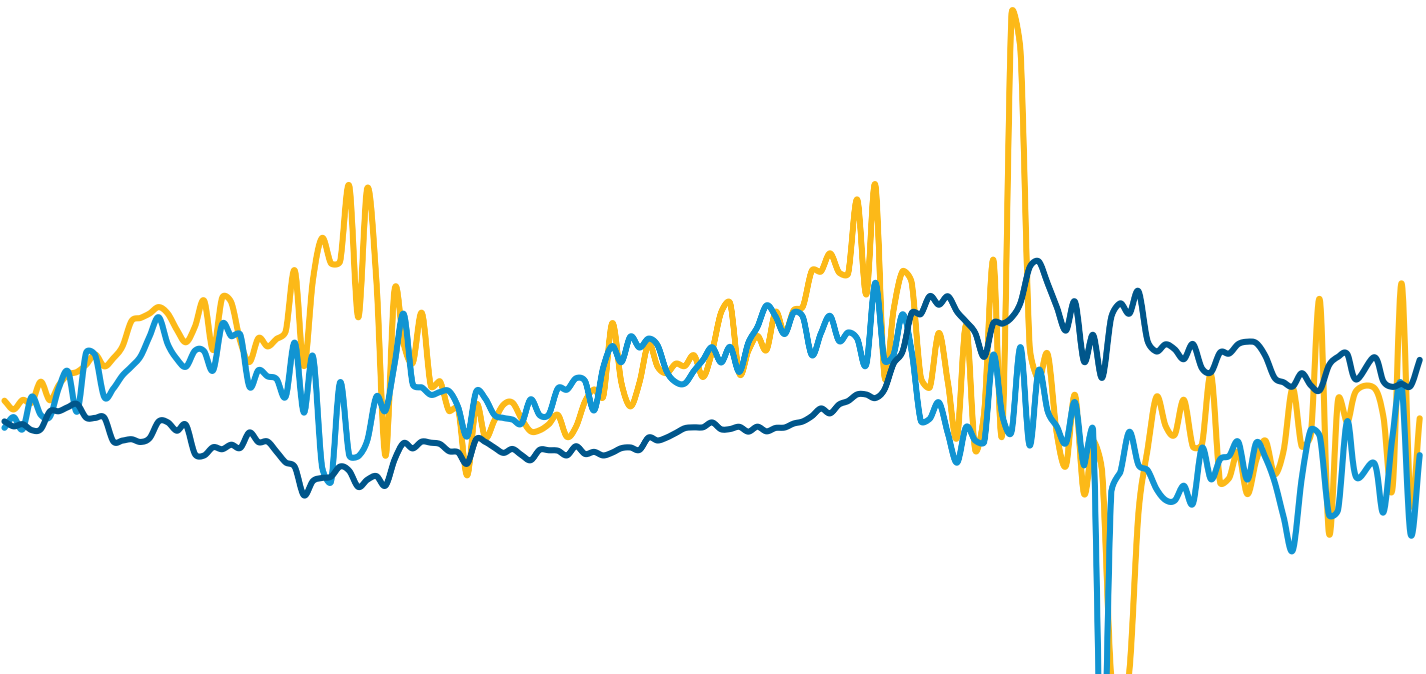
HOUSING FINANCE POLICY CENTER



HOUSING FINANCE AT A GLANCE

A MONTHLY CHARTBOOK

December 2017

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

Financial education can help reduce barriers to homeownership

The Fed recently released the flow of funds for the third quarter of 2017. It showed that mortgage debt was stable, while the value of household equity reached a new high of $14.9 trillion. This brought the total value of the housing market to $25.4 trillion, $1.5 trillion more than the previous peak of $23.9 trillion in 2006. Note all numbers are in nominal dollars, and do not account for the population growth over the period.

While mortgage debt has been stable to marginally increasing, other types of debt, particularly auto and student loan debt have increased far more rapidly. Our calculations, based on The Federal Reserve Bank of New York's Quarterly Report on Household Debt and Credit, show that over the past 5 years (Q3 2012 to Q3 2017), mortgage debt outstanding has grown at an annualized rate of 1.3 percent, while non-mortgage debt (which includes credit card debt, student loan debt, auto debt, and other debt) has grown by 6.8 percent annualized rate. Student loan debt has grown by 7.3 percent per year while auto debt has been growing by 9.6 percent per year. In Q3 2012, the number of accounts for mortgage loans and auto loans are very close (84 million vs 82 million). By Q3 2017, the number of accounts for mortgages had fallen to 80 million consistent with declining homeownership rate, while the number of accounts for auto loans had increased to 110 million.

Another metric where auto loans have diverged from mortgages is delinquency rates. Over the past 5 years, mortgage delinquencies have plummeted (pages 22 and 29) while the percent of auto loans that is more than 90 days late is roughly flat despite an improving economy. However, the percent of auto loans transitioning into serious delinquency has risen from 1.52 percent in Q3 2012 to 2.36 percent in Q3 2017. While these numbers remain small, the growth bears monitoring.

When we looked at the distribution of credit scores for new auto origination and new mortgage origination, we found no major change in either loan category; while mortgage credit scores are skewed higher, the distribution of mortgage credit scores (page 17) and the distribution of auto credit scores have been roughly consistent over the period. Our calculations based off NY Fed data shows the percent of auto loan origination balances with FICOs under 660 was 35.9% in Q3, 2012, it is now 31.7%; similarly the percent of auto origination with balances under 620 has contracted from 22.7 percent to 19.6 percent. There have been absolutely more auto loans with low FICOs originated, but this is because of the increased overall volume.

So what might explain the differences in trends in the delinquency rate and loan growth between these two asset classes? A good part of the story (in addition to tight mortgage credit) is that many potential low- and moderate-income borrowers do not believe they can get a mortgage. As a result, many don't even bother to apply. We showed in our recently released report on Barriers to Accessing Homeownership that survey after survey shows that borrowers think they need far bigger down payments than they actually do. And there are many down payment assistance programs available. Moreover, it is still less expensive at the national level to own than to rent. This suggests that many LMI borrowers who are shying away from applying for a mortgage could benefit from financial education; with a better grasp of down payment facts and assistance opportunities, many of these families could be motivated to apply for mortgages and have the opportunity to build wealth.

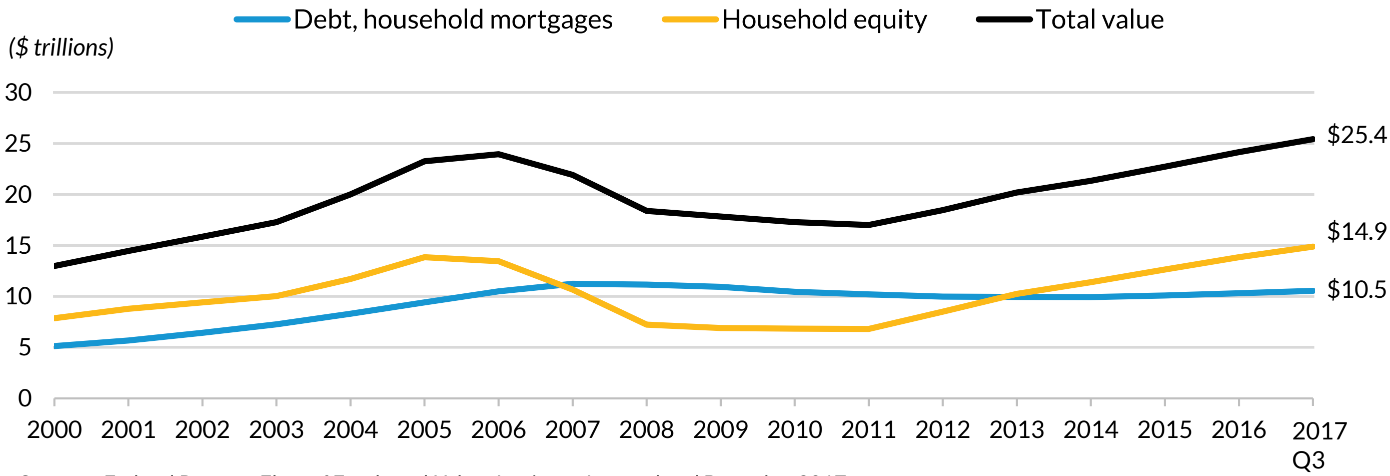
INSIDE THIS ISSUE

- The total value of the US Housing Market continued to rise in Q3 2017, driven by a $260 billion increase in household equity (page 6).
- The non-bank originator share of Freddie Mac and Ginnie Mae both reached historical high levels in November 2017 (page 12).
- The share of loans in negative equity continued the decline to 4.9 percent in Q3 2017 (page 22).
- Both modifications and liquidations continued to slow down through Q3 in 2017 (page 23).

MARKET SIZE OVERVIEW

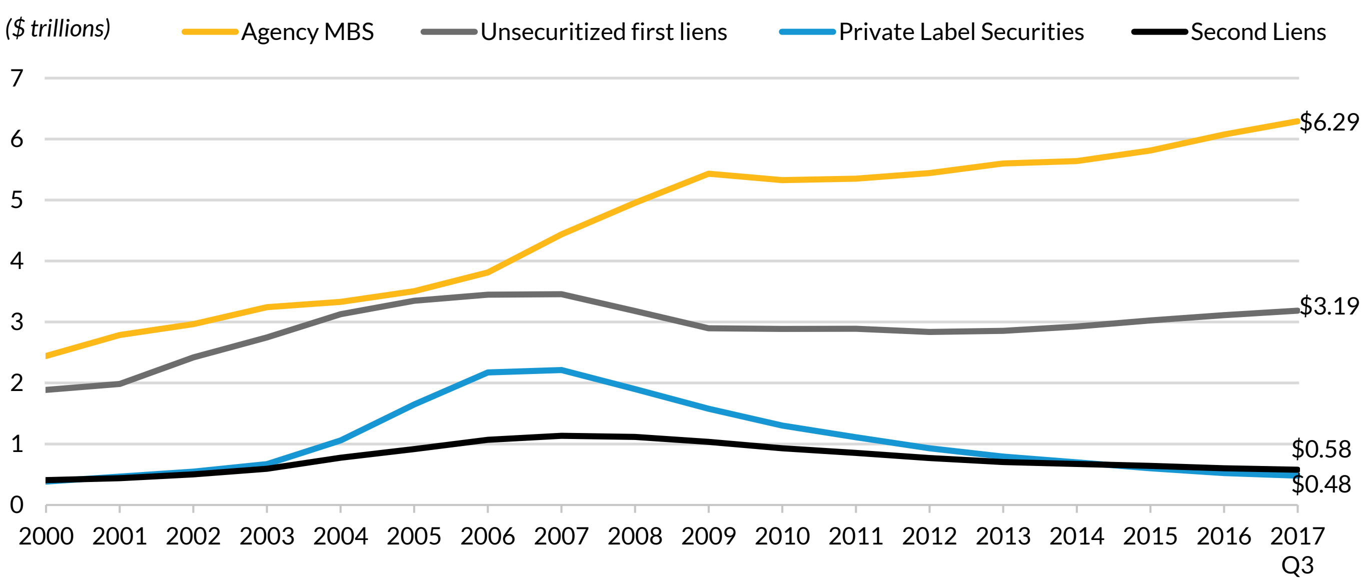
Since 2012, the Federal Reserve's Flow of Funds report has consistently indicated an increasing total value of the housing market, driven by growing household equity and 2017 Q3 was no different. While total debt and mortgages was stable at $10.5 trillion, household equity reached a new high of $14.9 trillion, bringing the total value of the housing market to $25.4 trillion, surpassing the pre-crisis peak of $23.9 trillion in 2006. Agency MBS make up 59.7 percent of the total mortgage market, private-label securities make up 4.6 percent, and unsecuritized first liens at the GSEs, commercial banks, savings institutions, and credit unions make up 30.3 percent. Second liens comprise the remaining 5.5 percent of the total.

Value of the US Housing Market



Sources: Federal Reserve Flow of Funds and Urban Institute. *Last updated December 2017.*

Size of the US Residential Mortgage Market



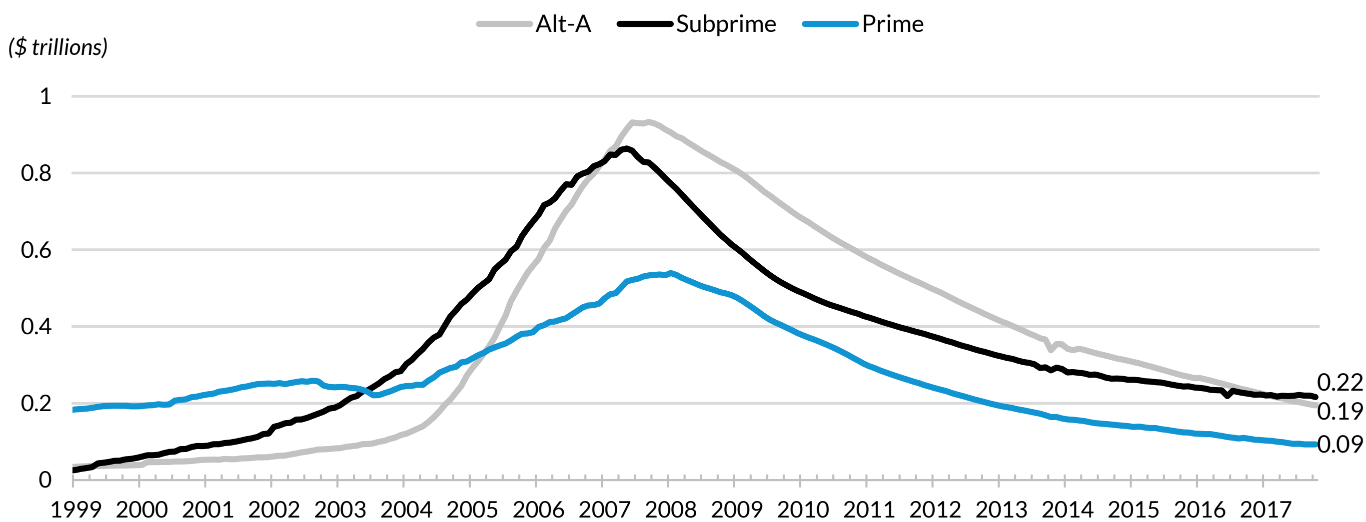
Sources: Federal Reserve Flow of Funds, Inside Mortgage Finance, Fannie Mae, Freddie Mac, eMBS and Urban Institute. *Last updated December 2017.* **Note:** Unsecuritized first liens includes loans held by commercial banks, GSEs, savings institutions, and credit unions.

OVERVIEW

MARKET SIZE OVERVIEW

As of October 2017, debt in the private-label securitization market totaled $504 billion and was split among prime (18.5 percent), Alt-A (38.6 percent), and subprime (42.9 percent) loans. In November 2017, outstanding securities in the agency market totaled $6.35 trillion and were 43.7 percent Fannie Mae, 27.4 percent Freddie Mac, and 28.8 percent Ginnie Mae. Ginnie Mae has had more outstanding securities than Freddie Mac since May 2016.

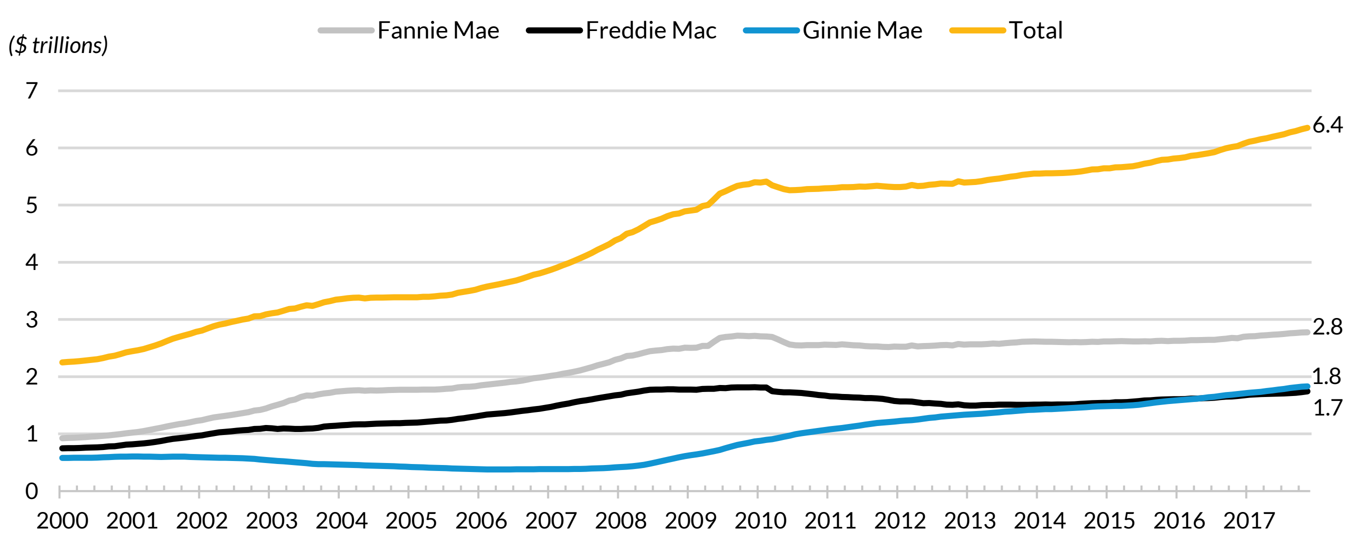
Private-Label Securities by Product Type



Sources: CoreLogic and Urban Institute.

October 2017

Agency Mortgage-Backed Securities



November 2017

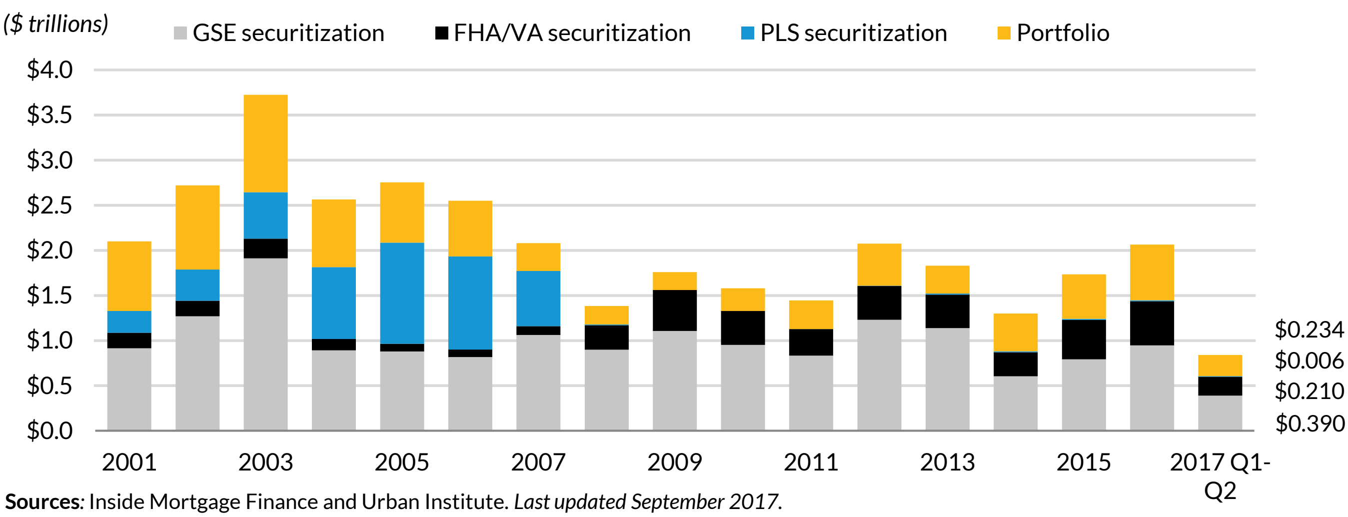
Sources: eMBS and Urban Institute.

OVERVIEW

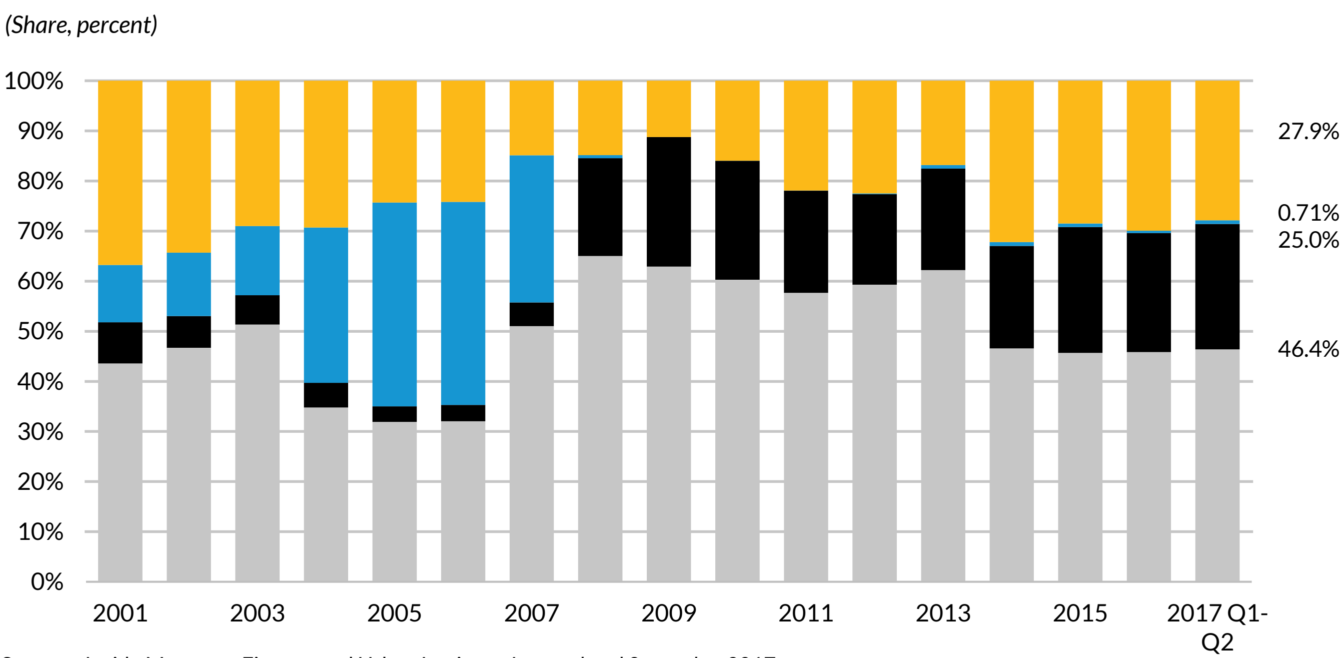
ORIGINATION VOLUME AND COMPOSITION

First Lien Origination Volume

After a record high origination year in 2016 ($2.1 trillion), the first lien originations totaled $840 billion in the first half of 2017, down 6 percent from the same period last year, mostly due to the elevated interest rates. The share of portfolio originations was 28 percent, down slightly from 30 percent in 2016. The GSE share stayed at about 46 percent. The FHA/VA share was slightly up: 25 percent for the first half of 2017 versus 24 percent in 2016. Origination of private-label securities was well under 1 percent in both periods.



Sources: Inside Mortgage Finance and Urban Institute. *Last updated September 2017.*



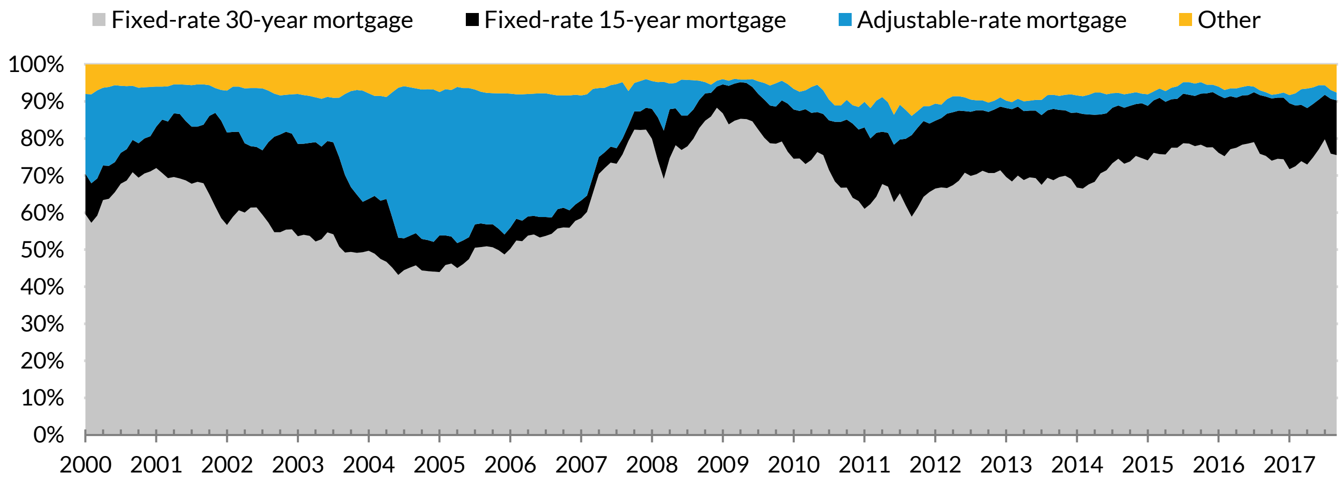
Sources: Inside Mortgage Finance and Urban Institute. *Last updated September 2017.*

OVERVIEW

MORTGAGE ORIGINATION PRODUCT TYPE

Adjustable-rate mortgages (ARMs) accounted for as much as 42 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 6 percent in April 2014. Since then, ARMs have began to decline again to 2.1 percent in September 2017. The 15-year fixed-rate mortgage (FRM), predominantly a refinance product, accounted for 14.8 percent of new originations in September 2017. If we exclude refinances (bottom chart), the share of 30-year FRMs in September 2017 stood at 90.9 percent, 15-year FRMs at 5.6 percent, and ARMs at 1.9 percent.

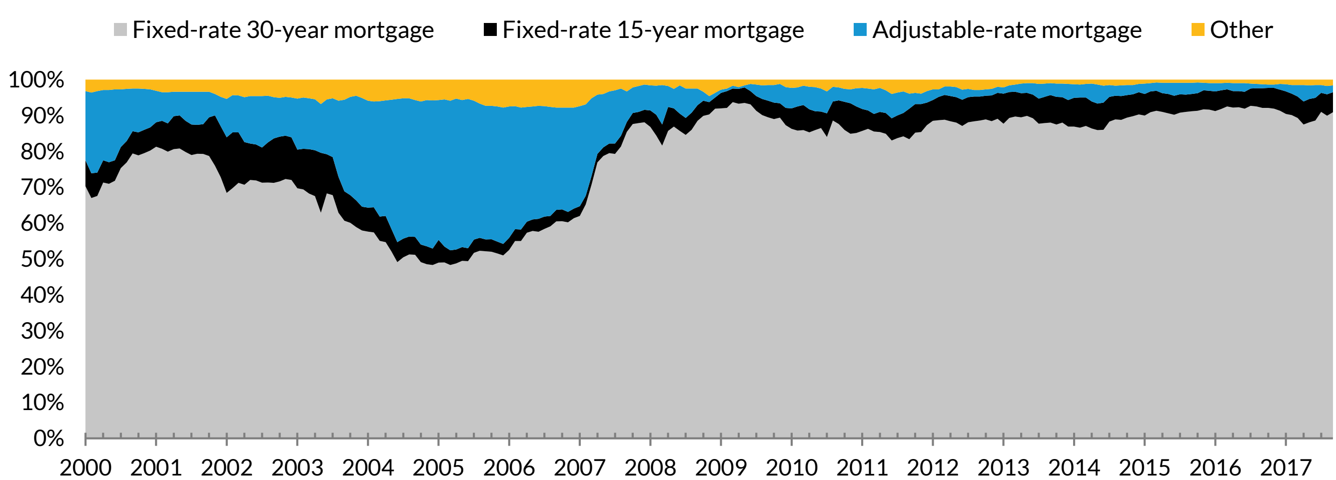
All Originations



Sources: Corelogic, eMBS, HMDA, SIFMA and Urban Institute.

September 2017

Purchase Loans Only



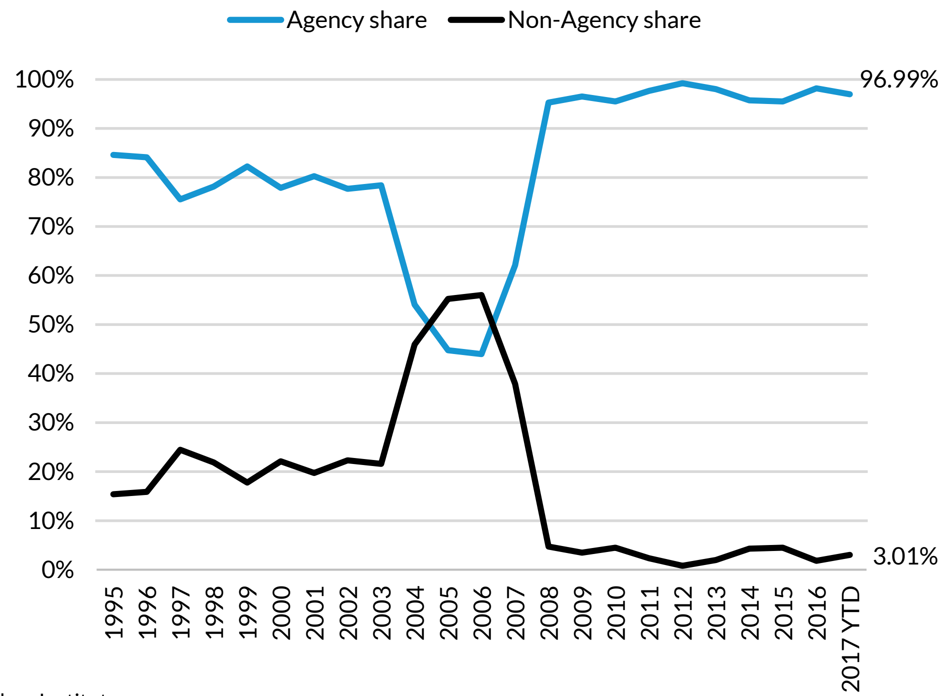
Sources: Corelogic, eMBS, HMDA, SIFMA and Urban Institute.

September 2017

OVERVIEW
SECURITIZATION VOLUME AND COMPOSITION

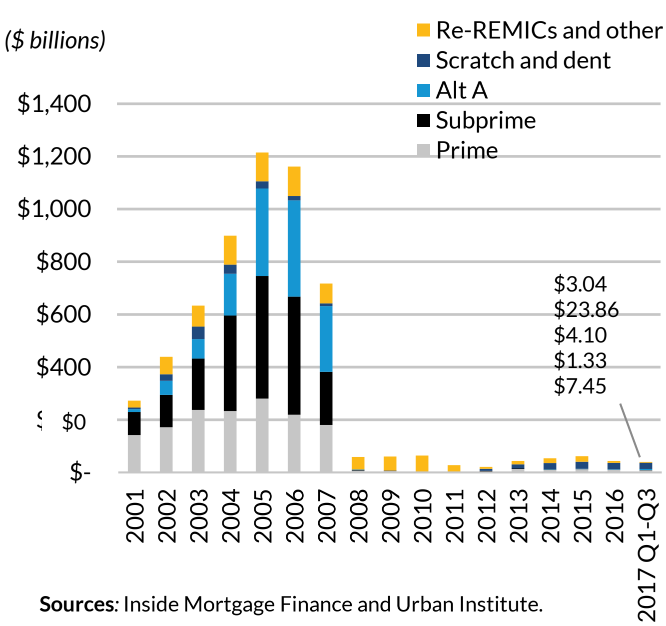
Agency/Non-Agency Share of Residential MBS Issuance

The non-agency share of mortgage securitizations in the first ten months of 2017 was 3.0 percent, compared to 1.8 percent in all of 2016 and 4.5 percent in all of 2015. The non-agency securitization volume totaled $40.0 billion in the first three quarters of 2017, a 12 percent increase over the same period in 2016. Much of the volume was in non-performing and re-performing (scratch and dent) deals. The volume of prime securitizations in the first three quarters of 2017 totaled $7.45 billion, just below the $7.75 billion in Q1-3 2016. Non-agency securitizations continue to be tiny compared to pre-crisis levels.



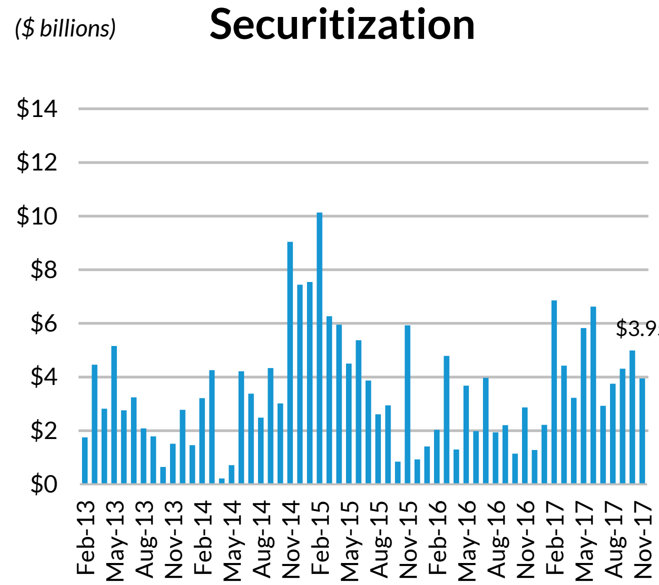
Sources: Inside Mortgage Finance and Urban Institute.
Note: Based on data from October 2017.

Non-Agency MBS Issuance



Sources: Inside Mortgage Finance and Urban Institute.

Monthly Non-Agency Securitization

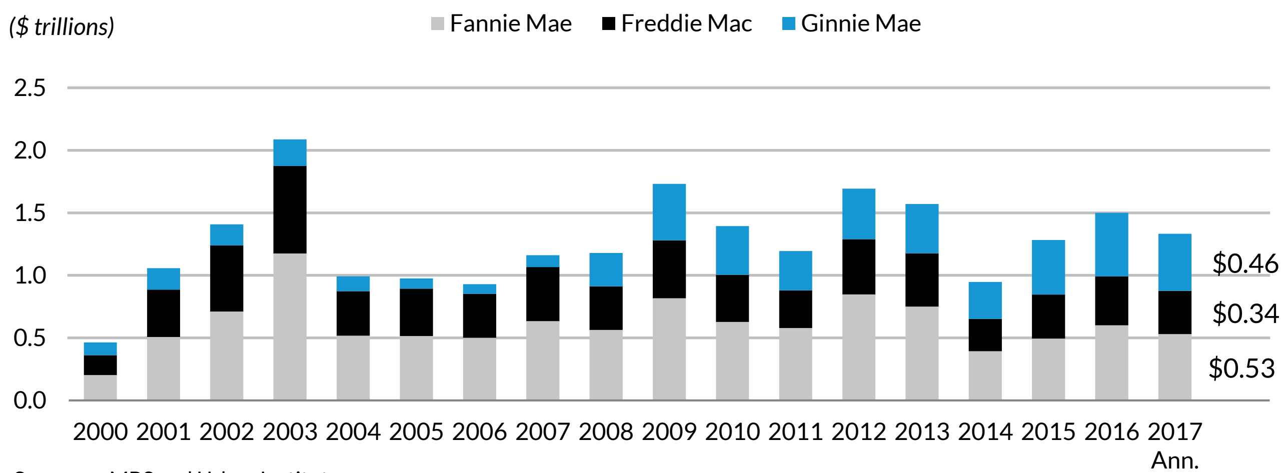


Sources: Inside Mortgage Finance and Urban Institute.

AGENCY ACTIVITY: VOLUMES AND PURCHASE/ REFI COMPOSITION

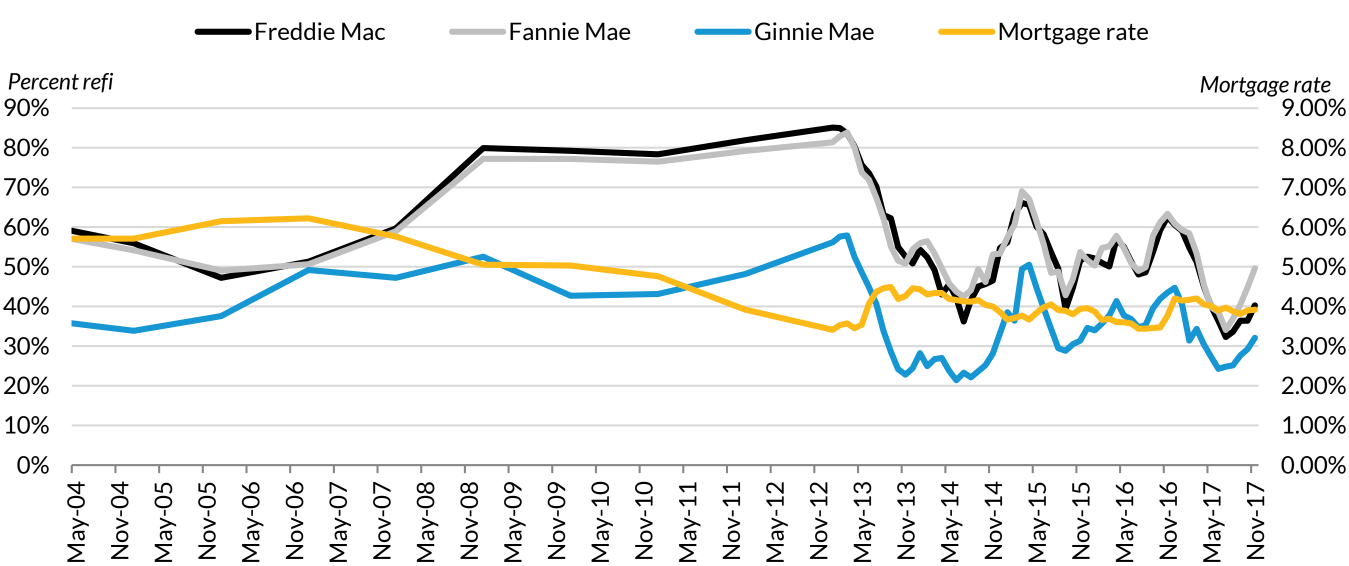
Agency issuance totaled $1.221 trillion for the first 11 months of the year, $1.332 trillion on an annualized basis. This is down about 8.8 percent from the first 11 months of 2016. The refinance share continued to edge up in November, a typical seasonal effect associated with lower purchase volume.

Agency Gross Issuance



Sources: eMBS and Urban Institute.
Note: Annualized figure based on data from November 2017.

Percent Refi at Issuance

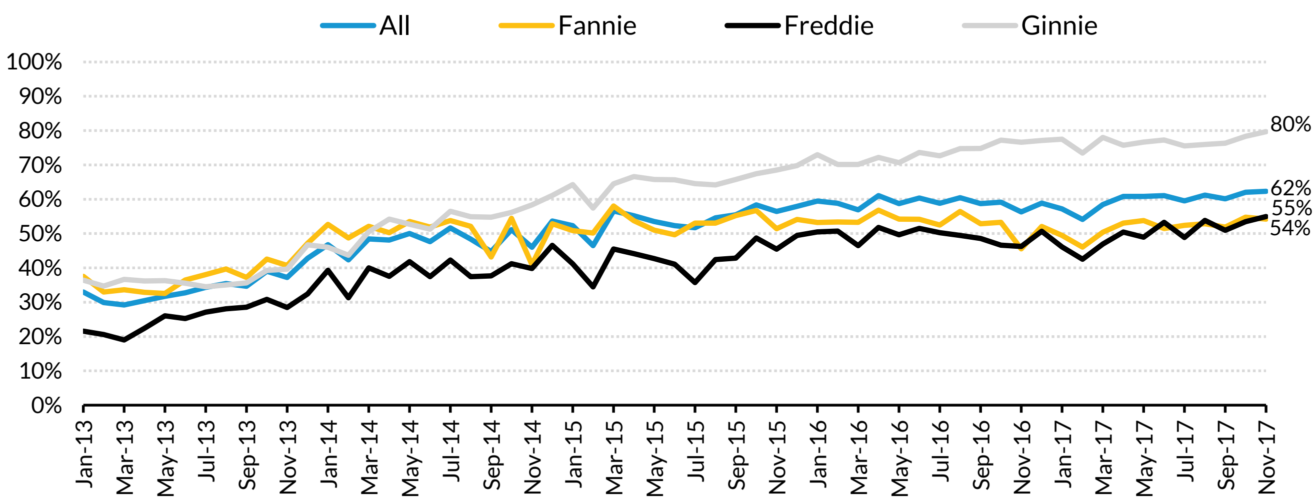


Sources: eMBS and Urban Institute.
Note: Based on at-issuance balance. Figure based on data from November 2017

OVERVIEW
NONBANK ORIGINATION SHARE

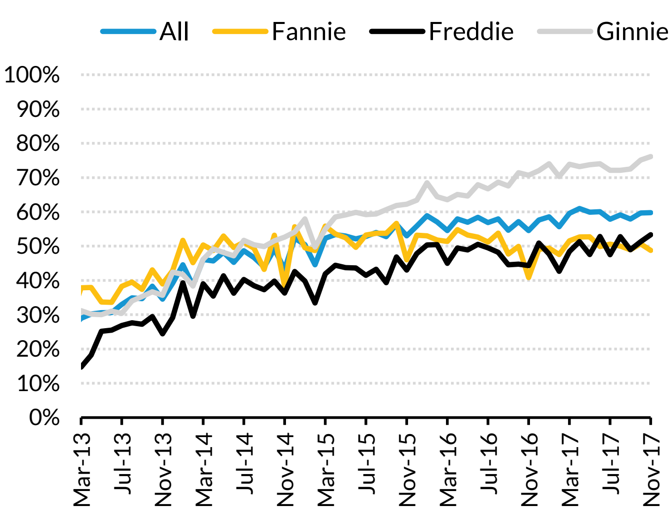
The nonbank origination share has increased for all three agencies since 2013. This month, Fannie Mae's nonbank share was steady at 54 percent, while nonbank originator shares for Freddie Mac and Ginnie Mae both edged up to their historical high levels at 55 and 80 percent, respectively. The nonbank originator share is higher for refinance than for purchases across all three agencies.

Nonbank Origination Share: All Loans



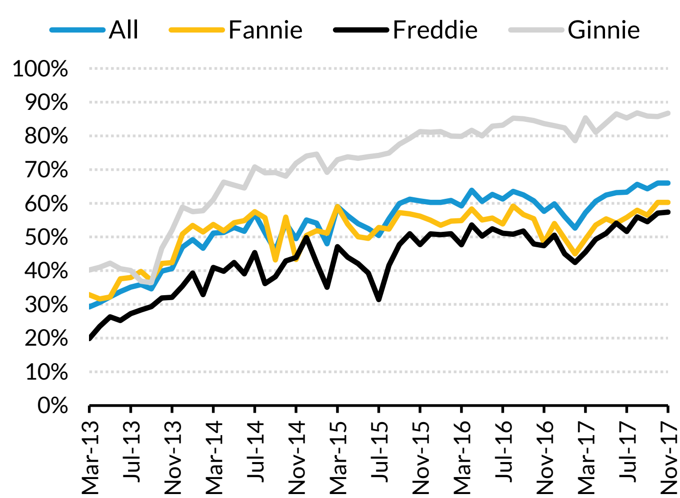
Sources: *eMBS and Urban Institute.*

Nonbank Origination Share: Purchase Loans



Sources: *eMBS and Urban Institute*

Nonbank Origination Share: Refi Loans



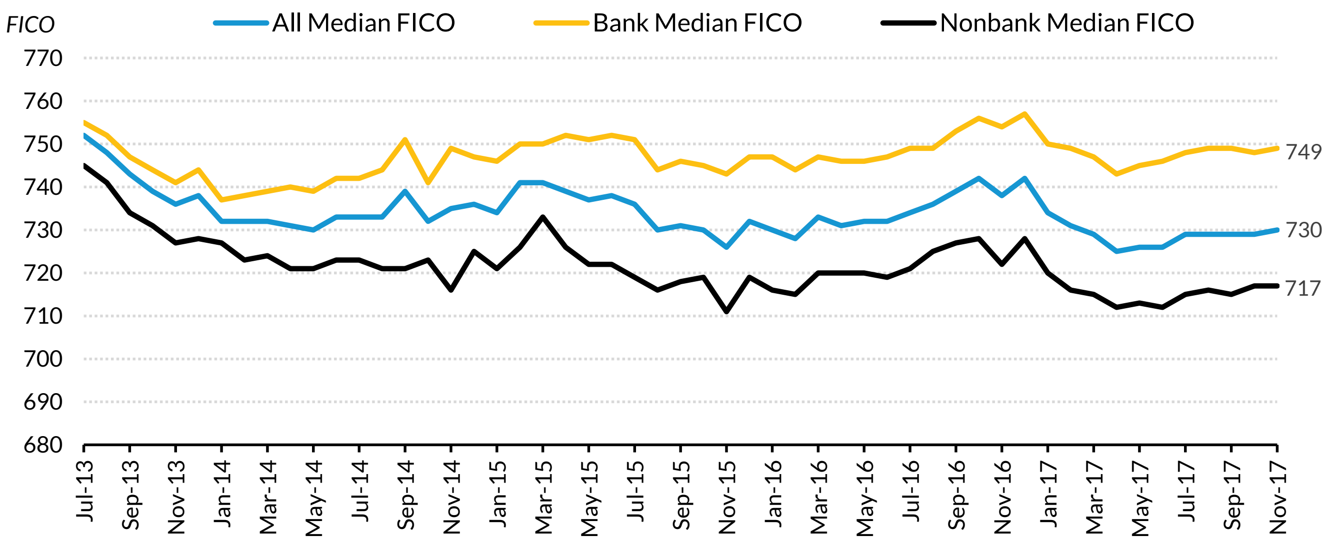
Sources: *eMBS and Urban Institute*

OVERVIEW

NONBANK CREDIT BOX

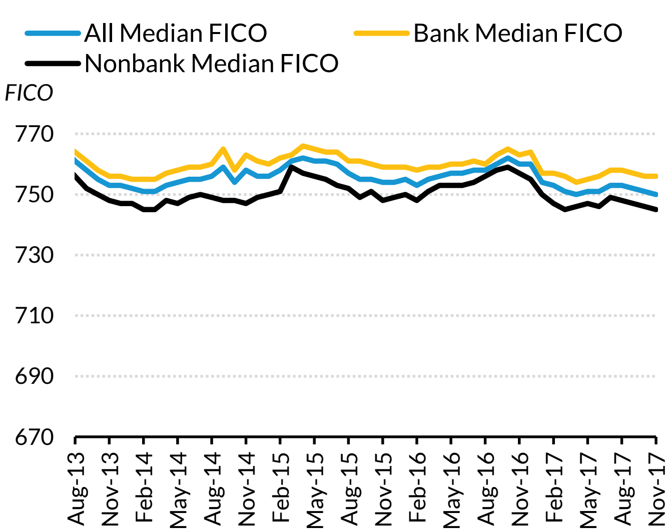
Nonbank originators have played a key role in opening up access to credit. The median GSE and the median Ginnie Mae FICO scores for loans originated by nonbanks are lower than their bank counterparts. Within the GSE space, both bank and nonbank FICOs have declined since 2014 with further relaxation in FICOs in 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



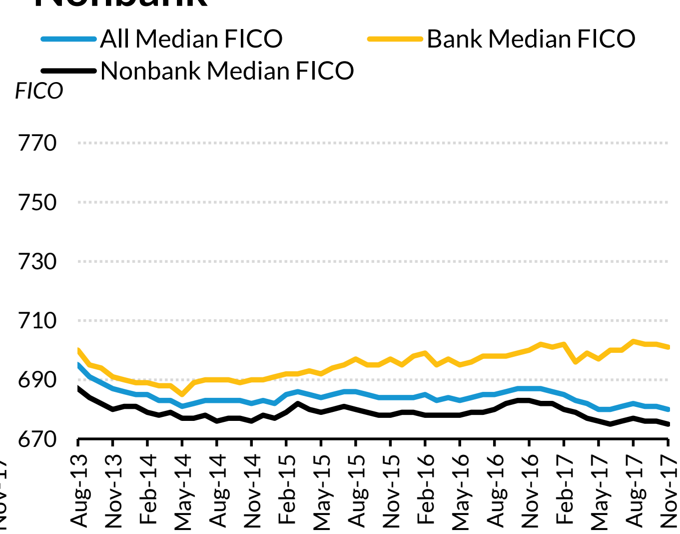
Sources: *eMBS and Urban Institute.*

GSE FICO: Bank vs. Nonbank



Sources: *eMBS and Urban Institute.*

Ginnie Mae FICO: Bank vs. Nonbank

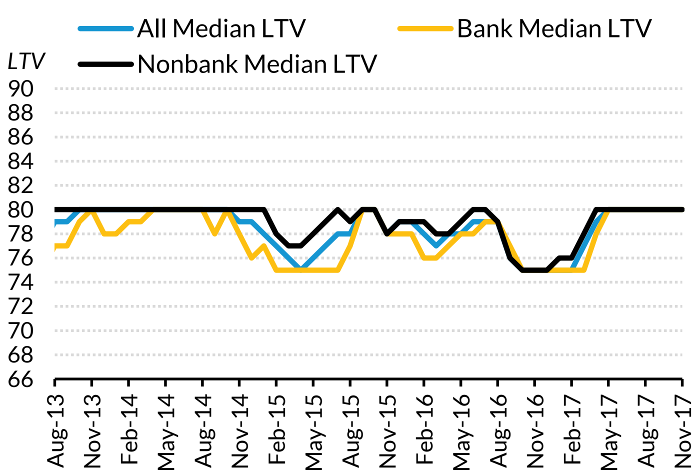


Sources: *eMBS and Urban Institute.*

NONBANK CREDIT BOX

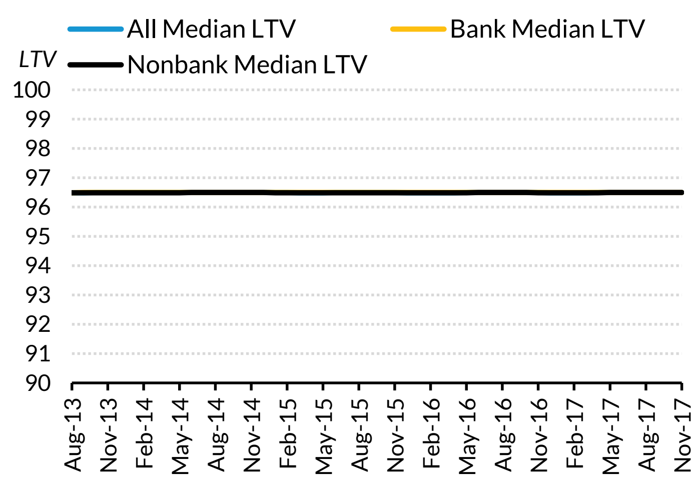
The median LTV ratios for loans originated by nonbanks are similar to their bank counterparts, while the median DTIs for nonbank loans are higher, indicating that nonbanks are more accommodating in this as well as in the FICO dimension. Note that in 2017 there has been a measurable increase in DTIs. This is true for both Ginnie Mae and GSE loans, banks and nonbank originators.

GSE LTV: Bank vs. Nonbank



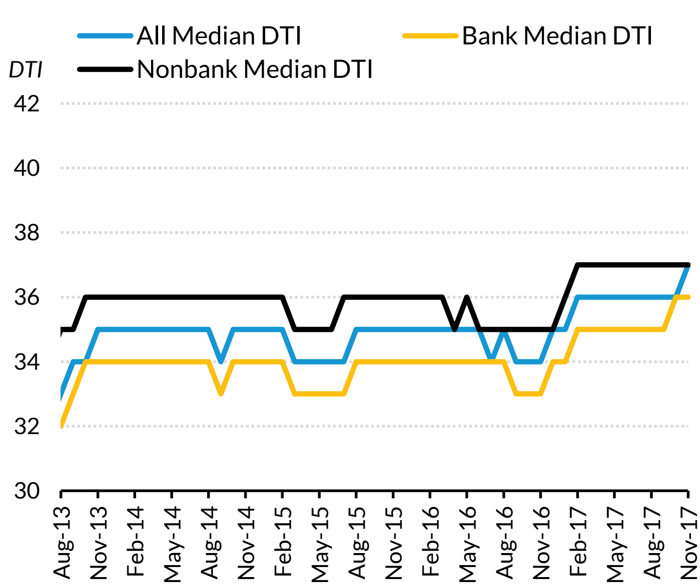
Sources: *eMBS and Urban Institute.*

Ginnie Mae LTV: Bank vs. Nonbank



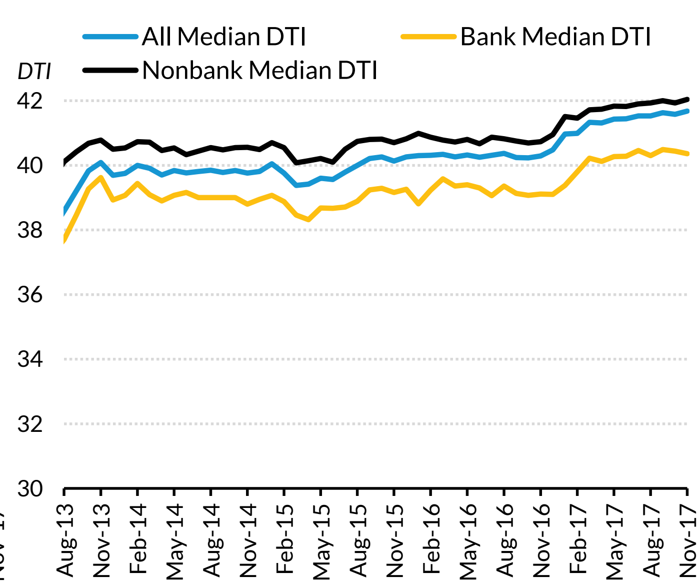
Sources: *eMBS and Urban Institute.*

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

Origination volume for calendar year 2016 was close to $2.0 trillion. In 2017, Fannie Mae, Freddie Mac and MBA expect origination volume to be in the $1.66-$1.8 trillion range, owing to a sharp decline in refinance activity due to rising interest rates. In 2017, the share of refinances is expected to be in the 33-37 percent range, representing a drop from the 48 percent refi share in 2016. Fannie, Freddie, and MBA all forecast 2017 housing starts to total 1.19 to 1.20 million units, an increase from 2016. Home sales forecasts for 2017 range from 6.07-6.30 million, a rise from 2016 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
2017 Q1	408	397	361	47	42	41
2017 Q2	490	475	463	33	30	32
2017 Q3	468	500	465	34	32	31
2017 Q4	438	428	370	37	32	35
2018 Q1	358	330	345	41	30	30
2018 Q2	475	490	445	30	25	24
2018 Q3	464	495	443	28	24	23
2018 Q4	412	405	355	29	23	28
FY 2014	1301	1350	1261	40	39	40
FY 2015	1730	1750	1679	47	45	46
FY 2016	2052	2125	1891	49	48	48
FY 2017	1805	1800	1659	37	34	34
FY 2018	1710	1720	1588	31	25	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. Column labels indicate source of estimate. Regarding interest rates, the yearly averages for 2014, 2015, and 2016 were 3.6%, 3.7%, and 3.6%. For 2017, the respective projections for Fannie, Freddie, and MBA are 4.1%, 4.2%, and 4.2%.

Housing Starts and Homes Sales

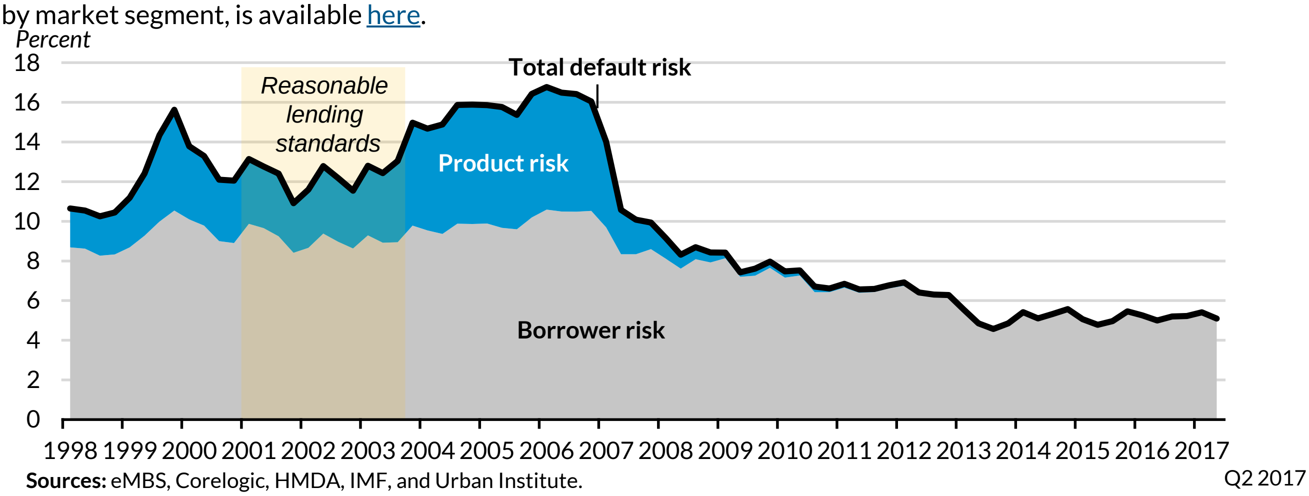
Year	Housing Starts, thousands			Home Sales. thousands				
	Total, FNMA estimate	Total, FHLMC estimate	Total, MBA estimate	Total, FNMA estimate	Total, FHLMC estimate	Total, MBA estimate	Existing, MBA estimate	New, MBA Estimate
FY 2014	1003	1000	1001	5377	5380	5360	4920	440
FY 2015	1112	1110	1108	5751	5750	5740	5237	503
FY 2016	1174	1170	1177	6013	6010	6001	5440	561
FY 2017	1190	1200	1195	6097	6300	6070	5486	584
FY 2018	1250	1300	1289	6201	6410	6249	5626	623

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.

STATE OF THE MARKET
CREDIT AVAILABILITY AND ORIGINATOR PROFITABILITY

Housing Credit Availability Index (HCAI)

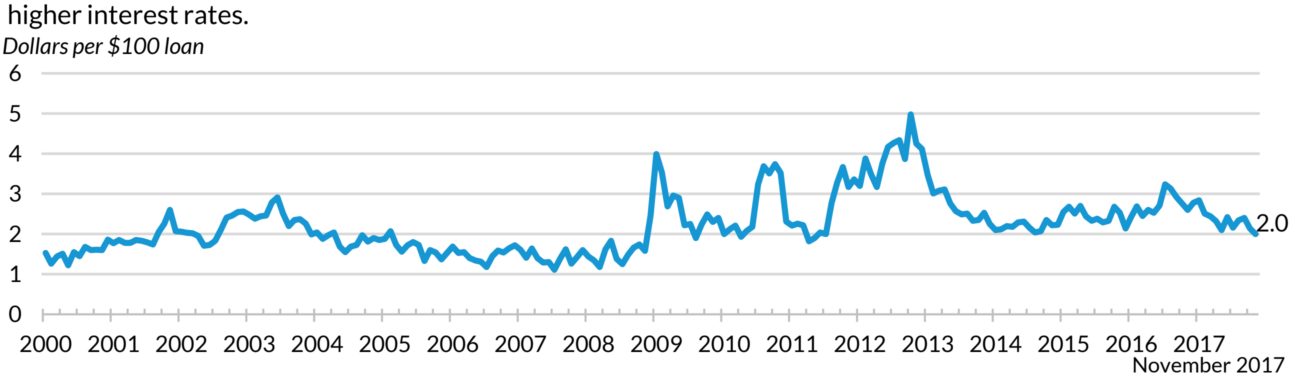
HFPC's Housing Credit Availability Index (HCAI) assesses lenders' tolerance for both borrower risk and product risk, calculating the share of owner-occupied purchase loans that are likely to default. The index shows that credit availability decreased slightly to 5.1 in the second quarter of 2017 (Q2 2017), down from 5.4 in Q1 2017, the highest level since 2016. This decline was mostly driven by a shift in market composition from Q1 to Q2 2017, with the government channel losing market share to the portfolio channel, where lending standards are tighter. In the meantime, credit continued to expand within each of 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 October 2017.*

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. Over the last four years, OPUC has ranged from a high of $3.24 in July 2016 when interest rates were low, to around $2.0 on a number of occasions when rates were higher. It now stands at $2.00, near the lower end of the range, reflecting relatively higher interest rates.



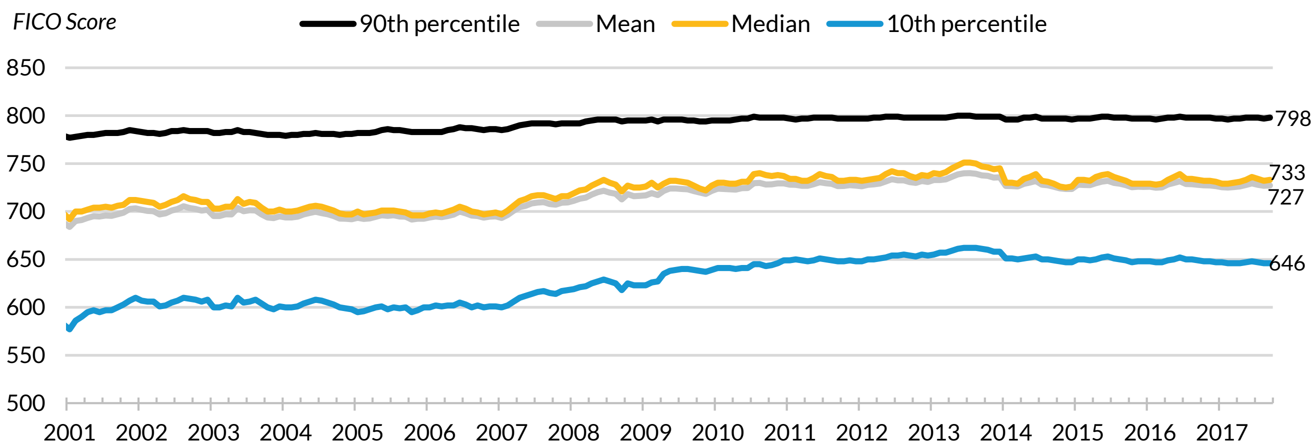
Sources: Federal Reserve Bank of New York, updated monthly and available at this link: http://www.ny.frb.org/research/epr/2013/1113fust.html and Urban Institute.
Note: OPUC is a is a monthly (4-week moving) average as discussed in Fuster et al. (2013).

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 646 as of September 2017. Prior to the housing crisis, this threshold held steady in the low 600s. Mean LTV levels at origination remain relatively high, averaging 87.4, which reflects the large number of FHA purchase originations.

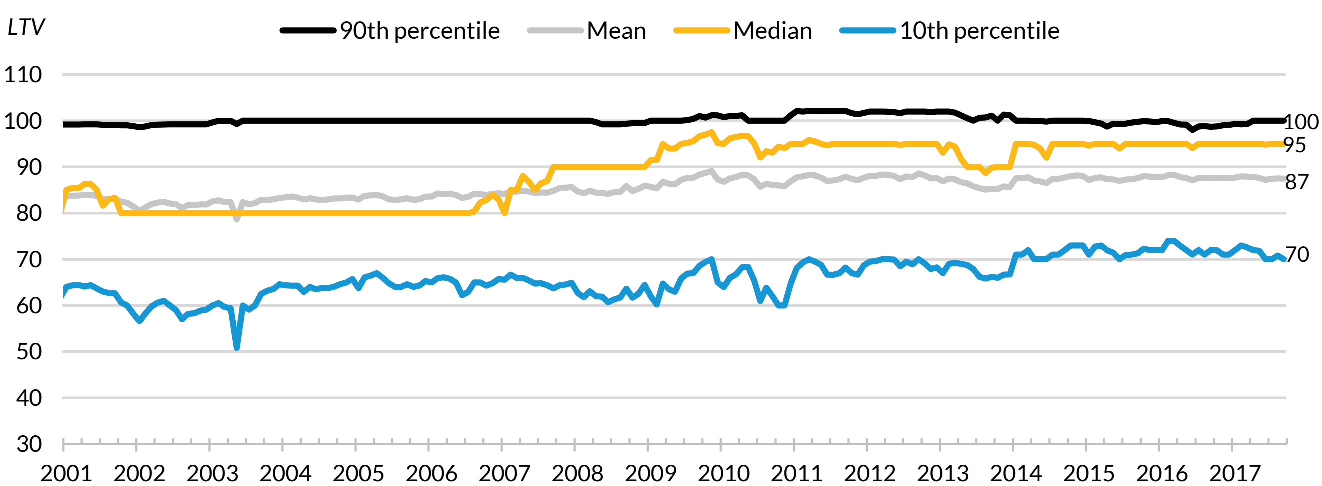
Borrower FICO Score at Origination



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

September 2017

Combined LTV at Origination



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

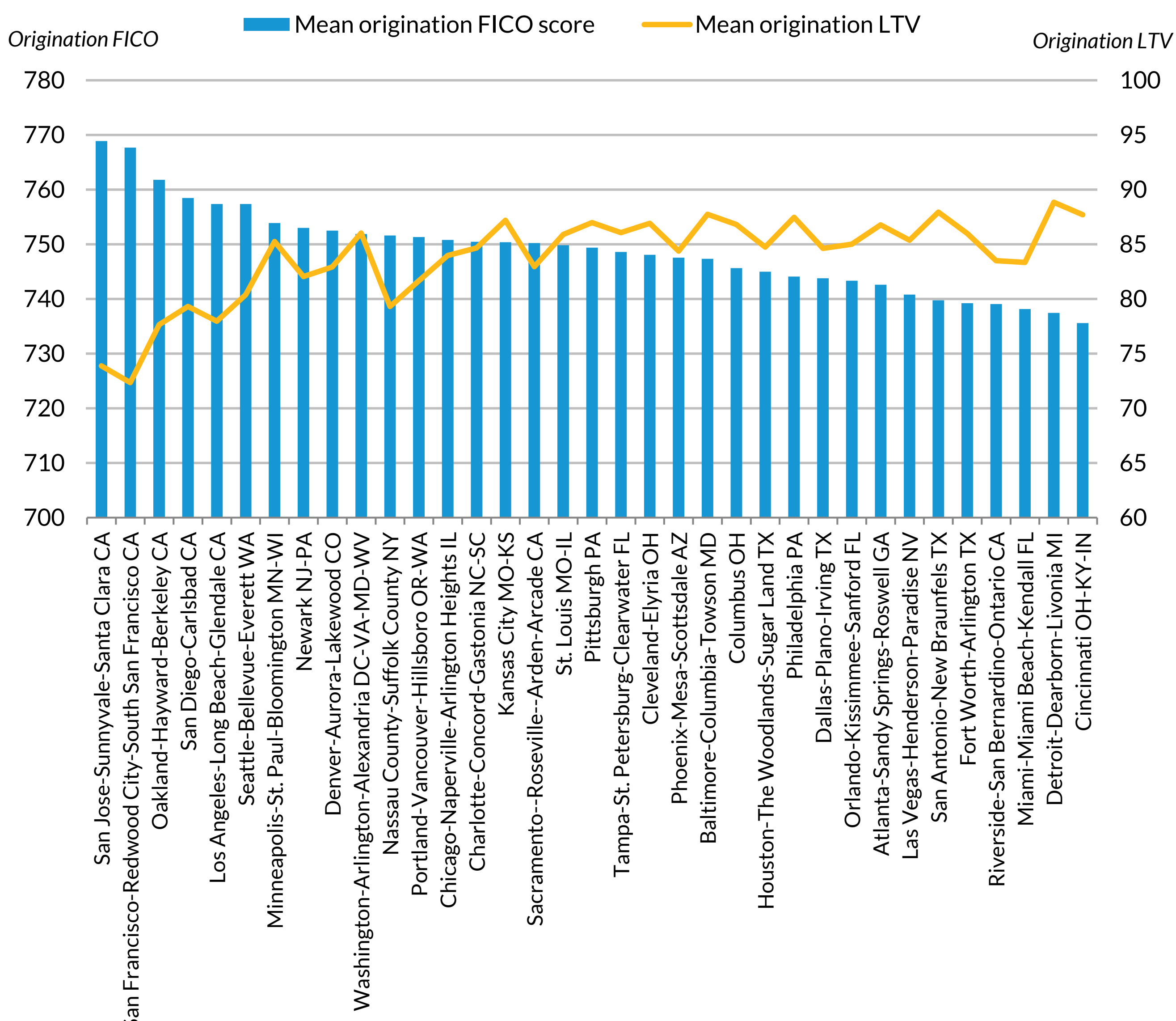
September 2017

STATE OF THE MARKET

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 Jose-Sunnyvale-Santa Clara, CA is 769, while in Cincinnati OH-KY-IN it is 736. 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



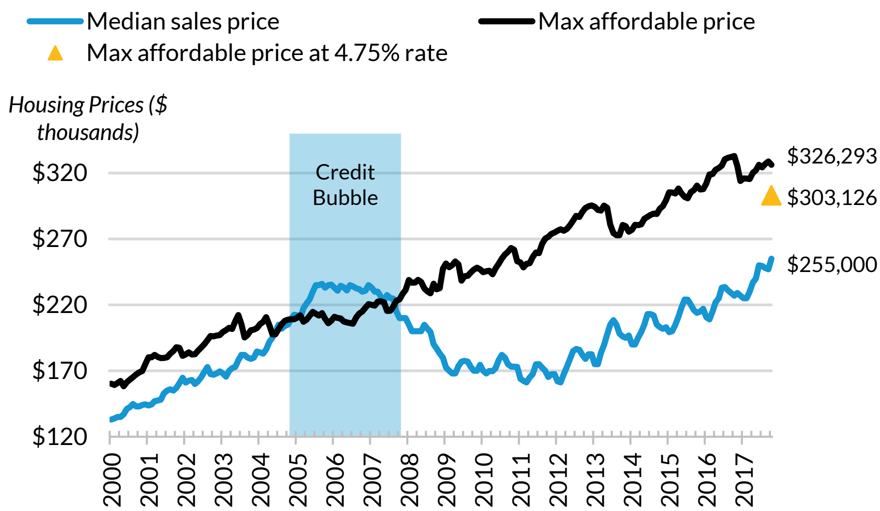
Sources: CoreLogic, eMBS, HMDA, SIFMA and Urban Institute.
Note: Includes owner-occupied purchase loans only. Data as of September 2017.

HOUSING AFFORDABILITY

National Housing Affordability Over Time

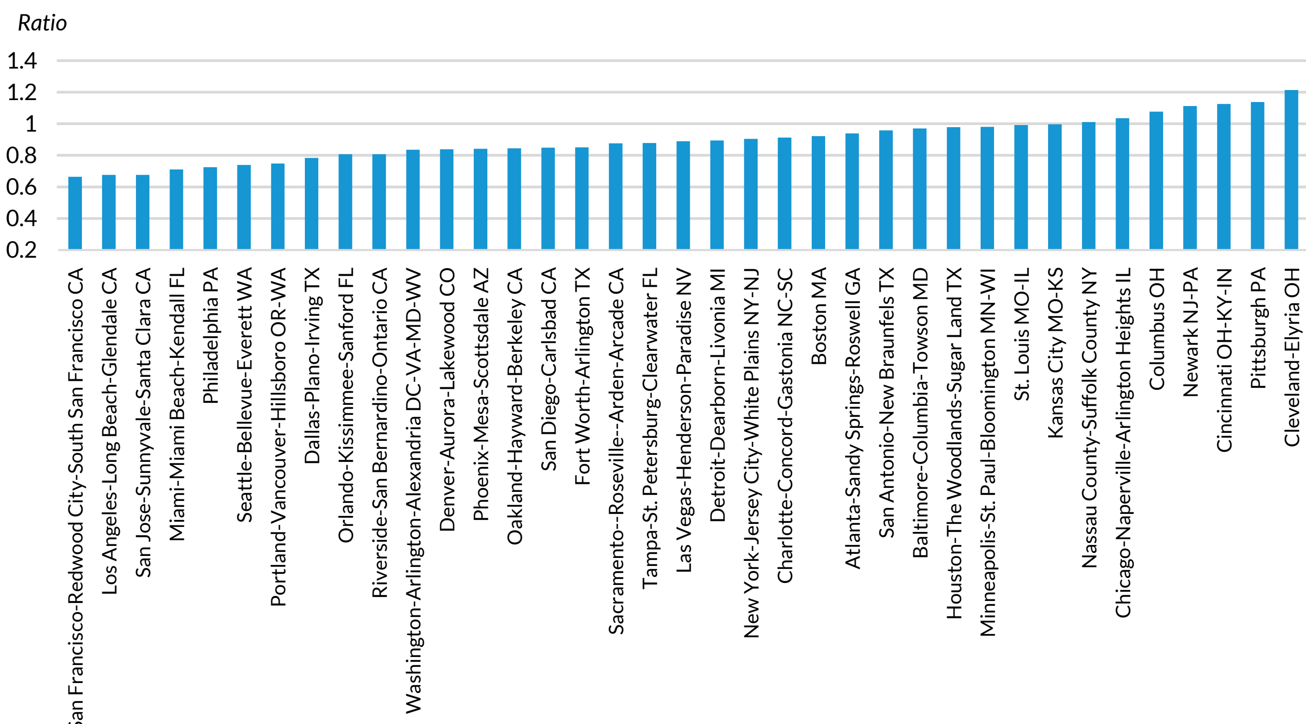
Home prices remain affordable by historic standards, despite increases over the last five years and the recent interest rate hikes. Even if interest rates rise to 4.75 percent, affordability would still be at the long-term historical average.

Sources: CoreLogic, US Census, Freddie Mac and Urban Institute.
Note: The maximum affordable price is the house price that a family can afford putting 20 percent down, with a monthly payment of 28 percent of median family income, at the Freddie Mac prevailing rate for 30-year fixed-rate mortgage, and property tax and insurance at 1.75 percent of housing value.



September 2017

Affordability Adjusted for MSA-Level DTI



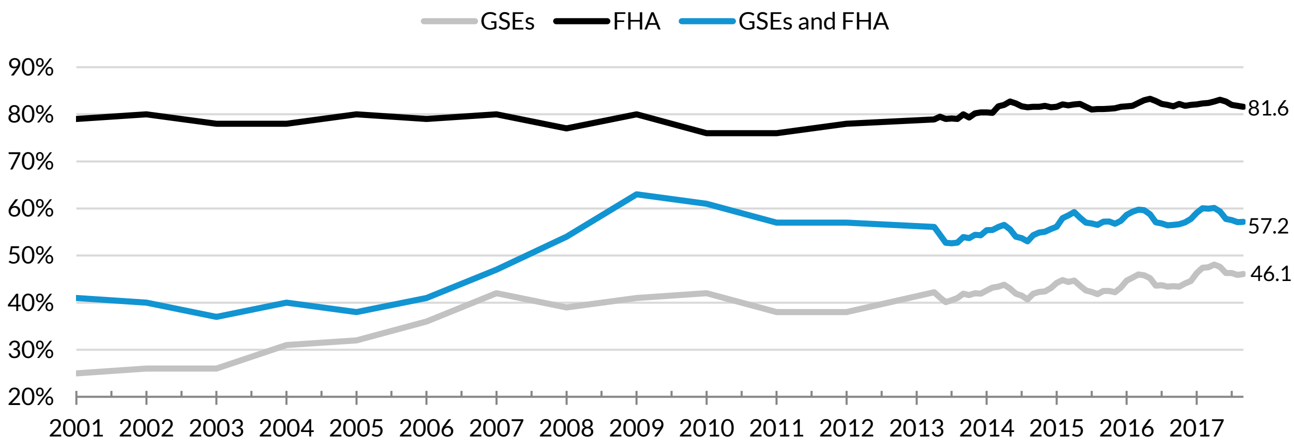
Sources: CoreLogic, US Census, Freddie Mac and Urban Institute calculations based on NAR methodology.
Note: Index is calculated relative to home prices in 2000-03. A ratio above 1 indicates higher affordability in September 2017 than in 2000-03.

STATE OF THE MARKET

FIRST-TIME HOMEBUYERS

First-Time Homebuyer Share

In September 2017, the first-time homebuyer share of GSE purchase loans was 46.1 percent, breaking a four month decline after hitting the highest level in recent history in April (48.1 percent). The FHA has always been more focused on first-time homebuyers, with its first-time homebuyer share hovering around 80 percent; it stood at 81.6 percent in September 2017. The bottom table shows that based on mortgages originated in September 2017, 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.

September 2017

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

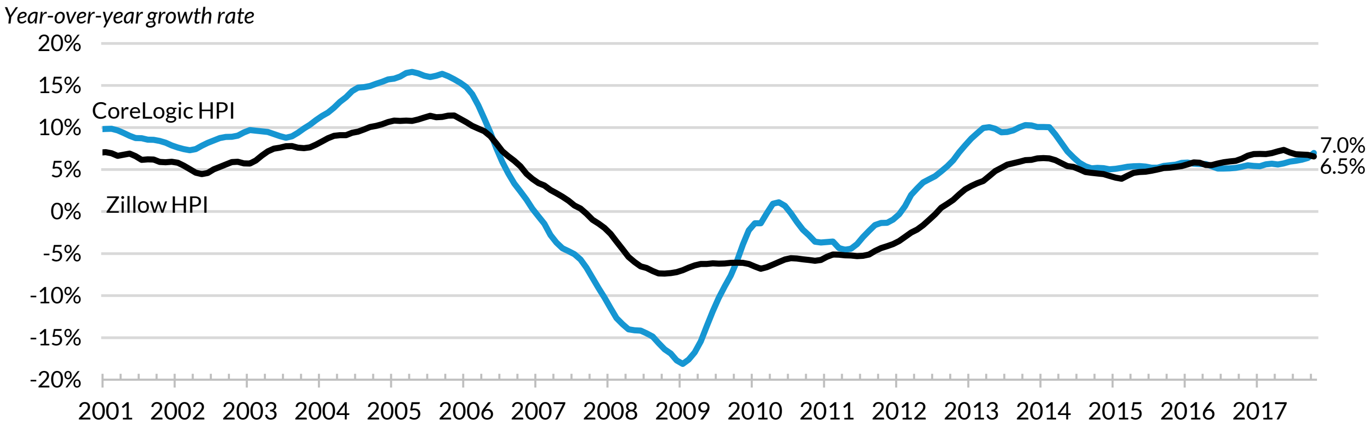
	GSEs		FHA		GSEs and FHA	
Characteristics	First-time	Repeat	First-time	Repeat	First-time	Repeat
Loan Amount ($)	226,878	250,283	201,996	225,734	216,175	246,266
Credit Score	738.4	753.7	675.0	681.5	711.1	741.9
LTV (%)	87.2	79.1	95.5	94.1	90.8	81.6
DTI (%)	35.1	35.7	42.2	43.4	38.2	36.9
Loan Rate (%)	4.15	4.02	4.18	4.1	4.16	4.03

Sources: eMBS and Urban Institute.
Note: Based on owner-occupied purchase mortgages originated in September 2017.

STATE OF THE MARKET
HOME PRICE INDICES

National Year-Over-Year HPI Growth

While the strong year-over-year home price growth from 2012 to 2013 has slowed somewhat, home price appreciation remains robust as measured by the repeat sales index from CoreLogic and hedonic index from Zillow. We will continue to closely monitor how rising mortgage rates impact this strong growth.



Sources: CoreLogic, Zillow, and Urban Institute.

September 2017

Changes in CoreLogic HPI for Top MSAs

After rising 51.0 percent from the trough, national house prices have now surpassed pre-crisis peak levels. At the MSA level, ten of the top 15 MSAs have reached their 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– would each need to rise 20 percent to return to peak levels.

MSA	HPI changes (%)			% Rise needed to achieve peak
	2000 to peak	Peak to trough	Trough to current	
United States	93.7%	-33.2%	51.0%	-0.8%
New York-Jersey City-White Plains NY-NJ	111.8%	-16.7%	31.3%	-8.6%
Los Angeles-Long Beach-Glendale CA	177.1%	-38.4%	70.7%	-4.9%
Chicago-Naperville-Arlington Heights IL	65.9%	-35.7%	36.7%	13.8%
Atlanta-Sandy Springs-Roswell GA	38.0%	-32.8%	61.7%	-7.9%
Washington-Arlington-Alexandria DC-VA-MD-WV	155.2%	-34.1%	38.3%	9.8%
Houston-The Woodlands-Sugar Land TX	39.7%	-14.0%	46.3%	-20.5%
Phoenix-Mesa-Scottsdale AZ	123.7%	-52.6%	75.8%	20.1%
Riverside-San Bernardino-Ontario CA	186.1%	-52.6%	75.5%	20.3%
Dallas-Plano-Irving TX	34.3%	-13.8%	59.5%	-27.3%
Minneapolis-St. Paul-Bloomington MN-WI	72.9%	-30.3%	45.8%	-1.5%
Seattle-Bellevue-Everett WA	90.9%	-29.1%	81.7%	-22.4%
Denver-Aurora-Lakewood CO	35.6%	-13.1%	75.3%	-34.4%
Baltimore-Columbia-Towson MD	122.8%	-24.6%	16.2%	14.1%
San Diego-Carlsbad CA	145.0%	-37.5%	63.4%	-2.1%
Anaheim-Santa Ana-Irvine CA	160.6%	-35.7%	56.0%	-0.3%

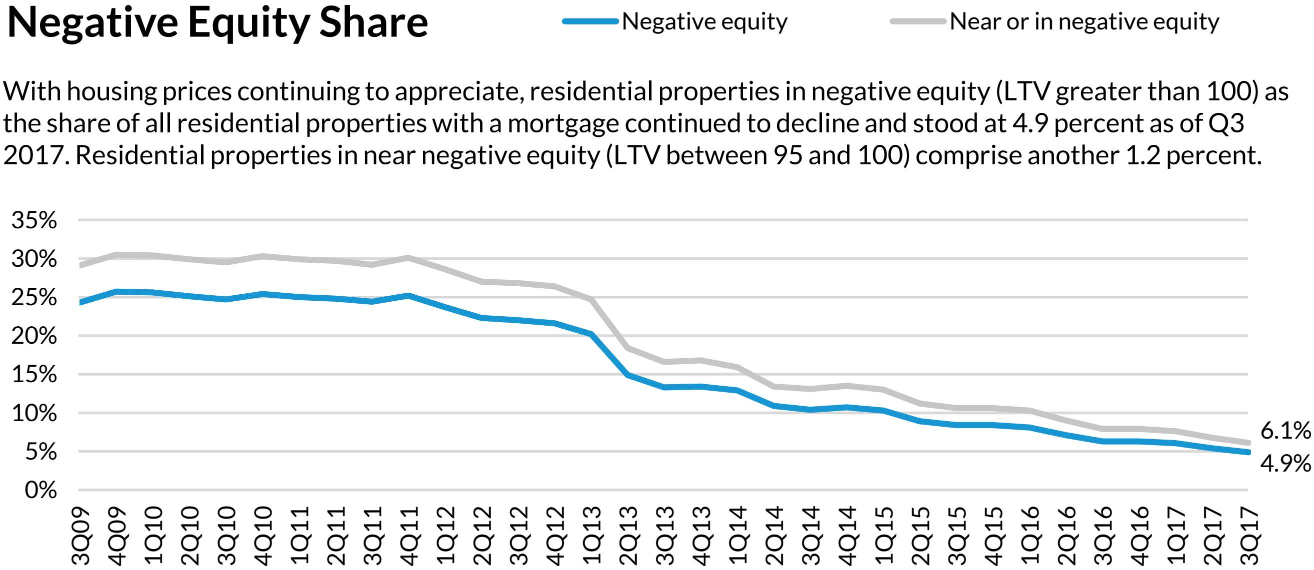
Sources: CoreLogic HPIs and Urban Institute. Data as of September 2017.
Note: This table includes the largest 15 Metropolitan areas by mortgage count.

STATE OF THE MARKET

NEGATIVE EQUITY & SERIOUS DELINQUENCY

Negative Equity Share

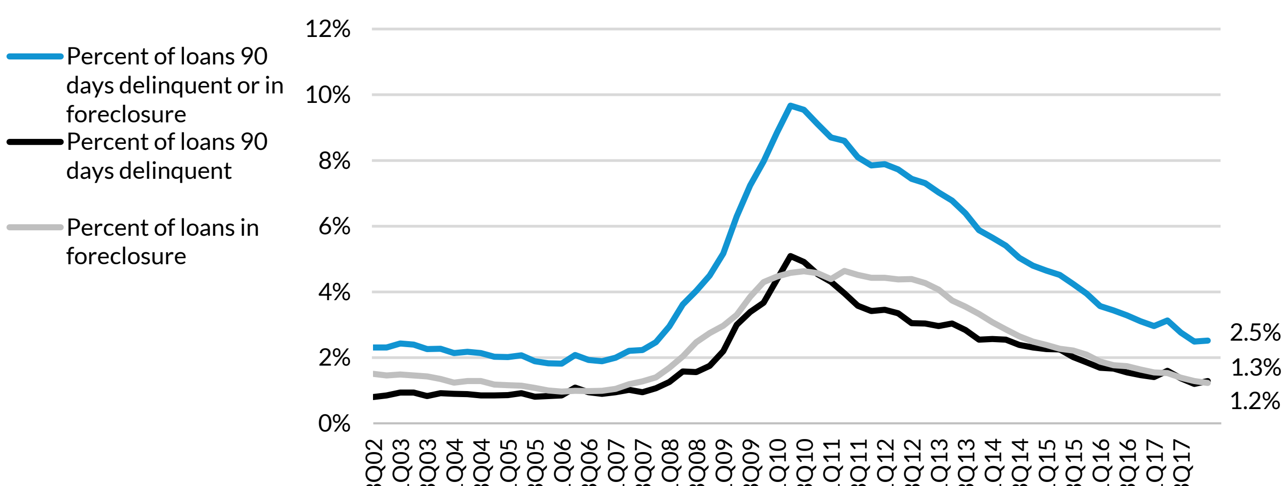
With housing prices continuing to appreciate, residential properties in negative equity (LTV greater than 100) as the share of all residential properties with a mortgage continued to decline and stood at 4.9 percent as of Q3 2017. Residential properties in near negative equity (LTV between 95 and 100) comprise another 1.2 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 December 2017.*

Loans in Serious Delinquency/Foreclosure

Due to seasonal factors, 90 day delinquencies inched up from 1.20 to 1.29 percent in Q3 2017. The percent of loans in foreclosure continued to edge down to 1.23 percent. The combined delinquencies totaled 2.52 percent in Q3 2017, down from 2.76 percent in Q1 2017 and 2.96 percent for the same quarter a year earlier.



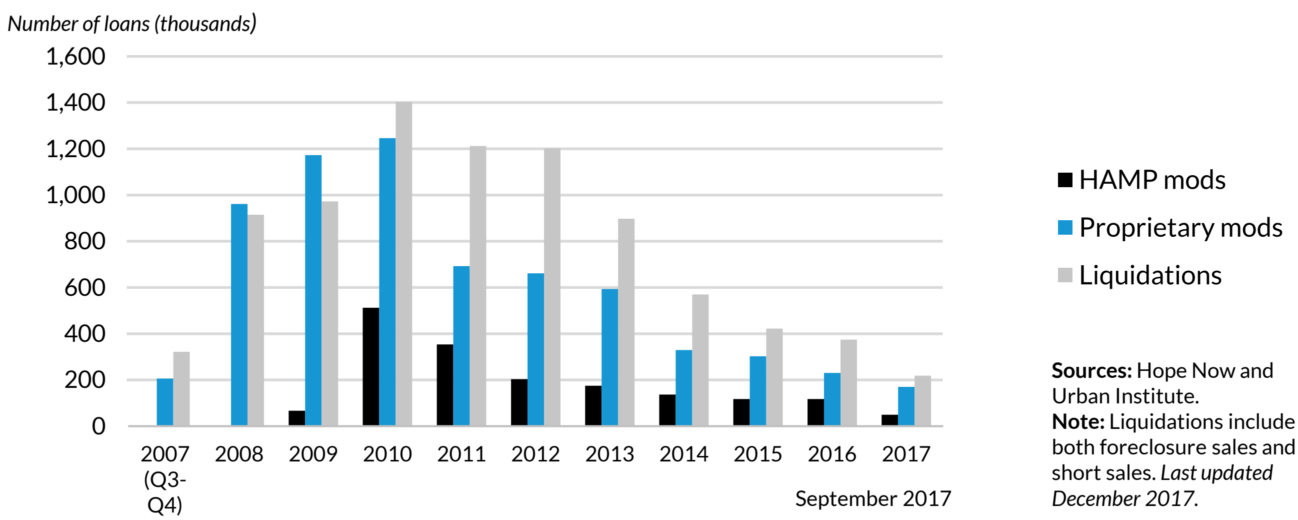
Sources: Mortgage Bankers Association and Urban Institute. *Last updated November 2017.*

STATE OF THE MARKET

MODIFICATIONS AND LIQUIDATIONS

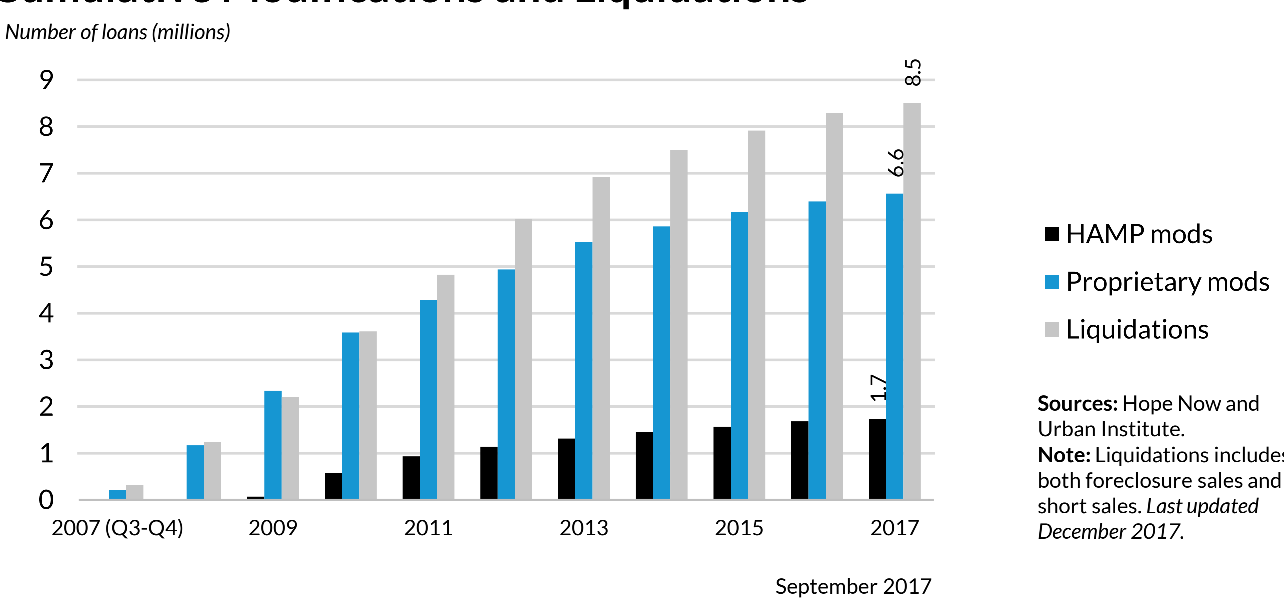
Total modifications (HAMP and proprietary) are roughly equal to total liquidations. Hope Now reports show 8,297,647 borrowers have received a modification since Q3 2007, compared with 8,508,942 liquidations in the same period. Modifications and liquidations have slowed significantly over the past few years. In the first nine months of 2017, there were just 219,516 modifications and 218,641 liquidations.

Loan Modifications and Liquidations



Sources: Hope Now and Urban Institute.
Note: Liquidations include both foreclosure sales and short sales. *Last updated December 2017.*

Cumulative Modifications and Liquidations

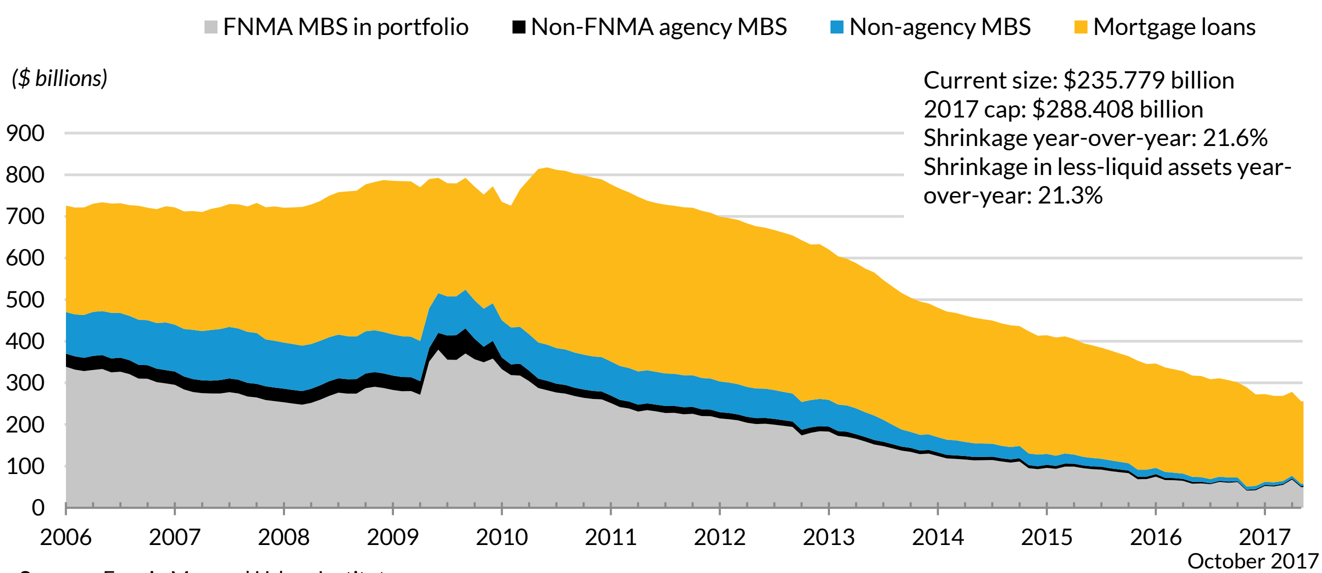


Sources: Hope Now and Urban Institute.
Note: Liquidations includes both foreclosure sales and short sales. *Last updated December 2017.*

GSE PORTFOLIO WIND-DOWN

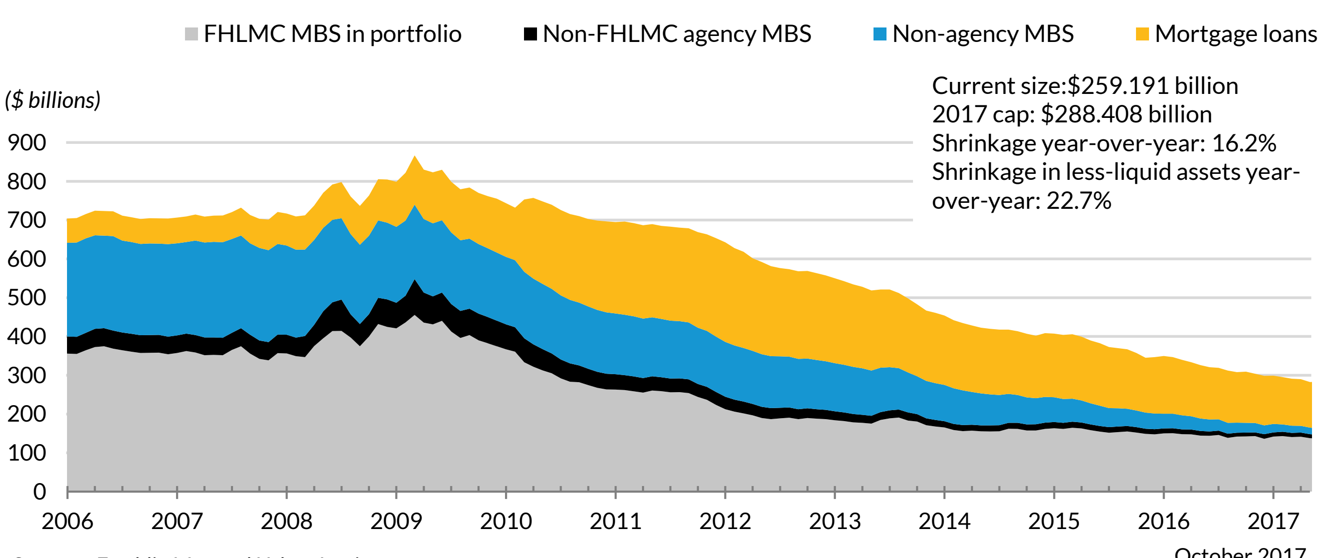
Both GSEs continue to contract their portfolios. Since October 2016, Fannie Mae has contracted by 21.6 percent and Freddie Mac by 16.2 percent. They are shrinking their less-liquid assets (mortgage loans and non-agency MBS) faster than they are shrinking their entire portfolio. As of October 2017, both Fannie Mae and Freddie Mac are below their year-end 2017 portfolio cap. Fannie Mae is also below the long run portfolio cap of $250 billion that each GSE is required to reach by year-end 2018.

Fannie Mae Mortgage-Related Investment Portfolio Composition



Sources: Fannie Mae and Urban Institute.

Freddie Mac Mortgage-Related Investment Portfolio Composition

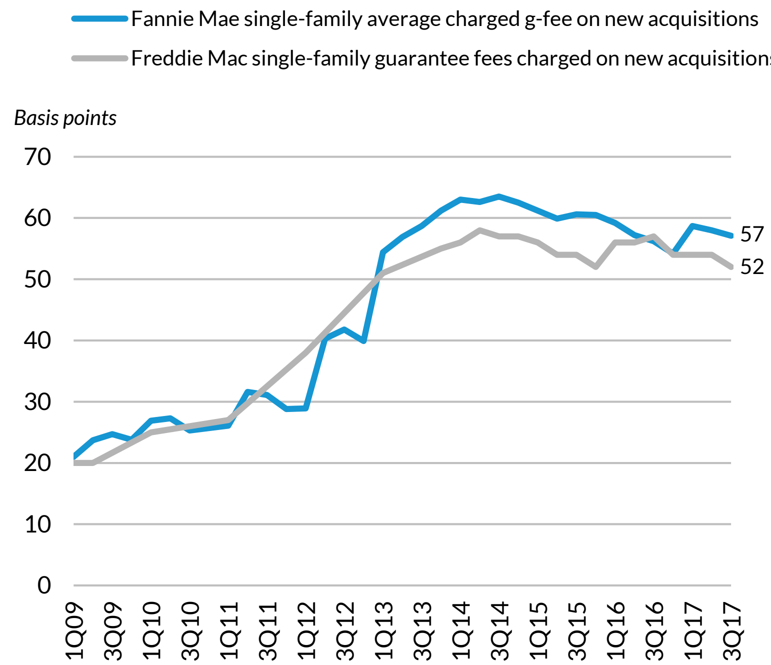


Sources: Freddie Mac and Urban Institute.

EFFECTIVE GUARANTEE FEES

Guarantee Fees Charged on New Acquisitions

The latest 10-K indicates that Fannie's average g-fees on new acquisitions decreased from 58.0 to 57.1 bps in Q3 2017 and Freddie's decreased from 54 to 52 bps. This is a marked increase over 2012 and 2011, 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. Note that the September 2015 changes were very modest, and did not have a material impact on GSE pricing. In particular, the Adverse Market Delivery Charge (ADMC) of 0.25 percent was eliminated, and LLPAs for some borrowers were slightly increased to compensate for the revenue loss.



Sources: Fannie Mae, Freddie Mae and Urban Institute.
Last updated November 2017.

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.

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 a few front-end transactions with originators and experimented with deep mortgage insurance coverage with private mortgage insurers. FHFA's 2017 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 cover 34 percent of its outstanding guarantees, while Freddie's STACR covers 48 percent. In November 2017, Fannie Mae issued a $1.2 trillion CAS deal.

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%
February 2016	CAS 2016 – C01	$28,882	$945	3.3%
March 2016	CAS 2016 – C02	$35,004	$1,032	2.9%
April 2016	CAS 2016 – C03	$36,087	$1,166	3.2%
July 2016	CAS 2016 – C04	$42,179	$1,322	3.1%
August 2016	CAS 2016 - C05	$38,668	$1,202	3.1%
November 2016	CAS 2016 - C06	$33,124	$1,024	3.1%
December 2016	CAS 2016 – C07	$22,515	$702	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%
Total		**$942,272**	**$28,086**	**3.0%**
Percent of Fannie Mae's Total Book of Business		**34.02%**		

Freddie Mac – Structured Agency Credit Risk (STACR)

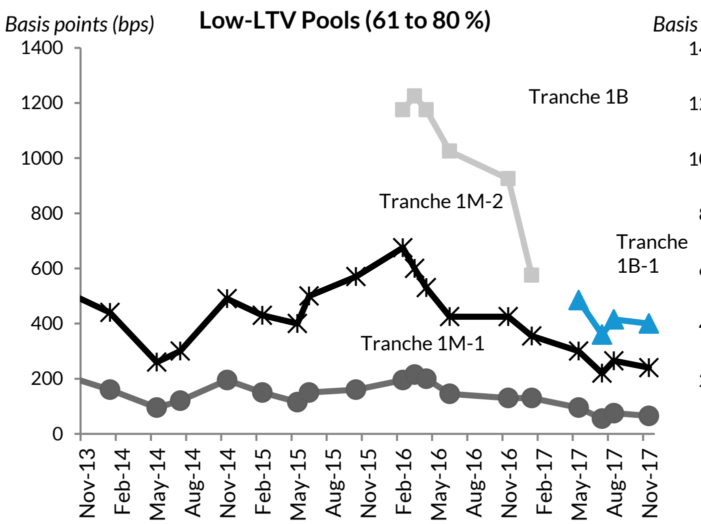
Date	*Transaction*	*Reference Pool Size ($ m)*	*Amount Issued ($m)*	*% of Reference Pool Covered*
2013	STACR 2013 deals	$57,912	$1,130	2.0%
2014	STACR 2014 deals	$147,120	$4,916	3.3%
2015	STACR 2015 deals	$209,521	$6,658	3.2%
January 2016	STACR Series 2016 – DNA1	$35,700	$996	2.8%
March 2016	STACR Series 2016 – HQA1	$17,931	$475	2.6%
May 2016	STACR Series 2016 – DNA2	$30,589	$916	3.0%
May 2016	STACR Series 2016 – HQA2	$18,400	$627	3.4%
June 2016	STACR Series 2016 – DNA3	$26,400	$795	3.0%
September 2016	STACR Series 2016 – HQA3	$15,709	$515	3.3%
September 2016	STACR Series 2016 – DNA4	$24,845	$739	3.0%
October 2016	STACR Series 2016 - HQA4	$13,847	$478	3.5%
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%
Total		**$847,460**	**$23,708**	**2.8%**
Percent of Freddie Mac's Total Book of Business		**48.15%**		

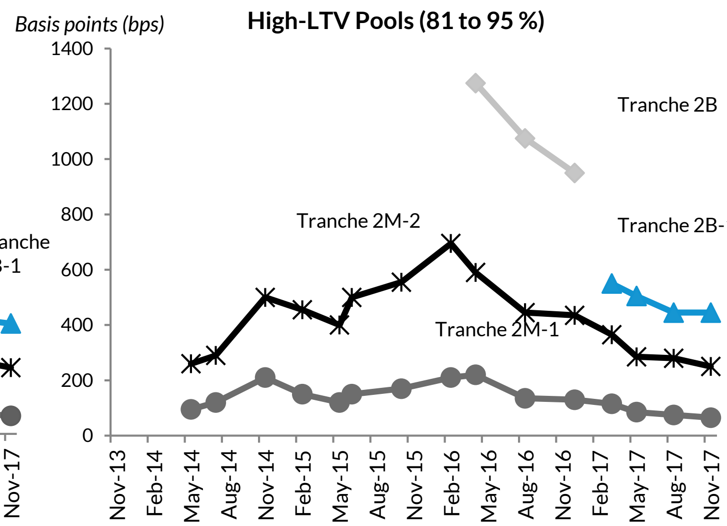
Sources: Fannie Mae, Freddie Mac and Urban Institute.
Note: Classes A-H, M-1H, M-2H, and B-H are reference tranches only. These classes are not issued or sold. The risk is retained by Fannie Mae and Freddie Mac. "CE" = credit enhancement.

GSE RISK-SHARING SPREADS

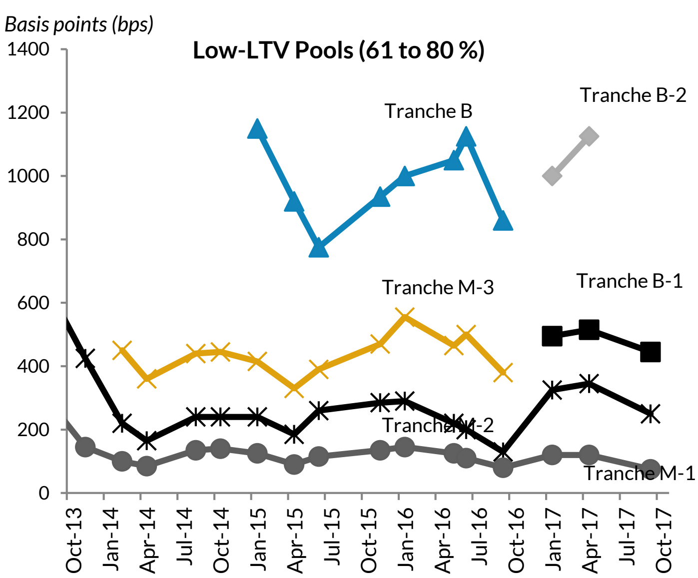
CAS and STACR spreads have moved around considerably since 2013, with the bottom mezzanine tranche and the first loss bonds experiencing considerably more volatility than the top mezzanine bonds. Tranche B in particular has been highly volatile because of its first loss position. Spreads widened especially during Q1 2016 due to falling oil prices, concerns about global economic growth and the slowdown in China. Since then spreads have resumed their downward trend but remain volatile. Secondary market spreads, not reflected here, widened considerably post Hurricanes Harvey and Irma, but are now tighter than their pre-hurricane levels.

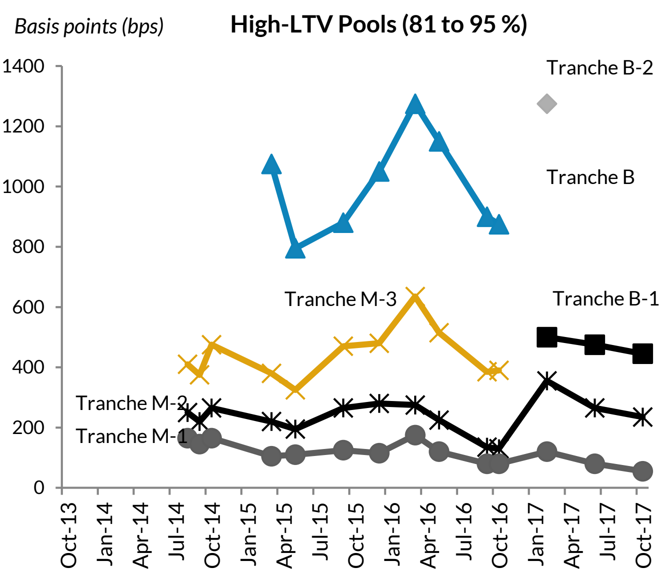
Fannie Mae CAS Spreads at-issuance (basis points over 1-month LIBOR)





Freddie Mac STACR Spreads at-issuance (basis points over 1-month LIBOR)



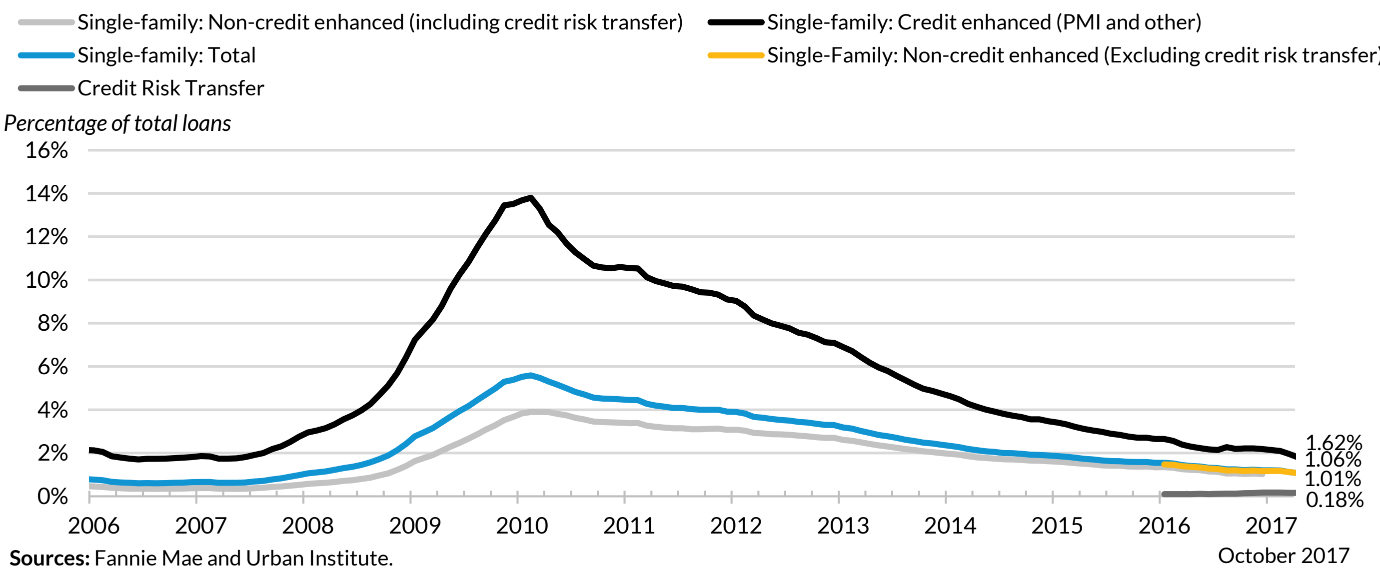


Sources: Fannie Mae, Freddie Mac Press Releases and Urban Institute.

GSES UNDER CONSERVATORSHIP
SERIOUS DELINQUENCY RATES

Serious delinquency rates of GSE loans continue to decline as the legacy portfolio is resolved and the pristine, post-2009 book of business exhibits very low default rates. As of October 2017, 1.01 percent of the Fannie portfolio and 0.86 percent of the Freddie portfolio were seriously delinquent, down from 1.21 percent for Fannie and 1.03 percent for Freddie in October 2016.

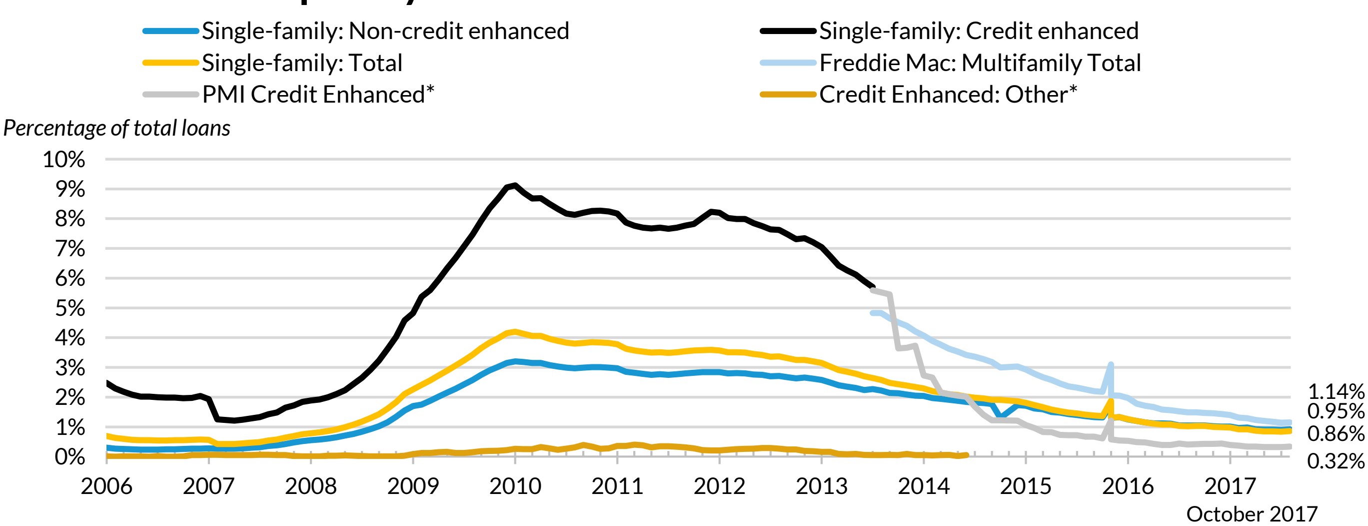
Serious Delinquency Rates–Fannie Mae



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



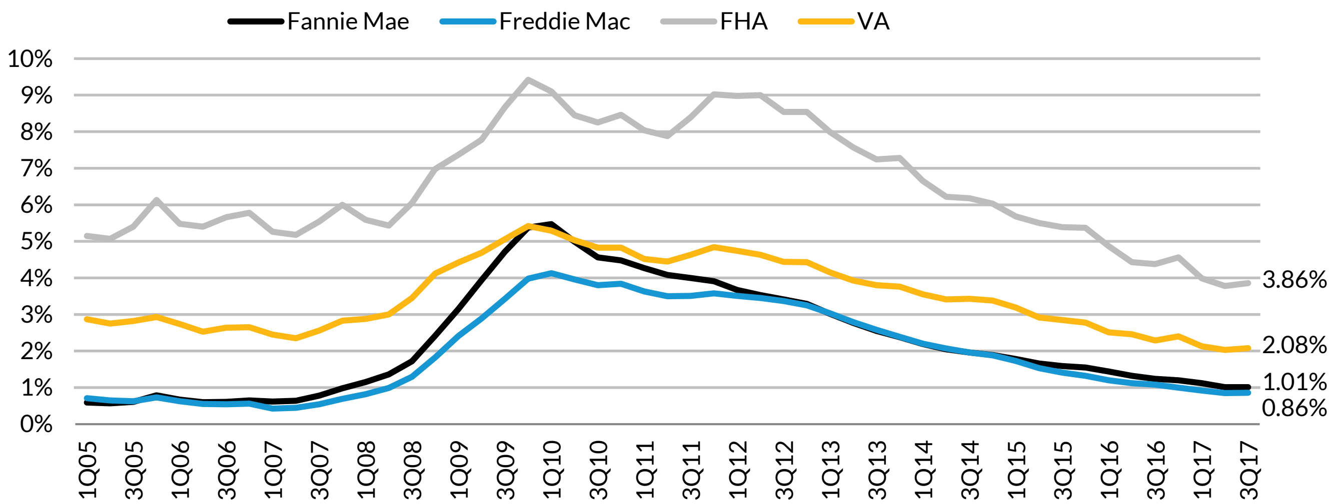
Sources: Freddie Mac and Urban Institute.

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

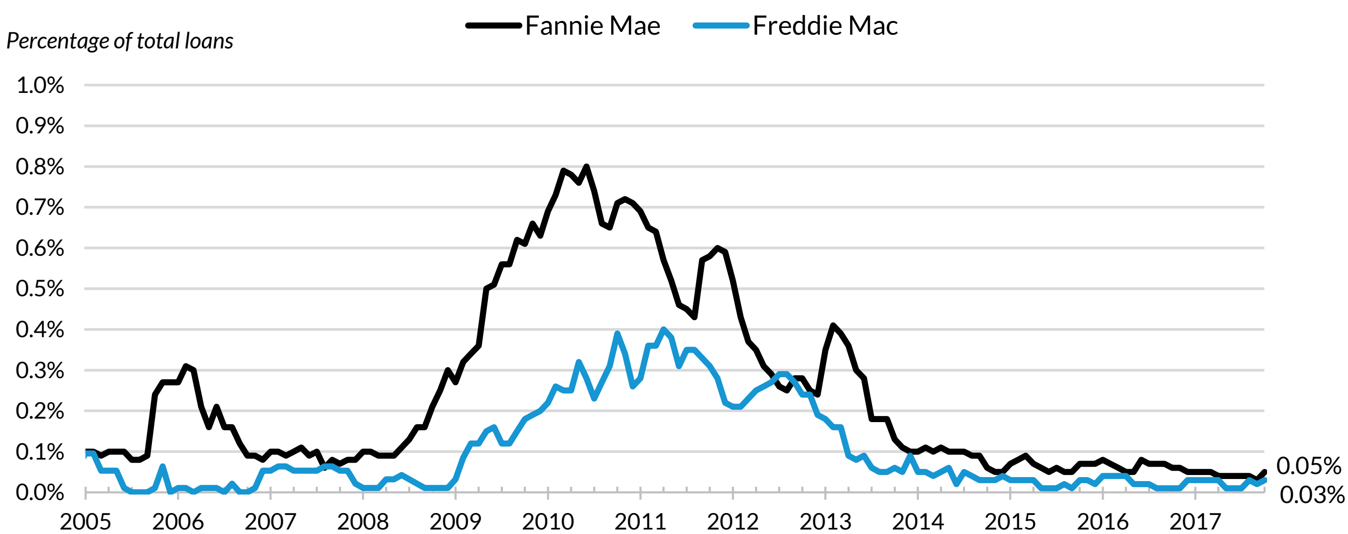
Serious delinquencies for GSE single-family loans remained flat, while FHA and VA delinquencies edged up slightly to 3.86 and 2.08 percent in Q3 2017. This uptick reflects primarily seasonal factors. GSE multifamily delinquencies have declined to pre-crisis levels, although they did not reach problematic levels even in the worst years of the crisis.

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 November 2017.*

Serious Delinquency Rates–Multifamily GSE Loans



October 2017

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

The agency gross issuance totaled $1.221 trillion in the first eleven months of 2017, a 8.8 percent decrease year-over-year. When measured on a monthly basis, the agency gross issuance was lower year-over-year for nine consecutive months since March. If we annualize year to date gross issuance, volume is down from 2016. Net issuance (which excludes repayments, prepayments, and refinances on outstanding mortgages) was up 27 percent versus the same period in 2016, on track to become the most robust net issuance year in recent history.

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 YTD	$802.0	$419.4	$1,221.4
2017 YTD %Change YOY	-8.7%	-9.1%	-8.8%
2017 Ann	$874.9	$457.5	$1,332.4

Agency Net Issuance

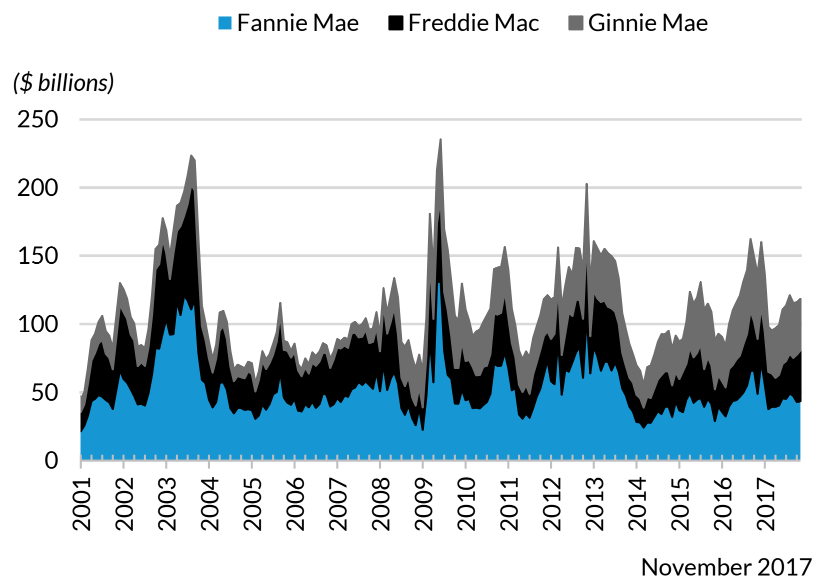
Issuance Year	GSEs	Ginnie Mae	Total
2000	$159.8	$29.3	$189.1
2001	$368.4	-$9.9	$358.5
2002	$357.2	-$51.2	$306.1
2003	$334.9	-$77.6	$257.3
2004	$82.5	-$40.1	$42.4
2005	$174.2	-$42.2	$132.0
2006	$313.6	$0.2	$313.8
2007	$514.9	$30.9	$545.7
2008	$314.8	$196.4	$511.3
2009	$250.6	$257.4	$508.0
2010	-$303.2	$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 YTD	$150.7	$125.0	$275.7
2017 YTD %Change YOY	47.98%	9.23%	27.48%
2017 Ann	$164.4	$136.4	$300.8

Sources: eMBS and Urban Institute.
Note: Dollar amounts are in billions. Annualized figure based on data from October 2017.

AGENCY GROSS ISSUANCE & FED PURCHASES

Monthly Gross Issuance

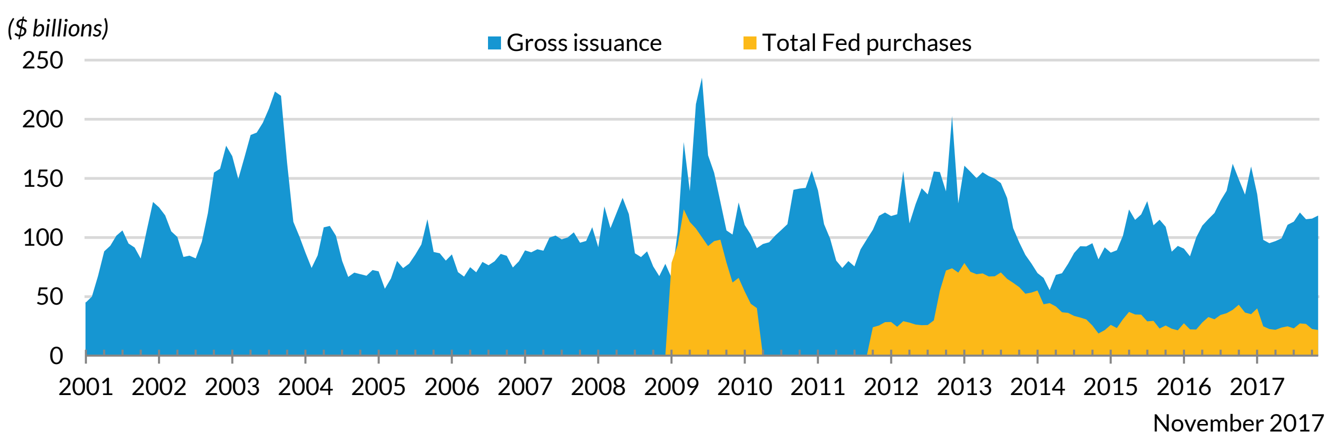
While government and GSE lending have dominated the mortgage market since the crisis, there has been a change in the mix. The Ginnie Mae share reached a peak of 28 percent of total agency issuance in 2010, declined to 25 percent in 2013, and has bounced back sharply from October 2014 through September 2017. With the elevated mortgage rates since the election, monthly agency issuance was lower year over year for eight consecutive months since March. Less dependent on refinances, Ginnie Mae gross issuance experienced less of a drop, driving its share up to 32 percent in November 2017.



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

Fed Absorption of Agency Gross Issuance

In October 2014, the Fed ended its purchase program, but continued buying at a much reduced level, reinvesting funds from pay downs on mortgages and agency debentures into the mortgage market. Since then, the Fed's absorption of gross issuance has been between 20 and 30 percent. In October 2017, the Fed began its balance sheet reduction plan. In November, total Fed purchases continued to decrease to $21.8 billion, yielding Fed absorption of gross issuance of 18.4 percent, the lowest level in the past five years. This is a slow wind down; initially, the Fed will continue to reinvest, but by less than their run off.

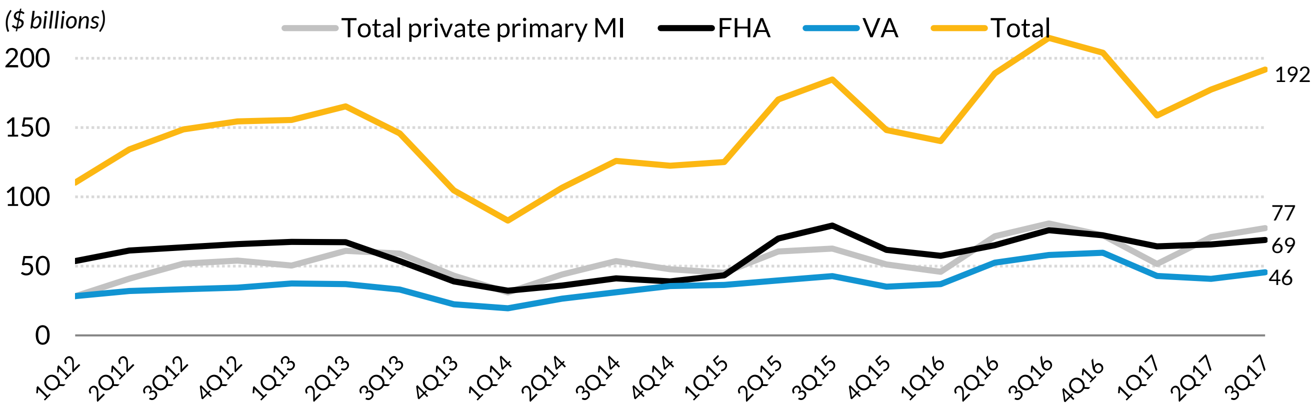


Sources: eMBS, Federal Reserve Bank of New York and Urban Institute.

MORTGAGE INSURANCE ACTIVITY

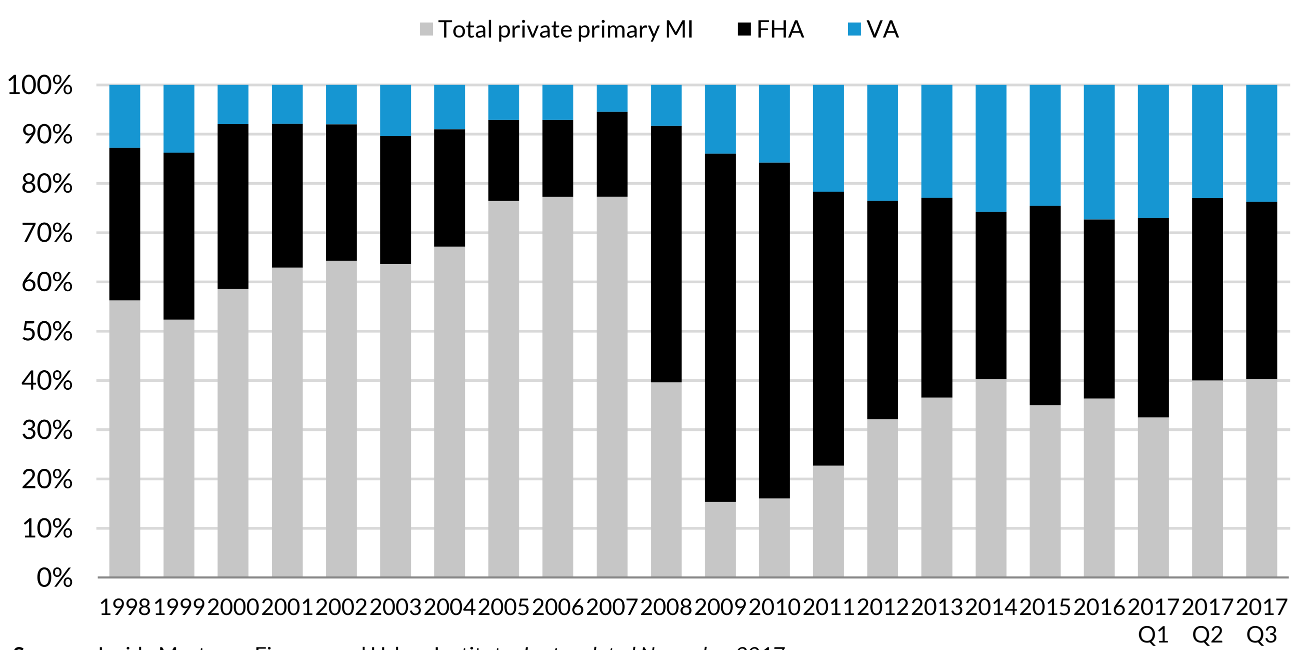
MI Activity

In 2017 Q3, mortgage insurance activity via the FHA, VA and private insurers rose from the previous quarter's $177 billion to $192 billion, but it was still down 12 percent year-over-year from the same quarter in 2016. This quarter's increase is driven by all three channels. Private mortgage insurers increased by $6 billion, while FHA edged up by $3 billion and VA grew by $5 billion. FHA's market share fell from 37 to 36 percent 2017 Q3, while VA's market share grew from 23 to 24 percent. The private insurance market's share remained flat at 40 percent.



Sources: Inside Mortgage Finance and Urban Institute. *Last updated November 2017.*

MI Market Share



Sources: Inside Mortgage Finance and Urban Institute. *Last updated November 2017.*

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 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[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	4.12%
FHA	4.02%

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	$1,350	$1,350	$1,350	$1,350	$1,350	$1,350	$1,350	$1,350
PMI	$1,730	$1,668	$1,623	$1,501	$1,451	$1,396	$1,349	$1,309
PMI Advantage	($380)	($318)	($273)	($151)	($101)	($46)	$1	$41

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 21.

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Date: November 16, 2017

What the 2016 Survey of Consumer Finances Tells Us about Senior Homeowners
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Mortgage Insurance Data at a Glance
Authors: Laurie Goodman, Alanna McCargo, Sheryl Pardo, Jun Zhu, Bing Bai, Karan Kaul, Bhargavi Ganesh
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Sixty Years of Private Mortgage Insurance in the United States
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The Impact of Higher Interest Rates on the Mortgage Market
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