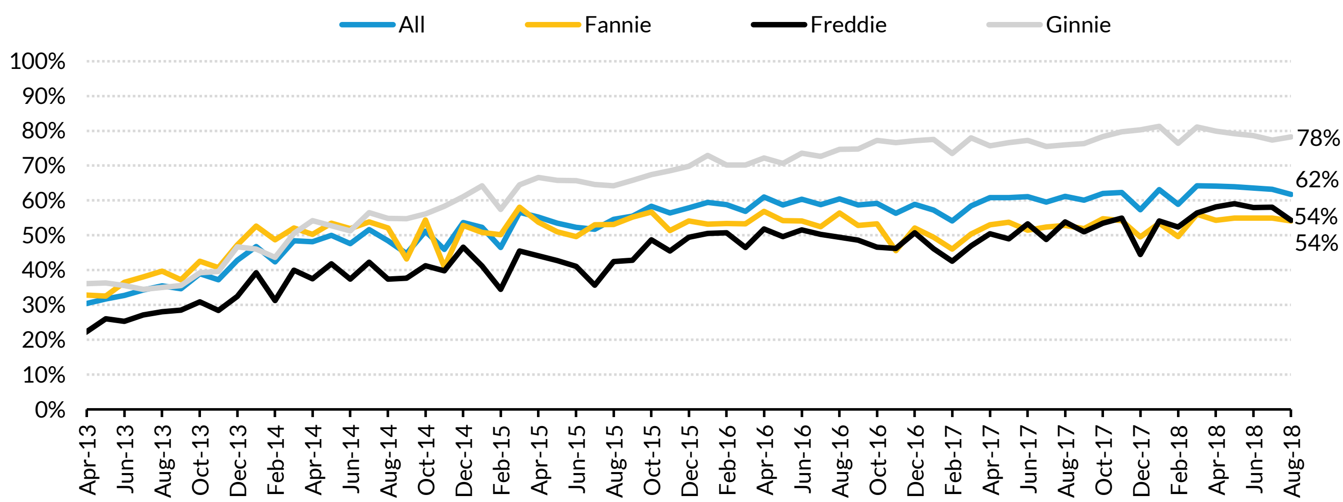
Sources: eMBS and Urban Institute.
Note: Based on at-issuance balance. Figure based on data from August 2018.

OVERVIEW

NONBANK ORIGINATION SHARE

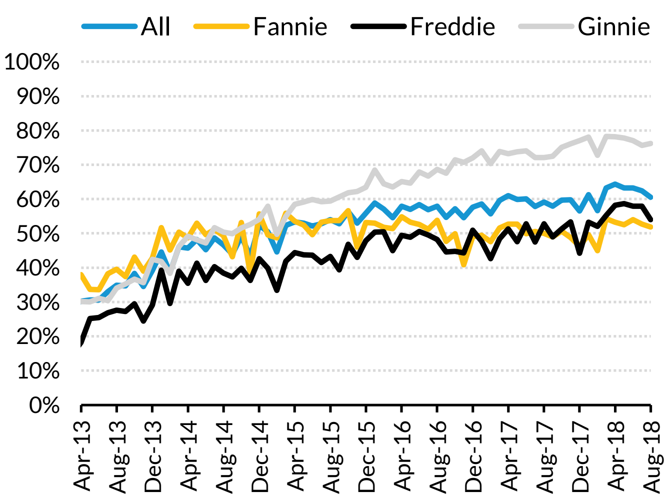
The nonbank origination share has been rising steadily for all three agencies since 2013. The Ginnie Mae nonbank share has been consistently higher than the GSEs, standing at 78 percent in August 2018. The Fannie Mae and Freddie Mac nonbank shares each stood at 54 percent. The nonbank originator share is higher for Ginnie refis than for purchase loans; for the GSEs, the purchase and refi loans have a similar bank/nonbank mix.

Nonbank Origination Share: All Loans



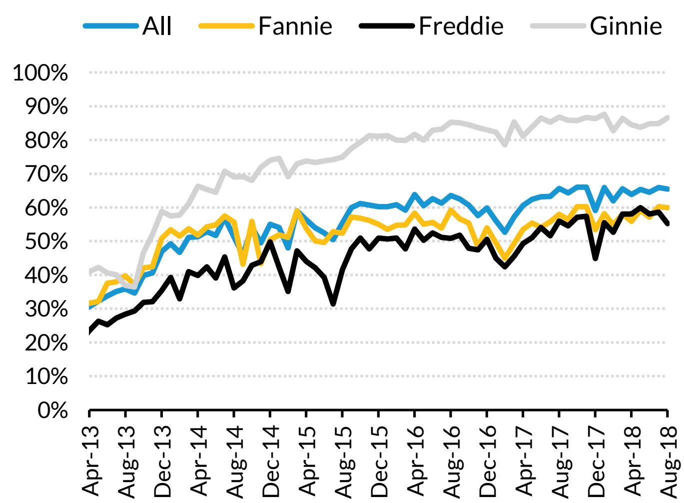
Sources: *eMBS and Urban Institute.*

Nonbank Origination Share: Purchase Loans



Sources: *eMBS and Urban Institute*

Nonbank Origination Share: Refi Loans



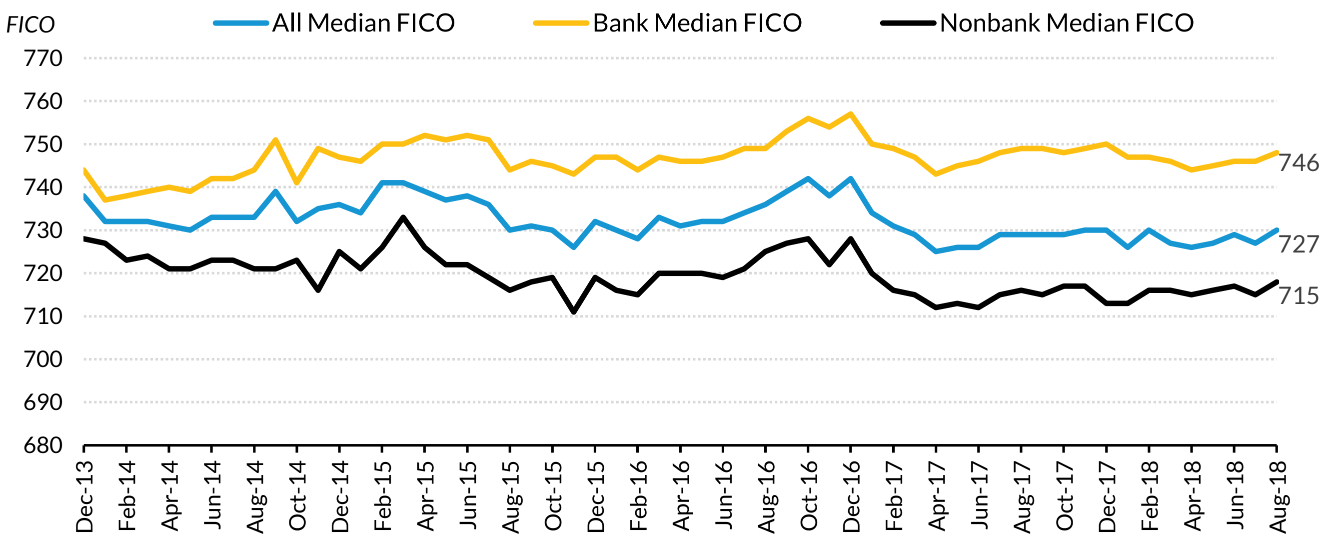
Sources: *eMBS and Urban Institute*

OVERVIEW

NONBANK CREDIT BOX

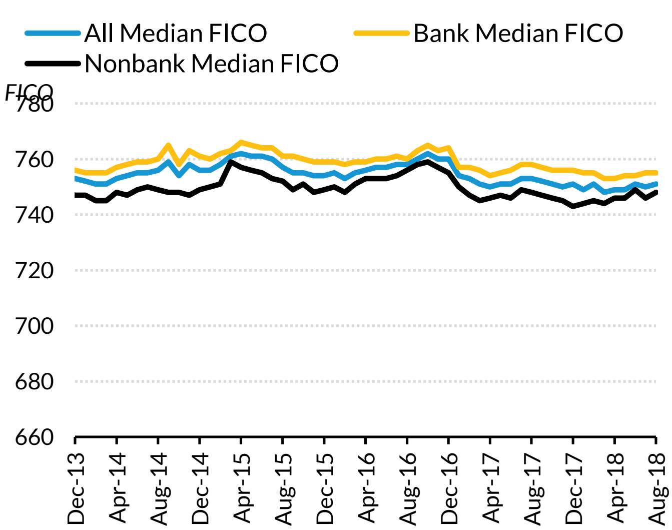
Nonbank originators have played a key role in opening up access to credit. The median GSE and the median Ginnie Mae FICO scores for loans originated by nonbanks are lower than their bank counterparts. Within the GSE space, both bank and nonbank FICOs have declined since 2014, with further relaxation in FICOs since 2017. In contrast, within the Ginnie Mae space, FICO scores for bank originations have increased since 2014 while nonbank FICOs have declined. This largely reflects the sharp cut-back in FHA lending by many banks.

Agency FICO: Bank vs. Nonbank



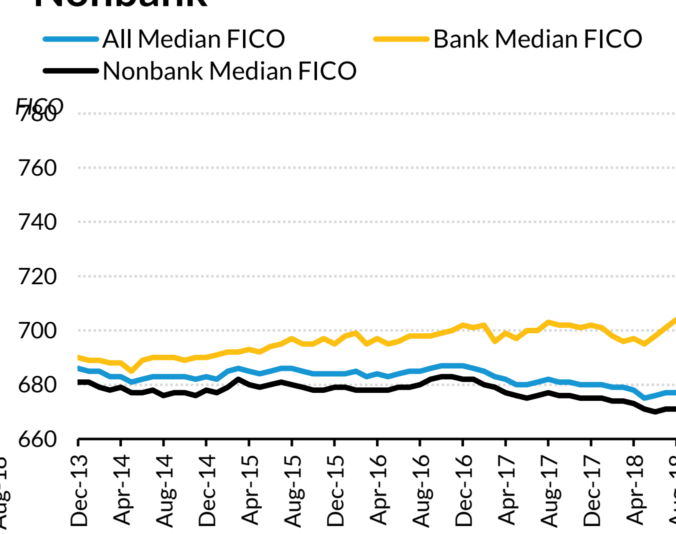
Sources: *eMBS and Urban Institute.*

GSE FICO: Bank vs. Nonbank



Sources: *eMBS and Urban Institute.*

Ginnie Mae FICO: Bank vs. Nonbank

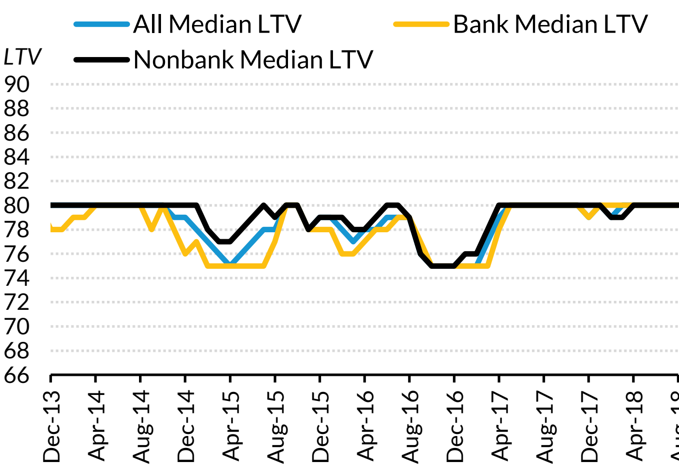


Sources: *eMBS and Urban Institute.*

NONBANK CREDIT BOX

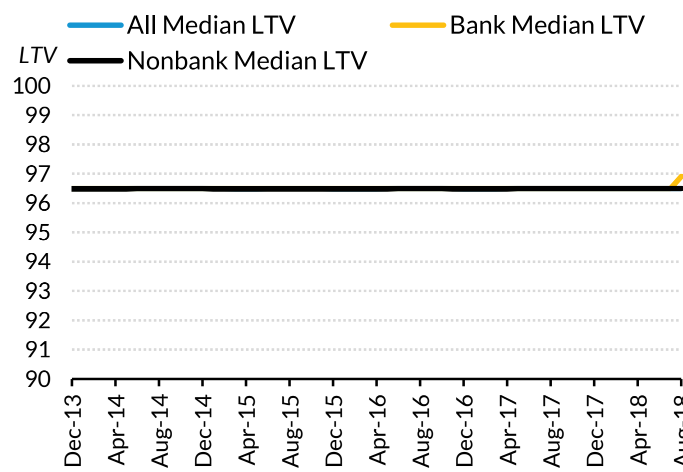
The median LTV ratios for loans originated by nonbanks are similar to their bank counterparts, while the median DTIs for nonbank loans are higher, indicating that nonbanks are more accommodating in this dimension as well as in the FICO dimension. Since early 2017 there has been a measurable increase in DTIs. This is true for both Ginnie Mae and GSE loans, banks and nonbank originators. Rising DTIs are to be expected in a rising rate environment, as higher interest rates, which usually accompany higher home prices, drive up borrowers' monthly payments, and the reduction in refinance volumes makes lenders more apt to work a bit harder to get a loan approved for a marginal borrower.

GSE LTV: Bank vs. Nonbank



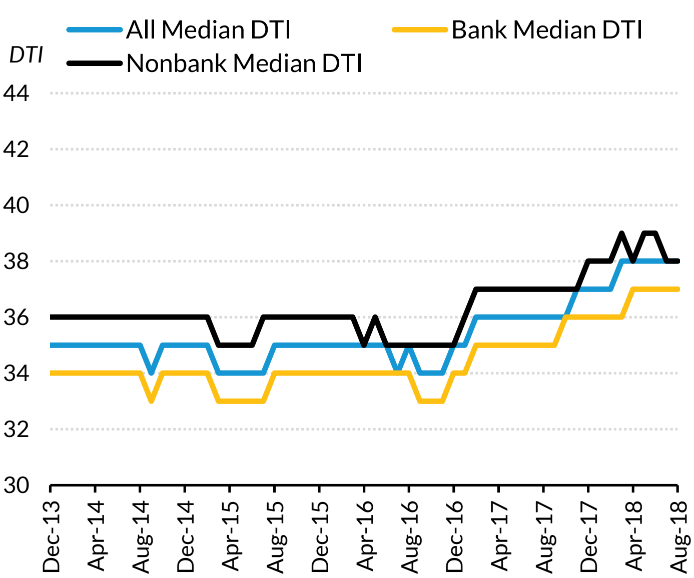
Sources: *eMBS and Urban Institute.*

Ginnie Mae LTV: Bank vs. Nonbank



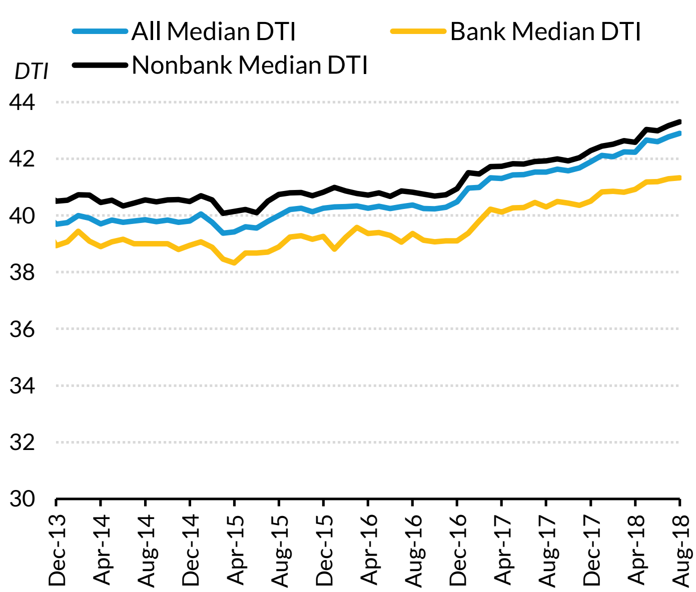
Sources: *eMBS and Urban Institute.*

GSE DTI: Bank vs. Nonbank



Sources: *eMBS and Urban Institute.*

Ginnie Mae DTI: Bank vs. Nonbank



Sources: *eMBS and Urban Institute.*

MORTGAGE ORIGINATION PROJECTIONS

Fannie Mae, Freddie Mac and MBA all forecast origination volume in 2018 to be lower than the 1.7-1.8 billion in 2017. The numbers shown in the top table reflects the fact that Fannie and Freddie have recently revised down their 2018 estimates. These 2017 and 2018 numbers are considerably lower than the $2.0 trillion of originations in 2016. The differences owe primarily to a decline the refi share: from 47-49 percent in 2016 to 35-36 percent in 2017 to a forecasted 28 -30 percent in 2018. Fannie, Freddie and MBA all forecast 2018 housing starts to be around 1.3 million units, up from a 1.2 million units in 2017. Home sales forecasts for 2018 are around 6.1 million, about consistent with 2017 levels.

Total Originations and Refinance Shares

Period	Originations ($ billions)			Refi Share (%)		
	Total, FNMA estimate	Total, FHLMC estimate	Total, MBA estimate	FNMA estimate	FHLMC Estimate	MBA estimate
2018 Q1	371	374	346	39	40	37
2018 Q2	452	455	447	26	29	26
2018 Q3	443	454	443	24	28	24
2018 Q4	404	372	370	26	24	27
2019 Q1	338	415	328	32	24	28
2019 Q2	460	437	443	23	23	22
2019 Q3	467	429	450	24	24	22
2019 Q4	420	409	371	26	24	26
FY 2014	1301	1350	1261	40	39	40
FY 2015	1730	1750	1679	47	45	46
FY 2016	2052	2125	1891	49	47	49
FY 2017	1826	1807	1710	36	37	35
FY 2018	1670	1655	1606	28	30	28
FY 2019	1686	1690	1592	26	24	25

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. Column labels indicate source of estimate. Regarding interest rates, the yearly averages for 2014, 2015,2016 and 2017 were 4.2%, 3.9%, 3.8%, and 4.0%. For 2018, the respective projections for Fannie, Freddie, and MBA are 4.5%, 4.6%, and 4.9%.

Housing Starts and Homes Sales

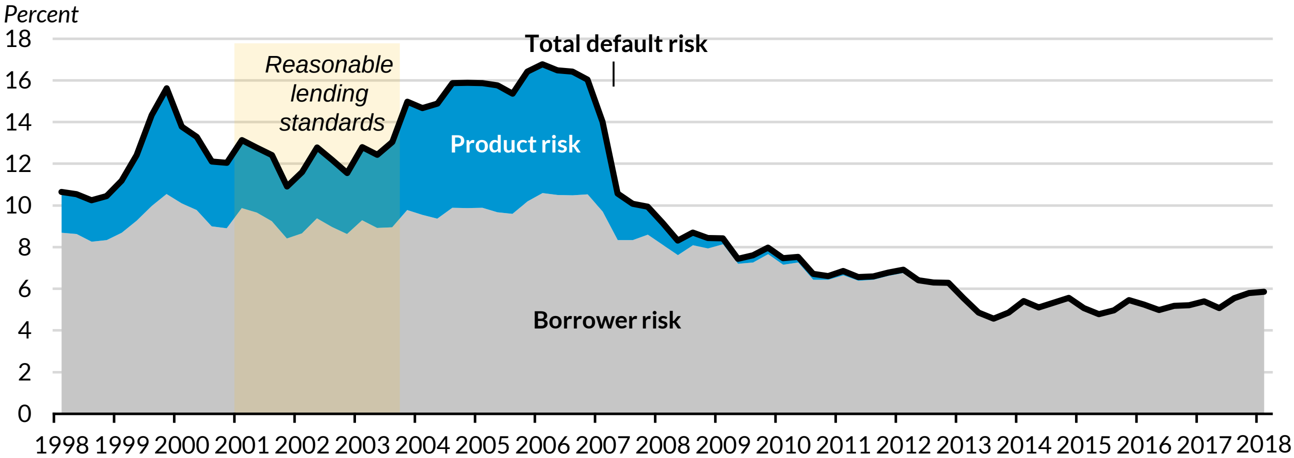
Year	Housing Starts, thousands			Home Sales. thousands				
	Total, FNMA estimate	Total, FHLMC estimate	Total, MBA estimate	Total, FNMA estimate	Total, FHLMC estimate	Total, MBA estimate	Existing, MBA estimate	New, MBA Estimate
FY 2014	1003	1000	1001	5377	5380	5360	4920	440
FY 2015	1112	1110	1108	5751	5750	5740	5237	503
FY 2016	1174	1170	1177	6011	6010	6001	5440	561
FY 2017	1203	1200	1208	6123	6120	6158	5542	616
FY 2018	1269	1320	1287	6115	6140	6082	5439	643
FY 2019	1303	1400	1313	6229	6360	6221	5560	661

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

CREDIT AVAILABILITY AND ORIGINATOR PROFITABILITY

Housing Credit Availability Index (HCAI)

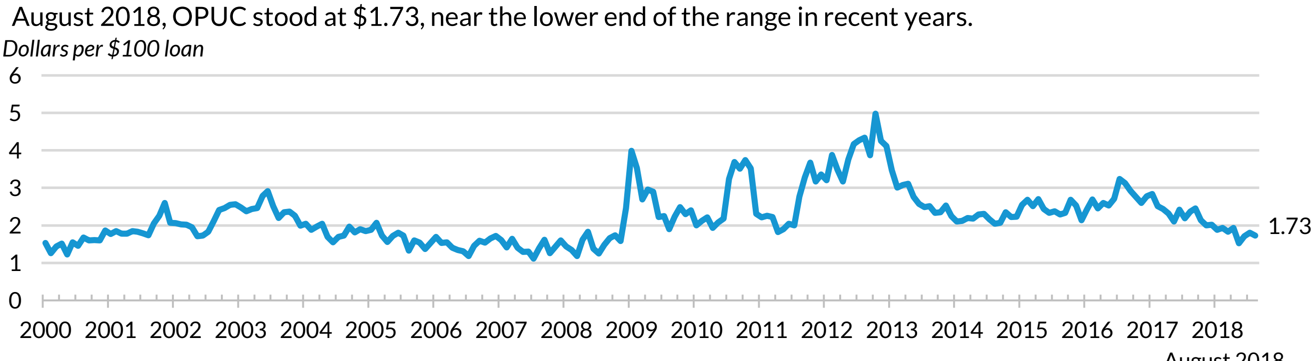
HFPC's Housing Credit Availability Index (HCAI) assesses lenders' tolerance for both borrower risk and product risk, calculating the share of owner-occupied purchase loans that are likely to go 90+ days delinquent over the life of the loan. In the first quarter of 2018 (Q1 2018) the index shows that credit availability increase for a third quarter in a row to 5.9 percent, the highest level since 2013. This increase continues to be driven by the credit expansions within both the GSE and government channels, thanks to higher interest rates and lower refinance volumes. More information about the HCAI, including the breakdown by market segment, is available here.



Sources: eMBS, CoreLogic, HMDA, IMF, and Urban Institute.
Note: Default is defined as 90 days or more delinquent at any point. *Last updated July 2018.*

Originator Profitability and Unmeasured Costs

When originator profits are higher, mortgage volumes are less responsive to changes in interest rates, because originators are at capacity. Originator Profitability and Unmeasured Costs (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 the mortgage in the secondary market (less par) and adds two additional sources of profitability; retained servicing (both base and excess servicing, net of g-fees), and points paid by the borrower. OPUC has generally been high when interest rates were low, as originators are capacity constrained due to refinance volume, and have no incentive to reduce rates. Conversely, when interest rates are relatively high and refi activity is low, originators are competing for a more limited amount of mortgages, driving profitability down. In August 2018, OPUC stood at $1.73, near the lower end of the range in recent years.



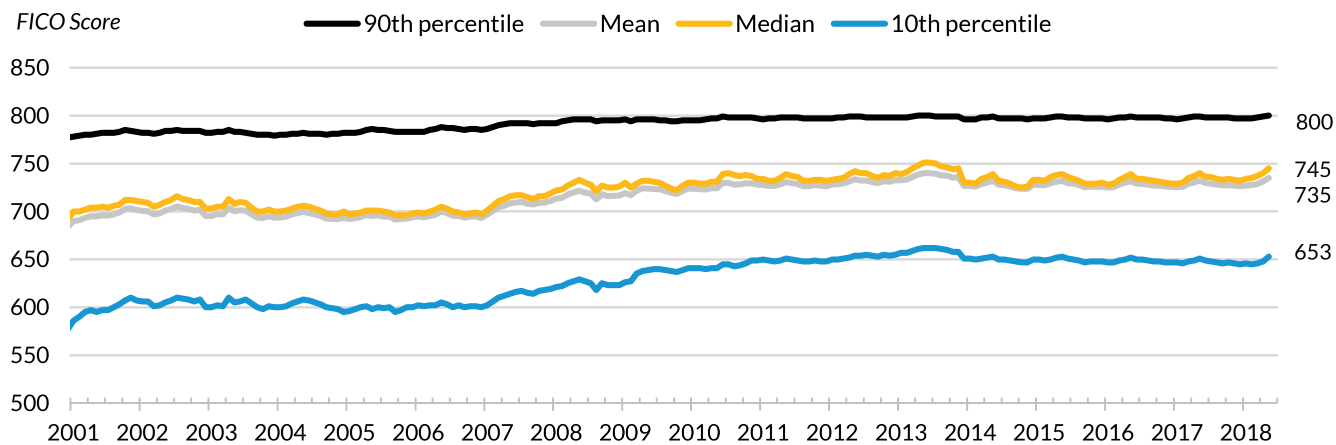
Sources: Federal Reserve Bank of New York, updated monthly and available at this link: http://www.ny.frb.org/research/epr/2013/1113fust.html and Urban Institute.
Note: OPUC is a is a monthly (4-week moving) average as discussed in Fuster et al. (2013).

STATE OF THE MARKET

CREDIT AVAILABILITY FOR PURCHASE LOANS

Access to credit remains extremely tight, especially for borrowers with low FICO scores. The mean and median FICO scores on new purchase originations have both drifted up about 21 and 20 points over the last decade, respectively. The 10th percentile of FICO scores, which represents the lower bound of creditworthiness needed to qualify for a mortgage, stood at 653 as of June 2018. Prior to the housing crisis, this threshold held steady in the low 600s. Mean LTV levels at origination remain relatively high, averaging 86, which reflects the large number of FHA purchase originations.

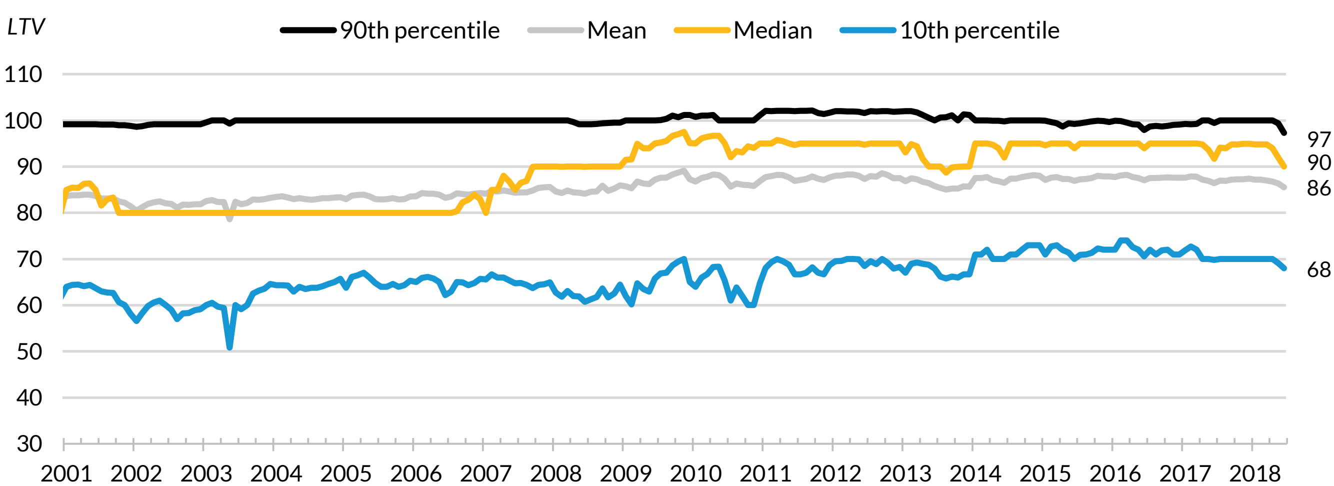
Borrower FICO Score at Origination



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

June 2018

Combined LTV at Origination



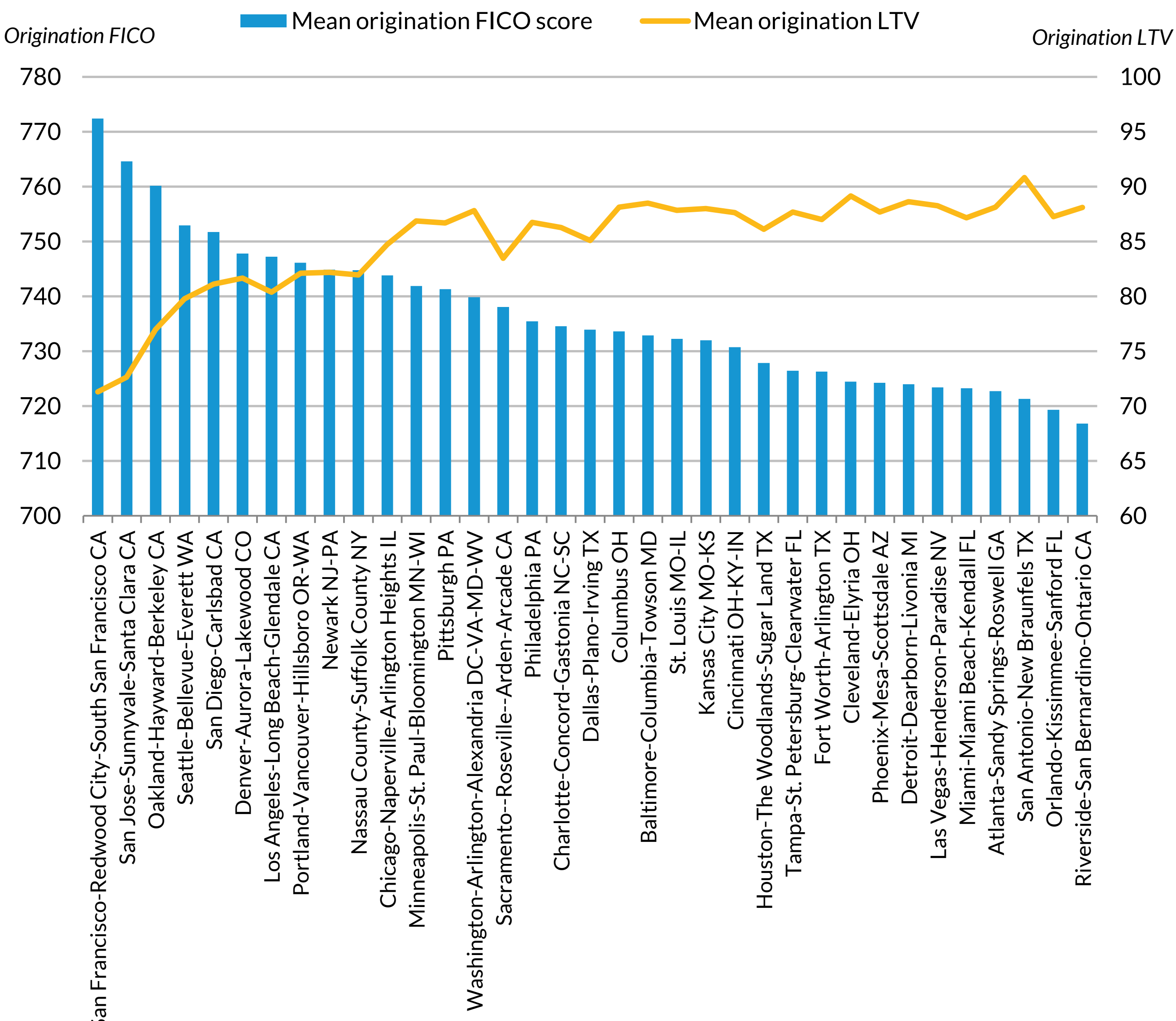
Sources: Black Knight, eMBS, HMDA, SIFMA and Urban Institute.
Note: Includes owner-occupied purchase loans only.

June 2018

CREDIT AVAILABILITY 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 almost 772, while in Riverside-San Bernardino-Ontario, CA it is 717. 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



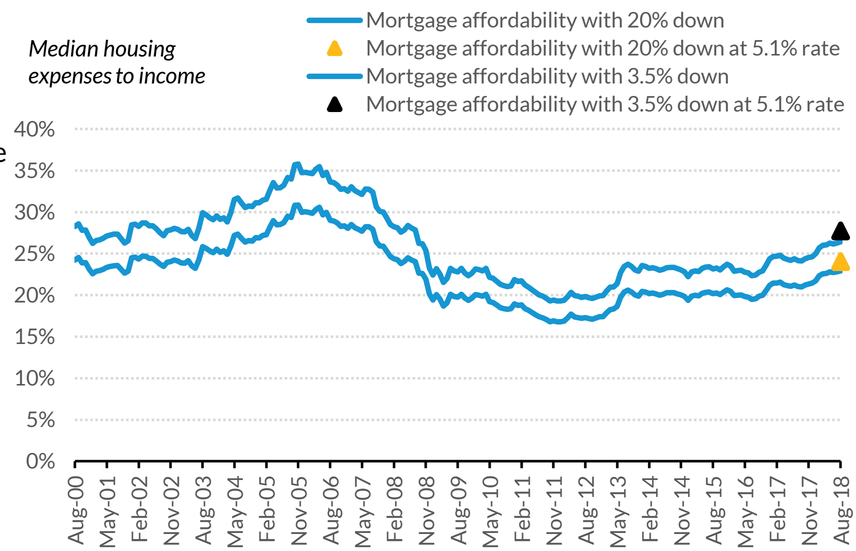
Sources: Black Knight, eMBS, HMDA, SIFMA and Urban Institute.
Note: Includes owner-occupied purchase loans only. Data as of July 2018.

STATE OF THE MARKET

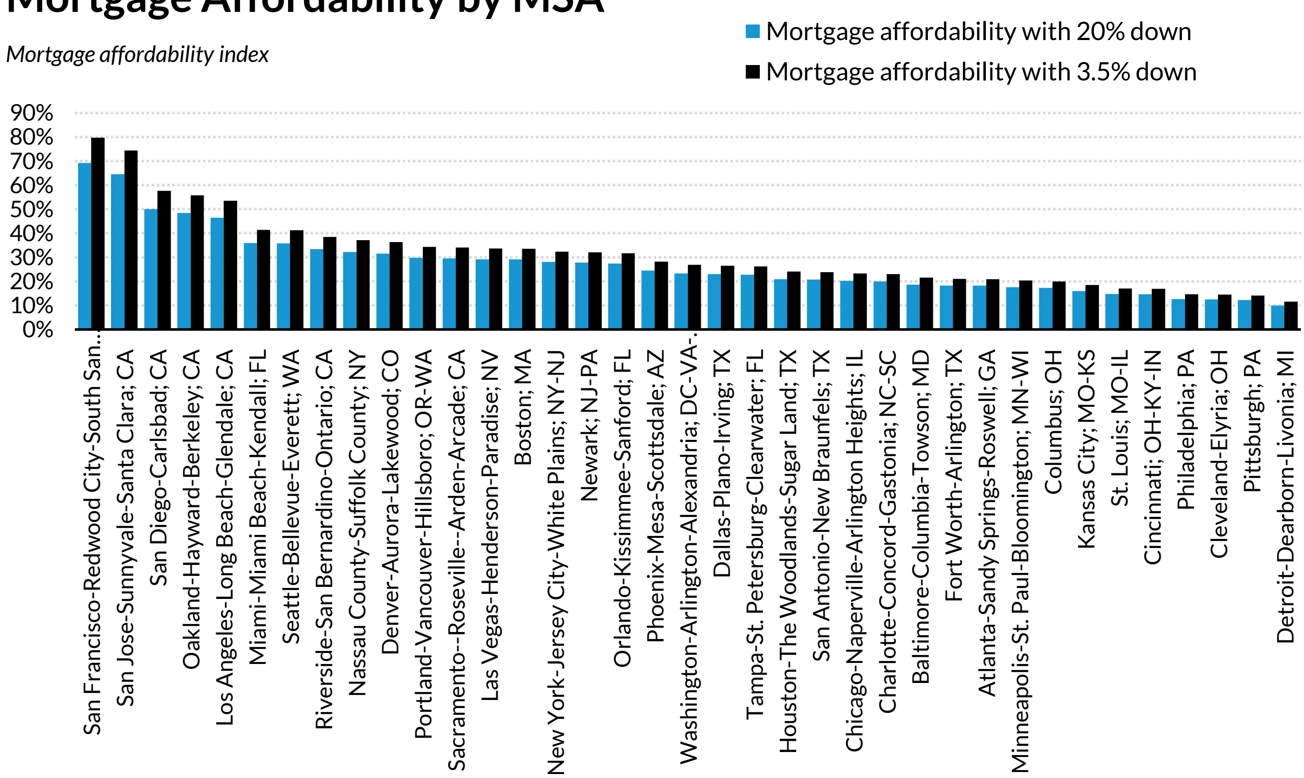
HOUSING AFFORDABILITY

National Mortgage Affordability Over Time

Home prices remain affordable by historic standards, despite price increases over the last five years and the recent interest rate hikes. As of August 2018, with 20% down, the share of median income needed for the monthly mortgage payment stood at 23%; with 3.5% down, it is 26%. If interest rates rise from 4.55% to 5.1%, the housing expenses to income share with both a 20 percent and a 3.5 percent down payment would be the same as the 2001-03 averages (24 and 28 percent, respectively). As shown in the bottom picture, mortgage affordability varies widely across MSAs.



Mortgage Affordability by MSA



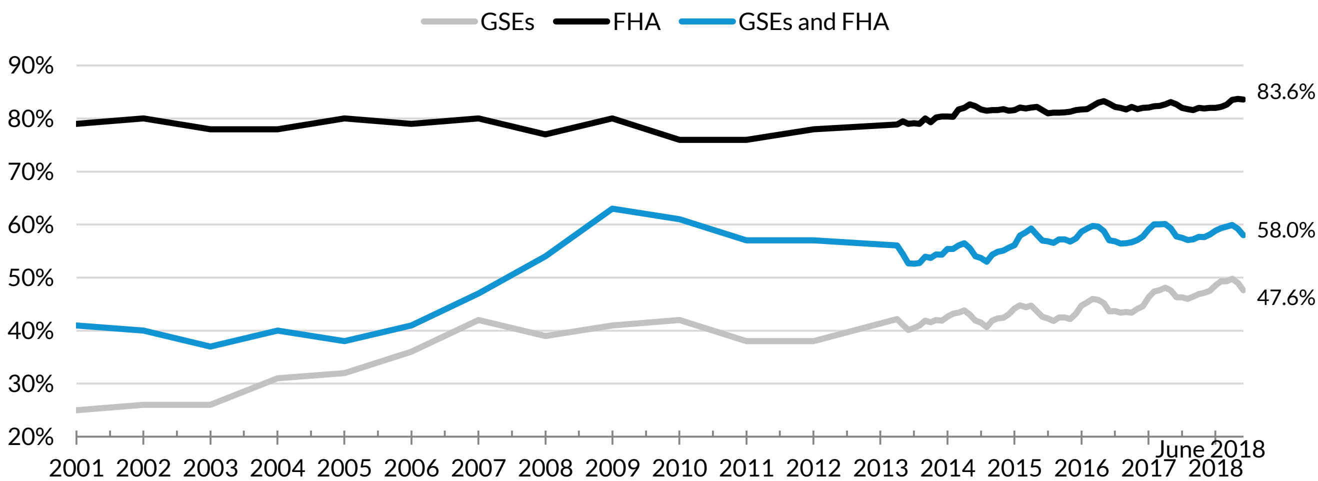
Sources: National Association of Realtors, US Census Bureau, Current Population Survey, American Community Survey, Moody's Analytics, Freddie Mac Primary Mortgage Market Survey, and the Urban Institute.

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 of the bottom chart as of Q2 2018.

FIRST-TIME HOMEBUYERS

First-Time Homebuyer Share

In June 2018, the first time homebuyer share of purchase loans was elevated for both FHA and conventional mortgages, reflecting the negative impact of higher interest rates on the "trade-up" buyer. FHA, which has always been more focused on first time homebuyers has a near record first time homebuyer share of 83.6 percent in June 2018, the share has traditionally been around 80 percent. The GSE share in June 2018 was 47.6 percent, just slightly off its highest level in recent history. The bottom table shows that based on mortgages originated in June 2018, the average first-time homebuyer was more likely than an average repeat buyer to take out a smaller loan and have a lower credit score and higher LTV and DTI, thus requiring a higher interest rate.



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

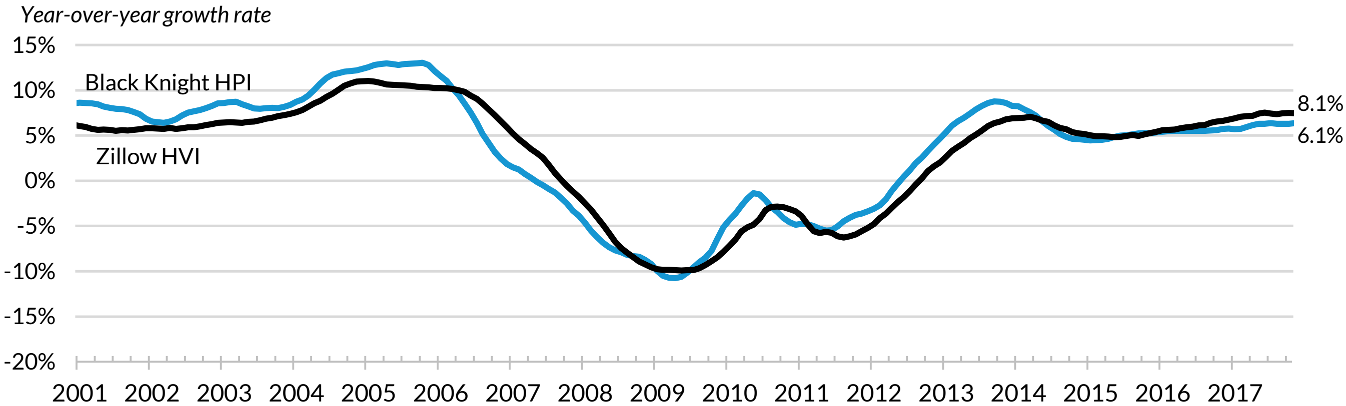
	GSEs		FHA		GSEs and FHA	
Characteristics	First-time	Repeat	First-time	Repeat	First-time	Repeat
Loan Amount ($)	236,304	262,792	206,089	227,938	224,187	257,813
Credit Score	739.9	755.3	670.0	676.5	711.9	744.0
LTV (%)	87.4	78.8	95.6	94.0	90.7	80.9
DTI (%)	36.1	36.5	43.3	44.2	39.0	37.6
Loan Rate (%)	4.83	4.73	4.92	4.84	4.87	4.74

Sources: eMBS and Urban Institute.
Note: Based on owner-occupied purchase mortgages originated in June 2018.

HOME PRICE INDICES

National Year-Over-Year HPI Growth

Home price appreciation remains very robust, as measured by both the Black Knight's repeat sales index and Zillow's hedonic index. We will be monitoring the impact of rising interest rates on home prices. Historically, rising interest rates (generally observed in tandem with a stronger economy and higher inflation) have been associated with higher home price increases, despite the impact on affordability.



Sources: Black Knight, Zillow, and Urban Institute.

July 2018

Changes in Black Knight HPI for Top MSAs

After rising 49.6 percent from the trough, national house prices are now 11.3 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—Phoenix, AZ and Riverside, CA—are 10.6 and 11.7 percent, respectively, below peak values.

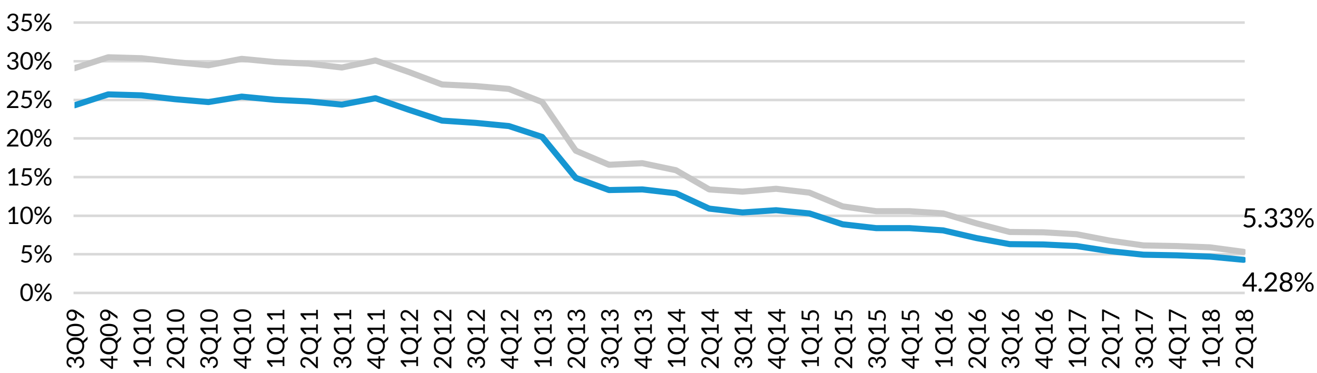
MSA	HPI changes (%)			% above peak
	2000 to peak	Peak to trough	Trough to current	
United States	76.2	-25.6	49.6	11.3
New York-Jersey City-White Plains NY-NJ	127.8	-22.2	41.7	10.2
Los Angeles-Long Beach-Glendale CA	181.0	-38.2	81.3	12.1
Chicago-Naperville-Arlington Heights IL	67.2	-38.3	45.2	-10.4
Atlanta-Sandy Springs-Roswell GA	32.8	-36.6	75.5	11.3
Washington-Arlington-Alexandria DC-VA-MD-WV	150.3	-28.0	32.3	-4.7
Houston-The Woodlands-Sugar Land TX	29.5	-6.7	46.1	36.2
Phoenix-Mesa-Scottsdale AZ	113.4	-51.2	83.3	-10.6
Riverside-San Bernardino-Ontario CA	178.1	-51.8	83.1	-11.7
Dallas-Plano-Irving TX	26.2	-7.1	64.4	52.7
Minneapolis-St. Paul-Bloomington MN-WI	69.1	-29.9	53.9	7.8
Seattle-Bellevue-Everett WA	90.6	-32.8	105.4	38.0
Denver-Aurora-Lakewood CO	34.1	-12.1	87.9	65.2
Baltimore-Columbia-Towson MD	123.2	-23.8	21.1	-7.7
San Diego-Carlsbad CA	148.9	-37.6	73.7	8.5
Anaheim-Santa Ana-Irvine CA	163.6	-35.3	64.0	6.0

Sources: Black Knight HPI and Urban Institute. Data as of July 2018.
Note: This table includes the largest 15 Metropolitan areas by mortgage count.

NEGATIVE EQUITY & SERIOUS DELINQUENCY

Negative Equity Share

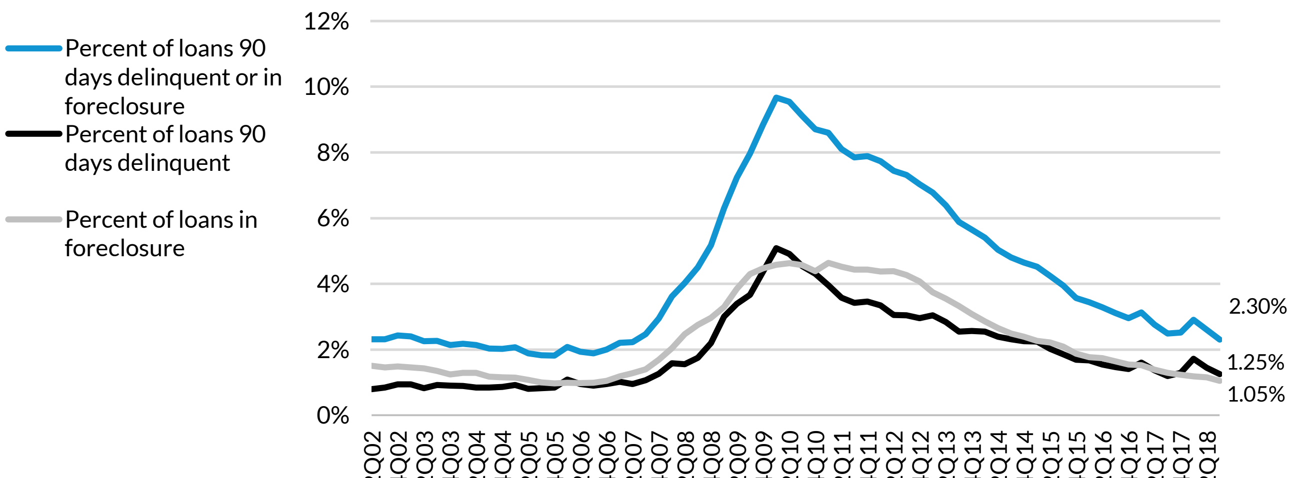
With housing prices continuing to appreciate, residential properties in negative equity (LTV greater than 100) as a share of all residential properties with a mortgage continued to edge down to 4.28 percent as of Q2 2018. Residential properties near negative equity (LTV between 95 and 100) comprise another 1.05 percent.



Sources: CoreLogic and Urban Institute.
Note: CoreLogic negative equity rate is the percent of all residential properties with a mortgage in negative equity. Loans with negative equity refer to loans above 100 percent LTV. Loans near negative equity refer to loans above 95 percent LTV. *Last updated September 2018.*

Loans in Serious Delinquency/Foreclosure

Ninety day delinquencies rose sharply due to the hurricanes in the second half of 2017, but have declined from 1.45 to 1.25 percent in the first two quarters of 2018. The percent of loans in foreclosure continued to edge down to 1.05 percent. The combined delinquencies totaled 2.30 percent in Q2 2018, down from 2.61 percent in Q1 2018 and 2.49 percent in the same quarter a year ago.



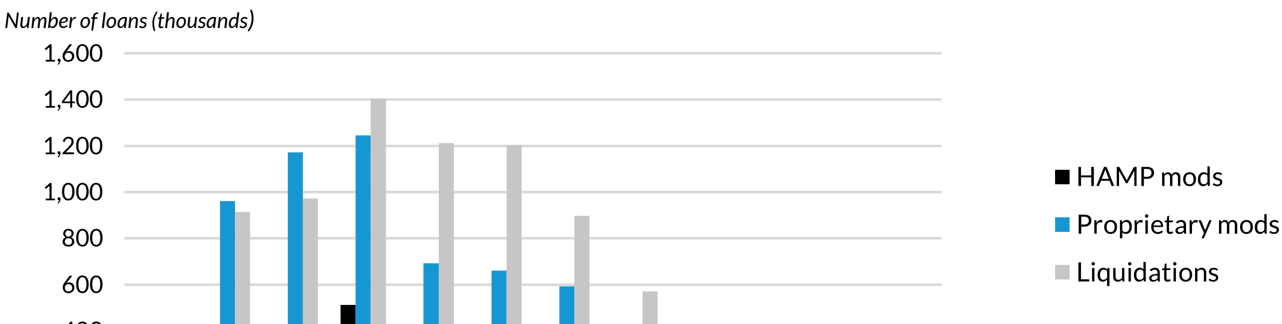
Sources: Mortgage Bankers Association and Urban Institute. *Last updated August 2018.*

STATE OF THE MARKET

MODIFICATIONS AND LIQUIDATIONS

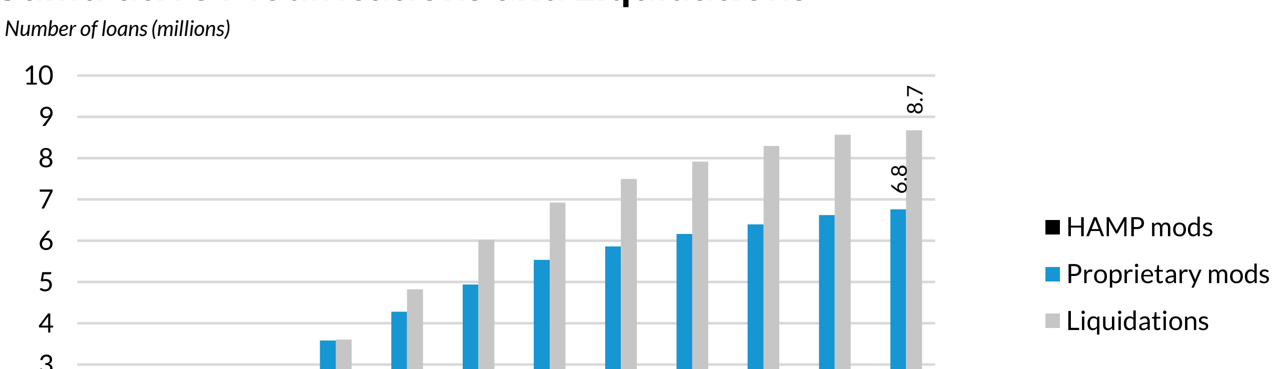
Total modifications (HAMP and proprietary) are roughly equal to total liquidations. Hope Now reports show 8,491,929 borrowers have received a modification since Q3 2007, compared with 8,673,435 liquidations in the same period. Modifications and liquidations have slowed significantly over the past few years. In Q2 2018, there were just 78,389 proprietary modifications and 54,790 liquidations. There were no new HAMP modifications as the program ended in 2017.

Loan Modifications and Liquidations



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

Cumulative Modifications and Liquidations

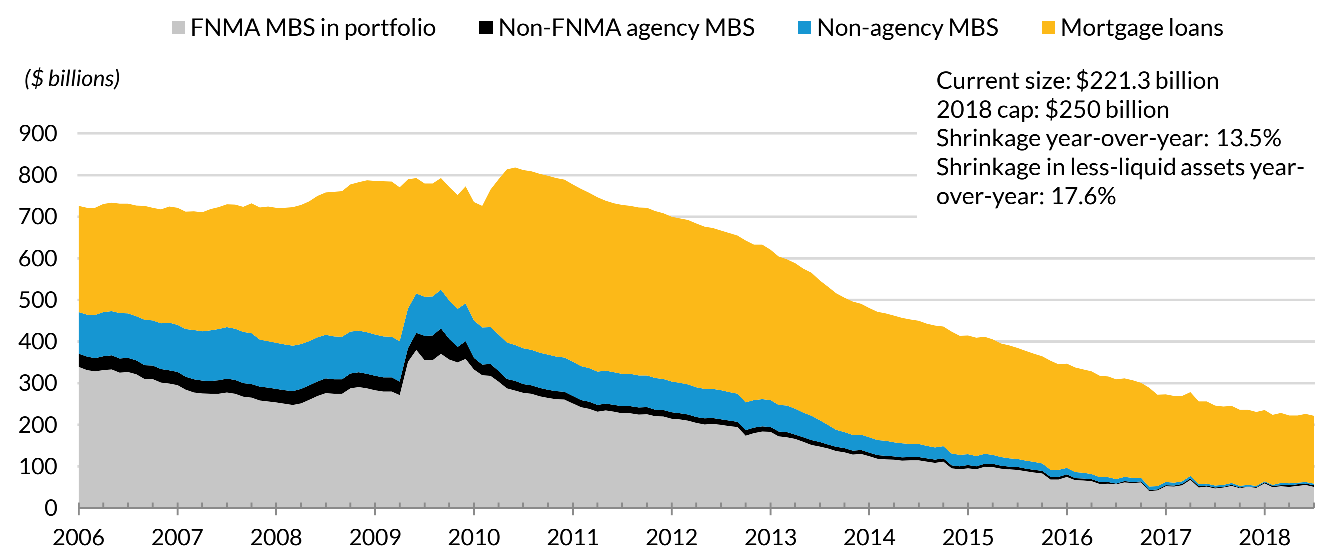


Sources: Hope Now and Urban Institute.
Note: Liquidations includes both foreclosure sales and short sales. *Last updated September 2018.*

GSE PORTFOLIO WIND-DOWN

Both GSEs continue to contract their portfolios. Since July 2017, Fannie Mae has contracted by 13.5 percent and Freddie Mac by 11.8 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 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.

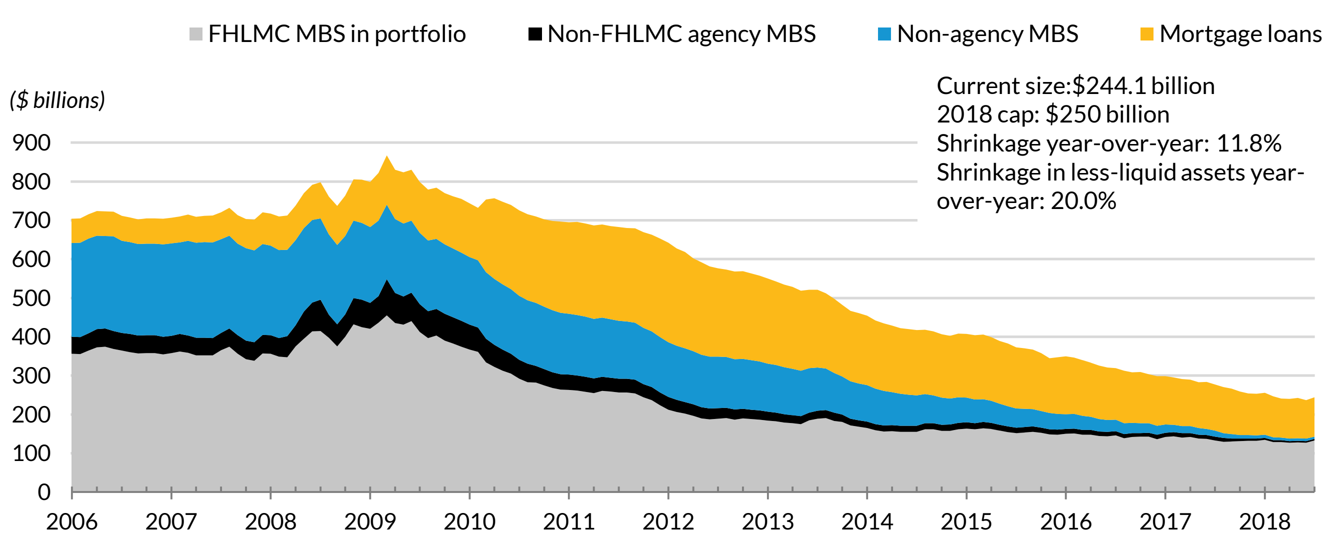
Fannie Mae Mortgage-Related Investment Portfolio Composition



Sources: Fannie Mae and Urban Institute.

July 2018

Freddie Mac Mortgage-Related Investment Portfolio Composition



Sources: Freddie Mac and Urban Institute.

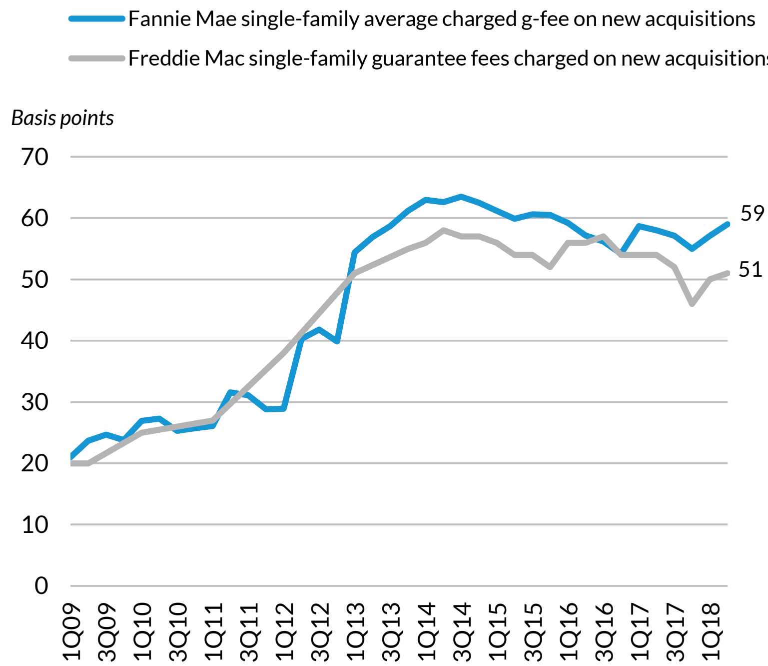
July 2018

EFFECTIVE GUARANTEE FEES

Guarantee Fees Charged on New Acquisitions

The latest 10-Q indicates that Fannie's average g-fees on new acquisitions increased from 57.1 to 59 bps in Q2 2018 and Freddie's increased to 51 bps. This is markedly higher than g-fee levels in 2011 and 2012, and has contributed to the GSEs' profits. 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 2018.



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
> 740	0.00%	0.25%	0.25%	0.50%	0.25%	0.25%	0.25%	0.75%
720 – 739	0.00%	0.25%	0.50%	0.75%	0.50%	0.50%	0.50%	1.00%
700 – 719	0.00%	0.50%	1.00%	1.25%	1.00%	1.00%	1.00%	1.50%
680 – 699	0.00%	0.50%	1.25%	1.75%	1.50%	1.25%	1.25%	1.50%
660 – 679	0.00%	1.00%	2.25%	2.75%	2.75%	2.25%	2.25%	2.25%
640 – 659	0.50%	1.25%	2.75%	3.00%	3.25%	3.75%	2.75%	2.75%
620 – 639	0.50%	1.50%	3.00%	3.00%	3.25%	3.25%	3.25%	3.50%
< 620	0.50%	1.50%	3.00%	3.00%	3.25%	3.25%	3.25%	3.75%
Product Feature (Cumulative)								
High LTV	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Investment Property	2.125%	2.125%	2.125%	3.375%	4.125%	N/A	N/A	N/A

Sources: Fannie Mae and Urban Institute.
Note: For whole loans purchased on or after September 1, 2015, or loans delivered into MBS pools with issue dates on or after September 1, 2015.

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 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 2018 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 to date total $1.098 trillion, while Freddie's STACR totals $1.016 trillion. In 2018 so far, Fannie has issued 5 securities, and Freddie has issued three securities.

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%
Total		**$1,098,172**	**$33,560**	**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%
Total		**$1,016,685**	**$27,663**	**2.7%**

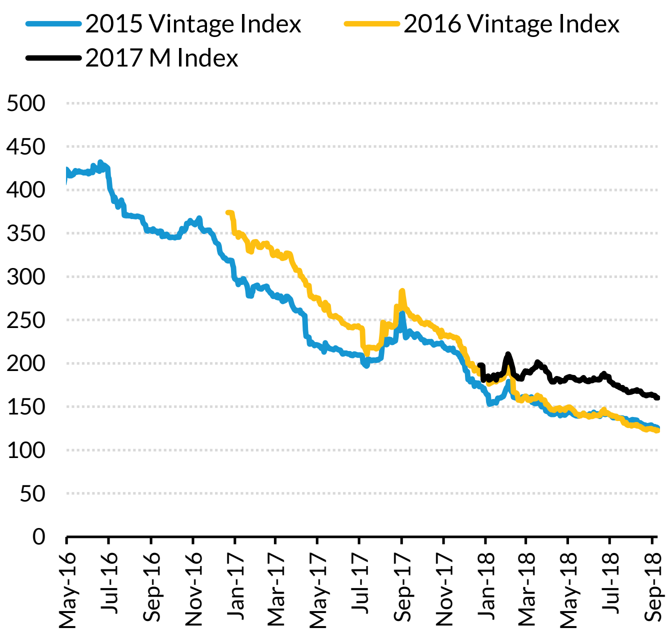
Sources: Fannie Mae, Freddie Mac and Urban Institute. **Note**: Classes A-H, M-1H, M-2H, and B-H are reference tranches only. These classes are not issued or sold. The risk is retained by Fannie Mae and Freddie Mac. "CE" = credit enhancement.

GSES UNDER CONSERVATORSHIP

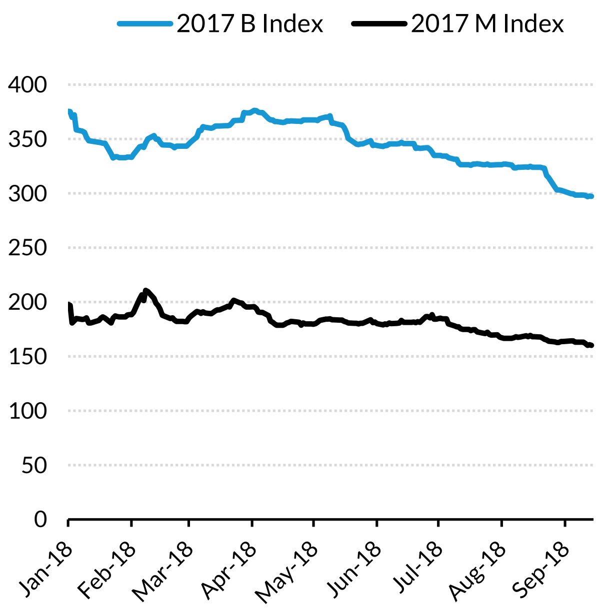
GSE RISK-SHARING INDICES

Spreads on CRT securities have narrowed considerably through time, despite occasional bouts of volatility. 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.

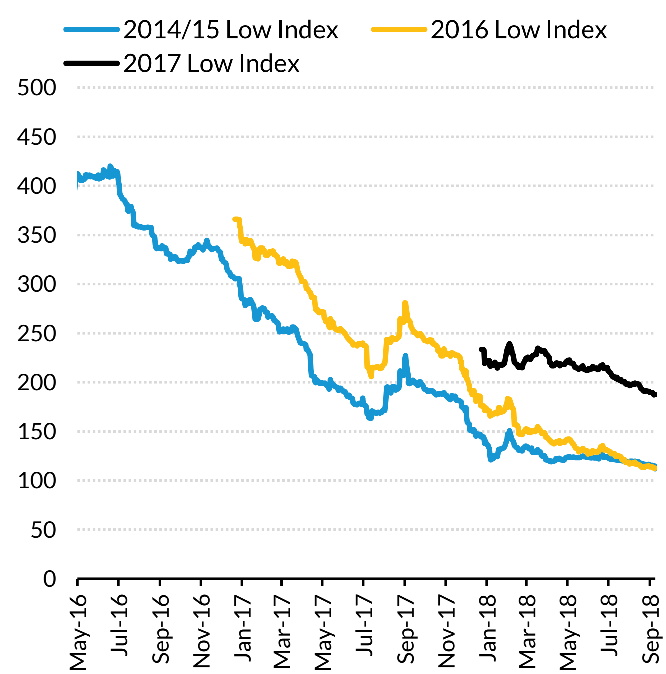
By Vintage



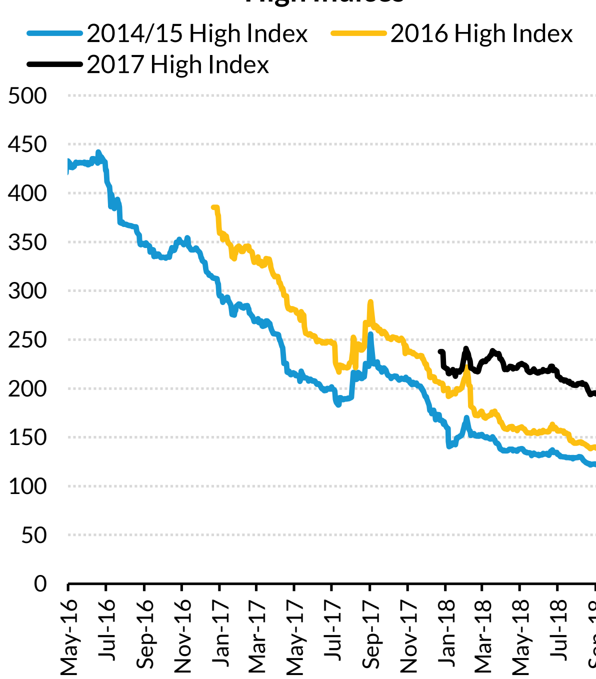
2017 Indices



Low Indices



High Indices

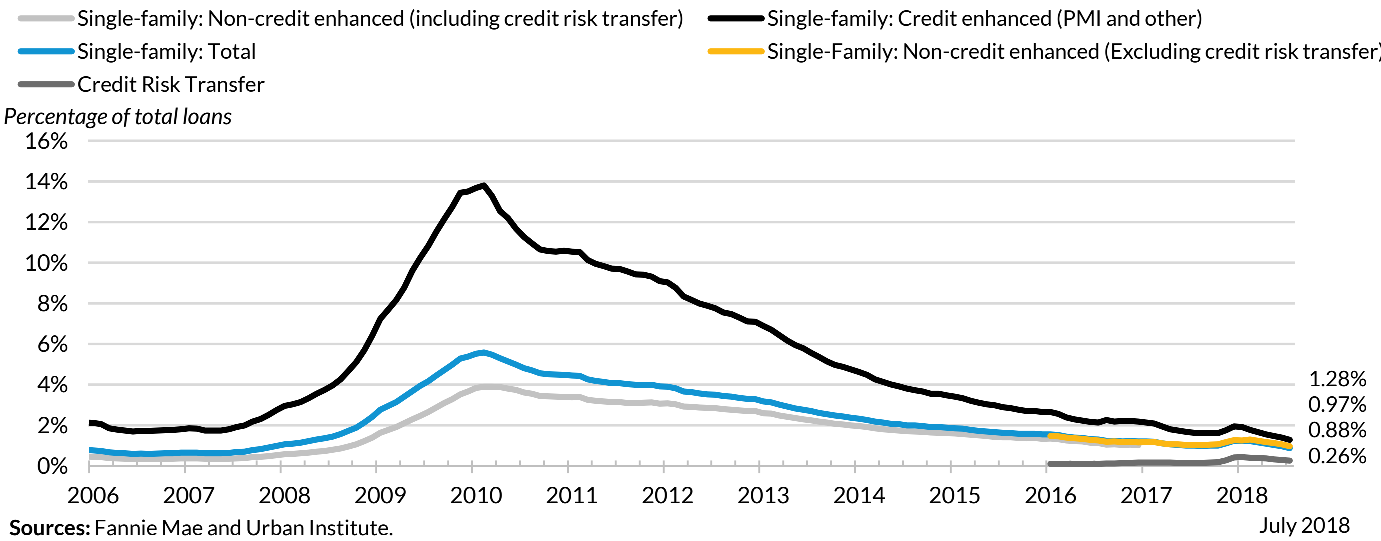


Sources: Vista Data Services and Urban Institute.
Note: Data as of September 14, 2018.

GSES UNDER CONSERVATORSHIP
SERIOUS DELINQUENCY RATES

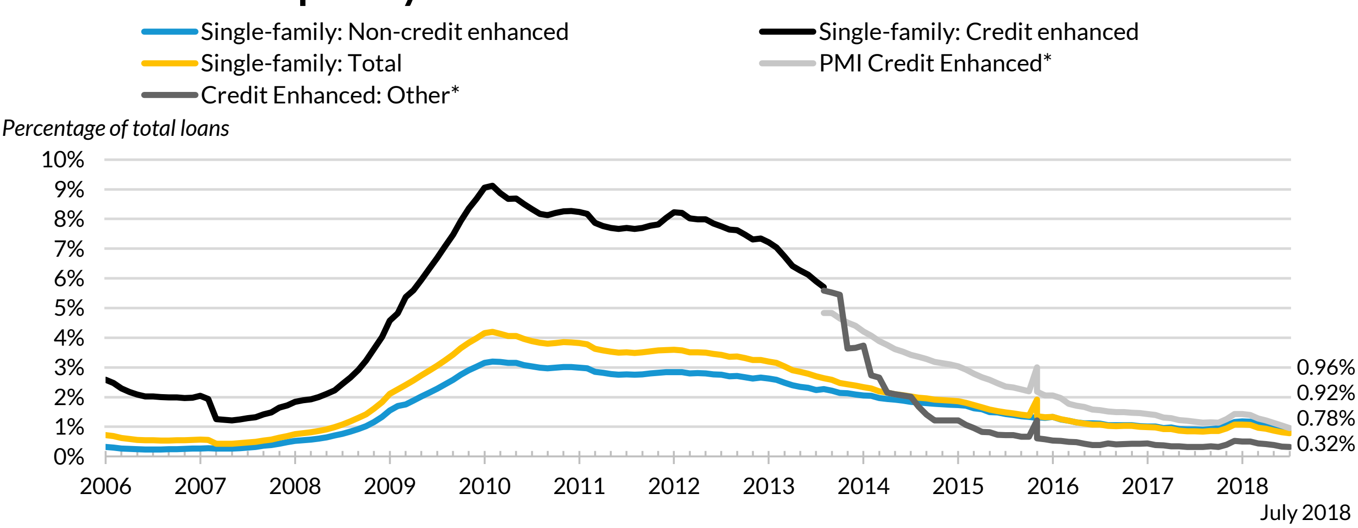
Serious delinquency rates of GSE loans continued to come down in July 2018. Overall, there has been a marked long term decline in serious delinquency rates as the legacy portfolio is resolved and the pristine, post-2009 book of business exhibits very low default rates. As of July 2018, 0.88 percent of the Fannie portfolio and 0.78 percent of the Freddie portfolio were seriously delinquent, down slightly from 0.97 percent for Fannie and 0.82 percent for Freddie in June 2018. The hurricanes in August and September of 2017 caused a small spike, but the downward trend in delinquencies resumed and, as of July 2018, delinquency rates were lower than in the month prior to the hurricanes.

Serious Delinquency Rates–Fannie Mae



Sources: Fannie Mae and Urban Institute.
Note*: Following a change in Fannie reporting in March 2017, we started to report the credit risk transfer category and a new non-credit enhanced category that excludes loans covered by either primary MI or credit risk transfer transactions. Fannie reported these two new categories going back to January 2016.

Serious Delinquency Rates–Freddie Mac

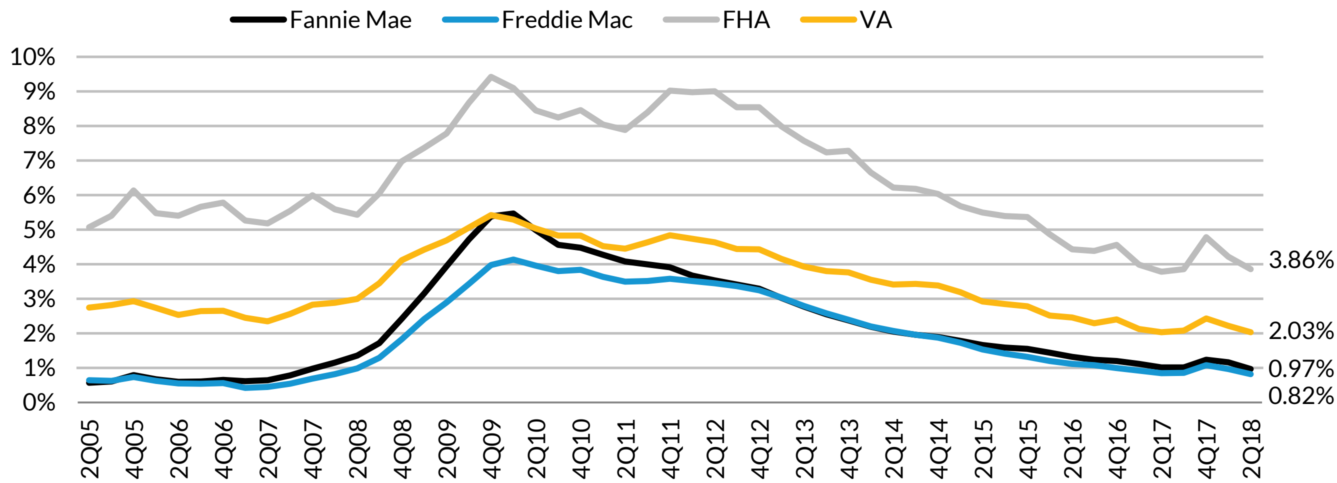


Sources: Freddie Mac and Urban Institute.
Note*: Following a change in Freddie reporting in September 2014, we switched from reporting credit enhanced delinquency rates to PMI and other credit enhanced delinquency rates. Freddie reported these two categories for credit-enhanced loans going back to August 2013. The other category includes single-family loans covered by financial arrangements (other than primary mortgage insurance) including loans in reference pools covered by STACR debt note transactions as well as other forms of credit protection.

SERIOUS DELINQUENCY RATES

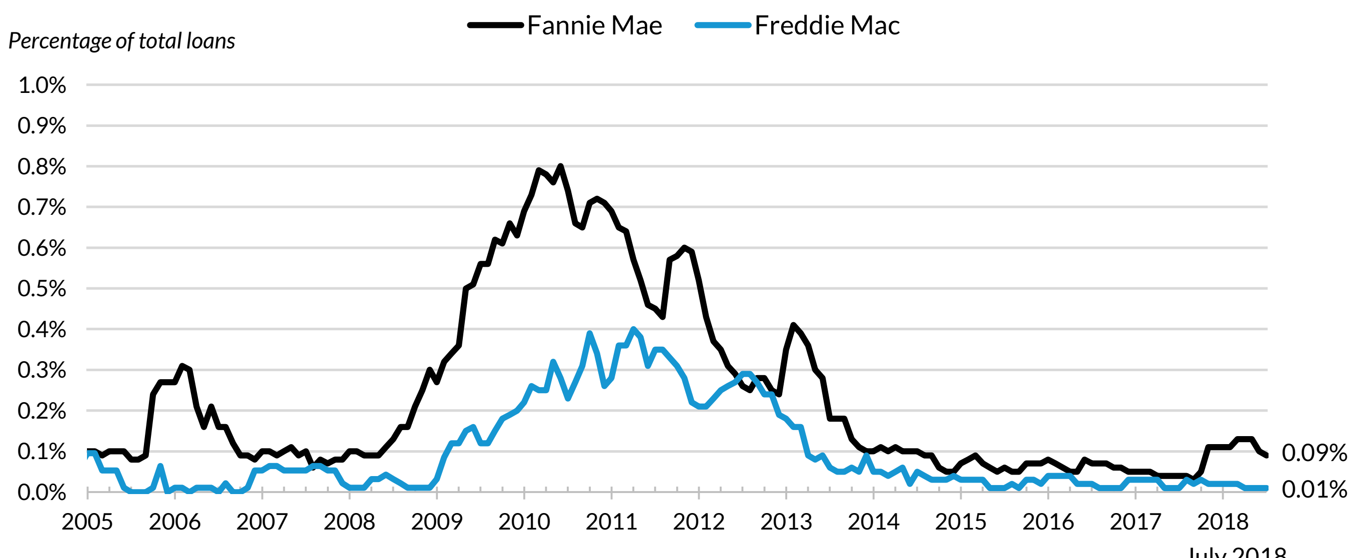
Serious delinquencies for single-family GSE loans, FHA loans, and VA loans continued to decline in the second quarter of 2018. GSE delinquencies remain high relative to 2005-2007, while FHA and VA delinquencies (which are higher than their GSE counterparts) are at levels lower than 2005-2007. GSE multifamily delinquencies remain at the levels prevailing before the financial crisis, although they did not reach problematic levels even in the worst years of the crisis. Fannie Mae delinquencies did rise after the 2017 hurricanes to a peak of 0.13 percent and has begun to decline; July 2018 delinquencies stand at 0.09 percent. Freddie Mac did not experience a post hurricane rise in multifamily delinquencies; July 2018 delinquencies stand at 0.01 percent.

Serious Delinquency Rates–Single-Family Loans



Sources: Fannie Mae, Freddie Mac, MBA Delinquency Survey and Urban Institute. **Note:** Serious delinquency is defined as 90 days or more past due or in the foreclosure process. Not seasonally adjusted. *Last updated August 2018.*

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 GROSS AND NET ISSUANCE

Agency gross issuance was $801.4 billion in the first eight months of 2018, $1.201 trillion on an annualized basis. This is down 8.0 percent year-over-year. When measured on a monthly basis, agency gross issuance year-over-year has been declining for eighteen consecutive months since March 2017, reflecting higher mortgage rates. Net issuance (which excludes repayments, prepayments, and refinances on outstanding mortgages) totaled $164.9 billion in the first eight months of 2018, down 16.5 percent from the same period in 2017.

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 YTD	$529.93	$271.06	$801.42
2018 YTD % Change YOY	-6.8%	-10.5%	-8.0%
2018 Ann.	$794.90	$406.59	$1,201.49

Agency Net Issuance

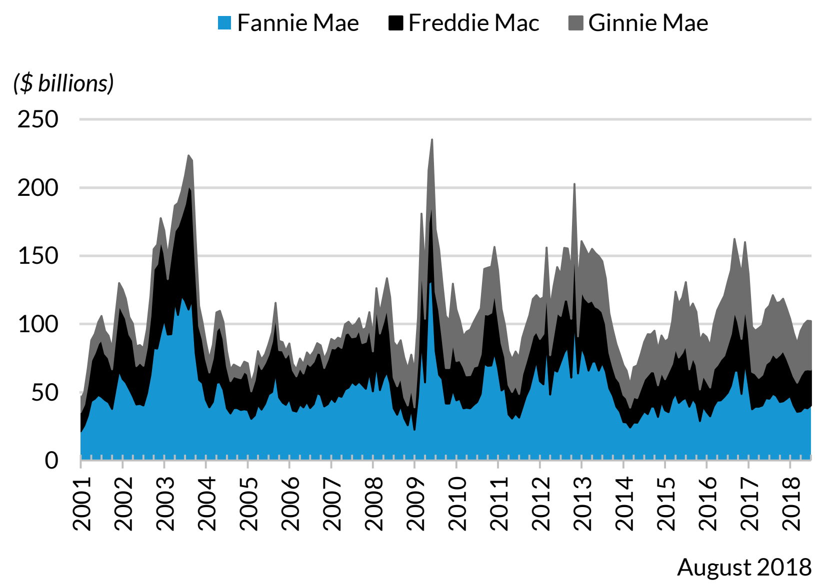
Issuance Year	GSEs	Ginnie Mae	Total
2000	$159.8	$29.3	$189.1
2001	$368.4	-$9.9	$358.5
2002	$357.2	-$51.2	$306.1
2003	$334.9	-$77.6	$257.3
2004	$82.5	-$40.1	$42.4
2005	$174.2	-$42.2	$132.0
2006	$313.6	$0.2	$313.8
2007	$514.9	$30.9	$545.7
2008	$314.8	$196.4	$511.3
2009	$250.6	$257.4	$508.0
2010	-$303.2	$198.3	-$105.0
2011	-$128.4	$149.6	$21.2
2012	-$42.4	$119.1	$76.8
2013	$69.1	$87.9	$157.0
2014	$30.5	$61.6	$92.1
2015	$75.1	$97.3	$172.5
2016	$135.5	$125.3	$260.8
2017	$168.5	$131.3	$299.7
2018 YTD	$90.3	$74.7	$164.9
2018 YTD % Change YOY	-11.9%	-21.4%	-16.5%
2018 (Ann.)	$135.4	$112.0	$247.4

Sources: eMBS and Urban Institute.
Note: Dollar amounts are in billions. Data as of August 2018.

AGENCY GROSS ISSUANCE & FED PURCHASES

Monthly Gross Issuance

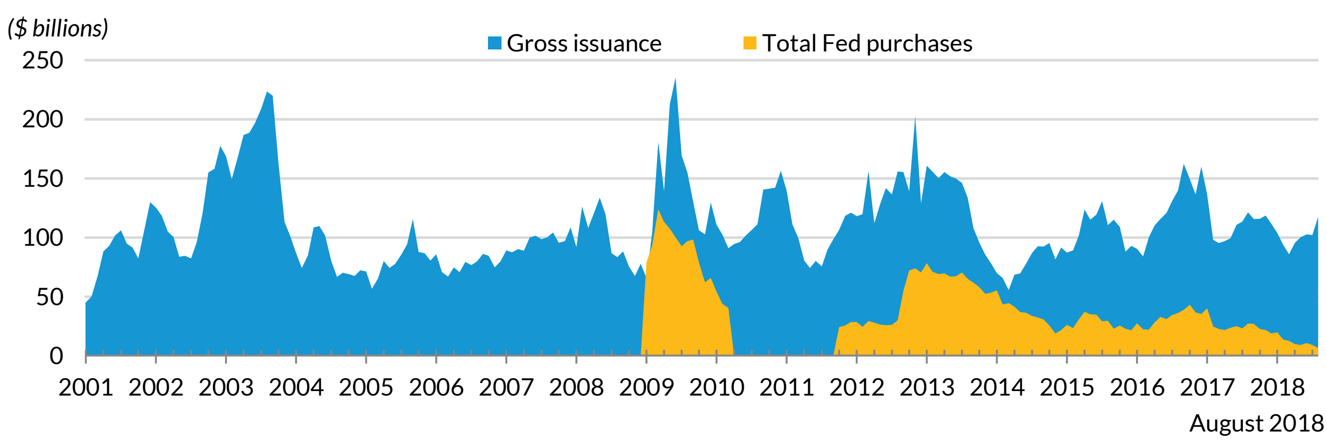
While government and GSE lending have dominated the mortgage market since the crisis, there has been a change in the mix. The Ginnie Mae share rose from its low levels in the pre-crisis period to 28 percent in 2010, then declined to 25 percent in 2013. Since then, the share has bounced back sharply, and now stands at 32.0 percent in August 2018. The increase in this share over the past 21 months is due to the fact that rates have risen, and Ginnie Mae is less dependent on refi activity than its conventional counterparts.



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

Fed Absorption of Agency Gross Issuance

The Fed has begun to wind down their portfolio, and we are beginning to see the effects in slower absorption rates. During the period October 2014-September 2017, the Fed had 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) increased from $12 billion to $16 billion in July 2018. In August 2018, total Fed purchases were $6.5 billion, yielding Fed absorption of gross issuance of 5.6 percent, the lowest level since the Fed began it's second mortgage purchase program.

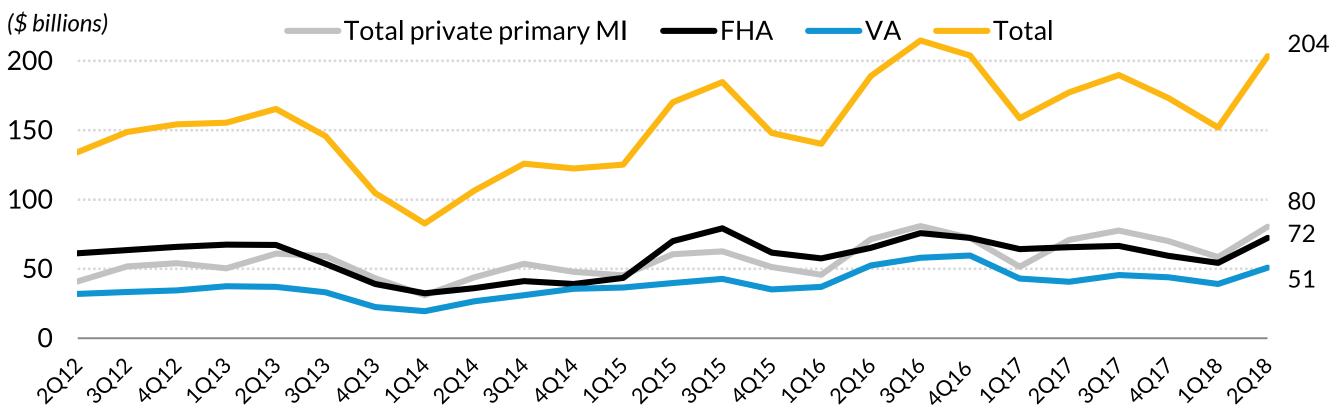


Sources: eMBS, Federal Reserve Bank of New York and Urban Institute.

AGENCY ISSUANCE
MORTGAGE INSURANCE ACTIVITY

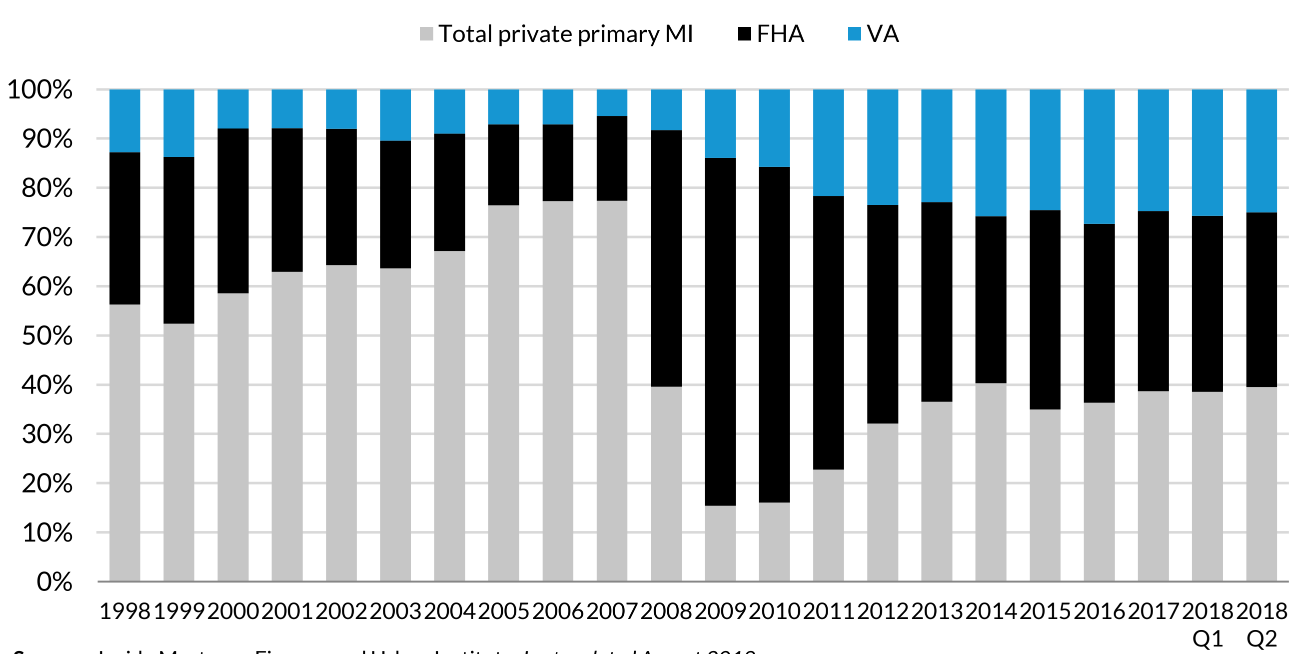
MI Activity

In 2018 Q2, mortgage insurance activity via the FHA, VA and private insurers increased from the previous quarter's $151 billion to $203 billion, up 14.7 percent year-over-year from the same quarter in 2017. Private mortgage insurers increased by $22.0 billion, FHA increased by $17.9 billion, and VA increased by $11.8 billion. In the second quarter of 2018, FHA accounted for 35.5 percent of the market, consistent with the share in Q1 2018, while VA accounted for 25.0 percent, losing about 1 percent market share to private mortgage insurers (39.5 percent).



Sources: Inside Mortgage Finance and Urban Institute. *Last updated August 2018.*

MI Market Share



Sources: Inside Mortgage Finance and Urban Institute. *Last updated August 2018.*

AGENCY ISSUANCE
MORTGAGE INSURANCE ACTIVITY

FHA premiums rose significantly in the years following the housing crash, with annual premiums rising 170 percent from 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 all 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	4.66%
FHA	4.70%

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	2.25%	2.05%	1.90%	1.40%	1.15%	0.95%	0.75%	0.55%
Monthly Payment								
FHA	$1,444	$1,444	$1,444	$1,444	$1,444	$1,444	$1,444	$1,444
PMI	$1,711	$1,648	$1,613	$1,524	$1,482	$1,443	$1,402	$1,378
PMI Advantage	($267)	($204)	($169)	($80)	($38)	$1	$42	$66

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 light 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.

RELATED HFPC WORK

PUBLICATIONS AND EVENTS

Upcoming events:
September 25: Data Talk: Effects of Parental Homeownership on Millennial Homebuying

Projects

The Mortgage Servicing Collaborative

Housing Credit Availability Index (HCAI)

Access and Affordability

Home Mortgage Disclosure Act Projects

Publications

Barriers to Accessing Homeownership 2018
Authors: Laurie Goodman, Alanna McCargo, Edward Golding, Bing Bai, Sarah Strochak
Date: September 20, 2018

What, if anything, should replace the QM GSE patch?
Authors: Karan Kaul, Laurie Goodman
Date: August 30, 2018

A Progress Report on Fannie Mae and Freddie Mac's Move to a Single Security
Authors: Laurie Goodman, Jim Parrott
Date: August 7, 2018

Real Denial Rates
Authors: Laurie Goodman, Bing Bai, Wei Li
Date: July 26, 2018

How Beneficial Are Streamlined Modifications?
Authors: Laurie Goodman, Walt Scott, Jun Zhu
Date: July 17, 2018

Millennial Homeownership
Authors: Jung Hyon Choi, Jun Zhu, Laurie Goodman, Bhargavi Ganesh, Sarah Strochak
Date: July 11, 2018

Challenges to Obtaining Manufactured Home Financing
Authors: Laurie Goodman, Bhargavi Ganesh
Date: June 27, 2018

Credit Risk Transfer: A Fork in the Road
Authors: Laurie Goodman
Date: June 7, 2018

GSE Reform is Dead- Long Live GSE Reform!
Authors: Jim Parrott, Mark Zandi
Date: May 9, 2018

Blog Posts

Down Payments Quiz
Authors: Sarah Strochak, Sheryl Pardo
Date: September 20, 2018

The "rent gap" still makes it cheaper to own than rent in these 17 cities
Authors: Sarah Strochak
Date: September 20, 2018

Too many homeowners lack flood insurance, but many buy it voluntarily
Authors: Sarah Strochak, Jun Zhu, Laurie Goodman
Date: September 18, 2018

New evidence shows manufactured homes appreciate as well as site-built homes
Authors: Laurie Goodman, Ed Golding, Bing Bai, Sarah Strochak
Date: September 13, 2018

Including new types of data in credit files could significantly expand credit access
Authors: Sarah Strochak
Date: September 11, 2018

Robocall laws can interfere with important mortgage borrower communications
Authors: Karan Kaul, John Walsh
Date: August 30, 2018

Proposed GSE capital requirements would better protect taxpayers, but some questions remain
Authors: John Walsh
Date: August 29, 2018

Traditional mortgage denial metrics may misrepresent racial and ethnic discrimination
Authors: Laurie Goodman, Bing Bai
Date: August 23, 2018

The rebounding mortgage market, in three charts
Authors: Bhargavi Ganesh
Date: August 21, 2018

First-time homebuyers will continue to dominate the mortgage market
Authors: Karan Kaul
Date: August 13, 2018

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