First-Time Buyer Mortgage Share and Mortgage Risk Indices

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Key Takeaways – Agency Purchase Loans*

- First-time buyer volume surged 14 percent in August from the year-earlier level.
- Compared to 2 years ago, FTB share is up 2.5 ppts. and volume is up 39 percent.
  - Over the past year, first-time buyer share eased slightly, accounting for 56.2 percent of primary owner-occupied home purchase mortgages with a government guarantee, down from 56.7 percent in August 2015. This is due to even faster volume growth from repeat buyers.
- The Combined FBMSI (measures the share of first-time buyers for both government-guaranteed and private-sector mortgages) stood at 50.8 percent, down slightly from 51.2 percent the prior August.
- Credit remains readily available for first-time buyers, as risk levels remain near or above series' highs
  - The Agency FBMRI stood at 15.6 percent, unchanged from August 2015.
  - The Agency FBMRI is 6.4 ppts. higher than the repeat buyer MRI, up from 6.0 ppts. a year earlier.
  - Setting a series high, FHA's First-Time Buyer NMRI at 24.8% in August, up 1.0 ppt. from a year earlier.

* Our dating convention is now based on date of loan origination, rather than date of first payment. For example, a loan previously identified as having a October first payment date, now has an August origination date.

Key Takeaways – Purchase Loans

- 53 percent of FTB loans were subprime or high risk (MRI above 12%) in August, down from 54 percent a year earlier. 89 percent of FHA FTB loans were subprime or high risk in August, up from 87 percent a year earlier.
  - Profile of first-time buyers in August:
    - 71% had down payments of 5% or less
    - 27% had DTIs greater than the QM limit of 43%
    - 21% had subprime credit (credit score below 660)
    - 97% had 30-year mortgages
- Fueled by solid job gains, low mortgage rates, and high and growing leverage, the national seller's market is now in its 50th month
  - National median home price has risen relative to median income, retracing about a third of the drop from the 2006 peak to the 2012 trough, crimping affordability
  - Calls for reductions in FHA premium, a deeper push into FHA's credit box, or higher conforming loan limits would add more fuel
  - As mortgage rates normalize, leverage likely to rise further unless income gains pick up

National Mortgage Risk Index: Loan Totals

- The First-Time Buyer Mortgage Share and Mortgage Risk Indexes (FBMSI and FBMRI) draw on data from the National Mortgage Risk Index (NMRI), which includes monthly data for nearly all government-guaranteed home purchase loans.
- The August NMRI covers over 23.6 million agency loans back to Sept. 2012. These data are used to construct the NMRI, First-Time Homebuyer Indices, and the National Mortgage Market Indexes (NMMI)
- This total consists of over 10.7 million agency purchase loans and over 12.9 million agency refinance loans
- NMRI and other risk indexes published for:
  - Purchase loans, with separate indices for first-time and repeat buyers
  - Refinance loans, with separate indices for no-cash-out and cash-out refis
  - Composite of purchase and refinance loans
  - Purchase loan NMRI is the primary measure for monitoring mortgage risk and the impact of housing policy, particularly with respect to first-time buyers
  - Refinance loan NMRI contributes to overall assessment of changes in leverage

NMRI: A Quick Primer

- Principles behind the NMRI
  - Market stability depends on the preponderance of loans being low risk, defined as good performance (low default propensity) under stress
  - NMRI is a stress test, similar to car crash tests and hurricane ratings for buildings
- Basics of index construction and coverage
  - The NMRI is a standardized quantitative index for mortgage risk (leverage)
  - Places loans in risk buckets and assesses default risk based on performance of 2007 vintage loans with similar characteristics
  - Covers an estimated 99.5% of gov't-guaranteed mortgages for home purchases (about 80%, 85%, and 93% respectively of entire market of purchase loans, primary owner-occupied purchase loans, and first-time buyer loans, all by count). Similar percentages apply to refinance loans.
    - With a nearly complete census of gov't-guaranteed loans, the NMRI data allow for accurate, timely, and in-depth coverage of purchase mortgage trends
  - Expand coverage to include non-agency loans and second mortgages later this year
  - NMRI provides significant signals of market trends without the noise of other indices
- What does an increasing or decreasing NMRI mean?
  - Increasing (decreasing) NMRI = increasing (decreasing) leverage = looser (tighter) lending
- NMRI provides accurate, real-time tracking of credit-fueled cycles that, if left unchecked, result in destructive housing boom/busts.

Stressed Default Rates, Home Purchase Loans

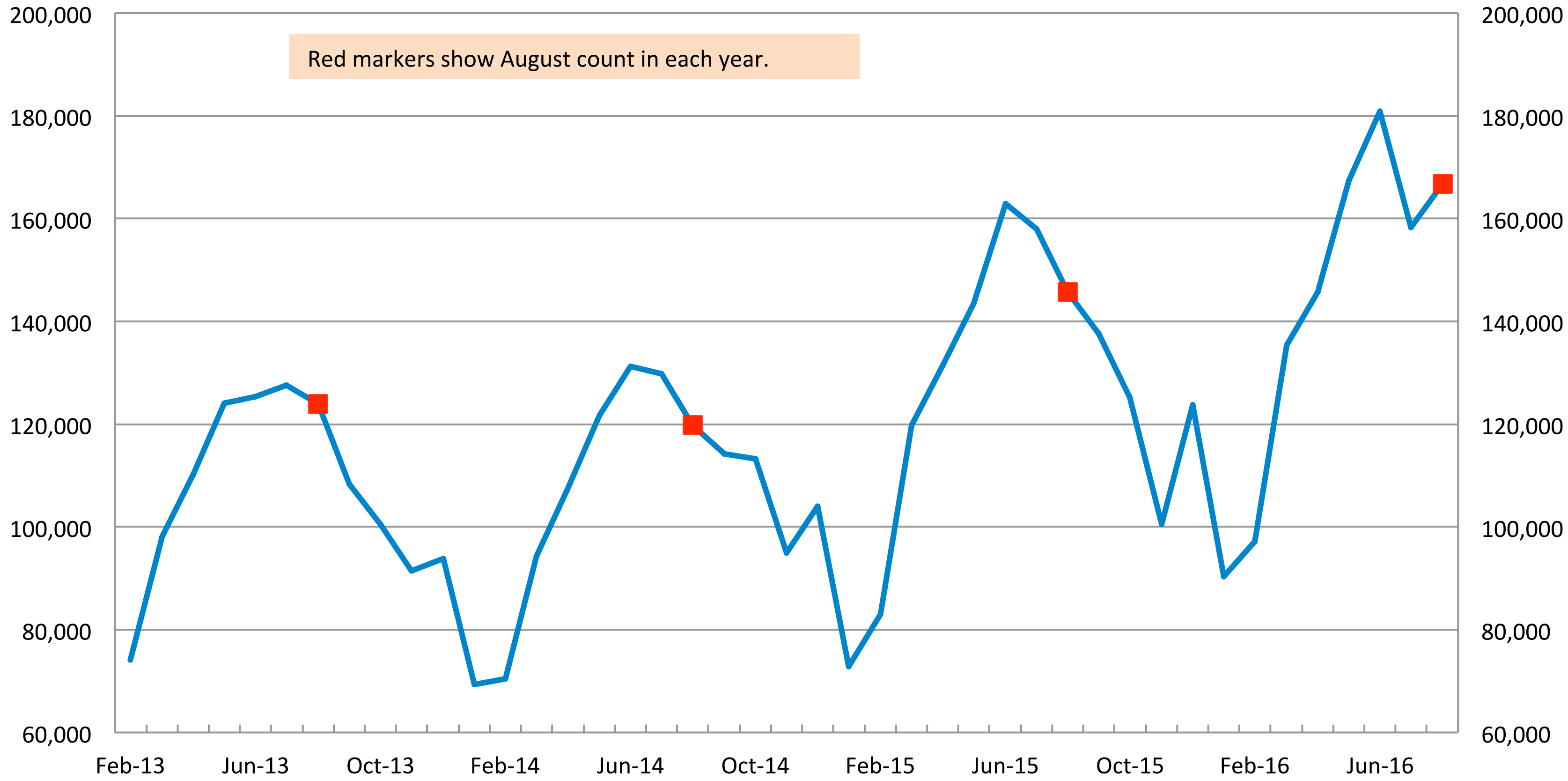
Risk Bucket	Credit Score	CLTV	Total DTI	Default Rate
Very Low	≥ 770	61-70%	≤ 33%	0.8%
Low	720-769	76-80%	34-38%	4.2%
Medium	690-719	81-85%	39-43%	9.3%
High	660-689	91-95%	44-50%	22.7%
Very High	620-639	> 95%	> 50%	45.8%

Note: Default rates represent cumulative defaults through year-end 2012 for Freddie Mac's 2007 vintage of acquired loans. The loans included in the calculation are all primary owner-occupied, 30-year fixed-rate, fully amortizing, fully documented, home purchase loans.

- Takeaway: Huge spread of default rates across risk buckets
- All 320 risk buckets for home purchase loans are shown at Periodic Table – Purchase
- Analogous tables for cash-out and no-cash-out refi loans are at Periodic Tables – Refinance
- Additional loan risk factors applied to VA loans and to ARMs, investor loans, second homes, 15 year terms, and 20 year terms

Agency First-Time Buyer Loan Count

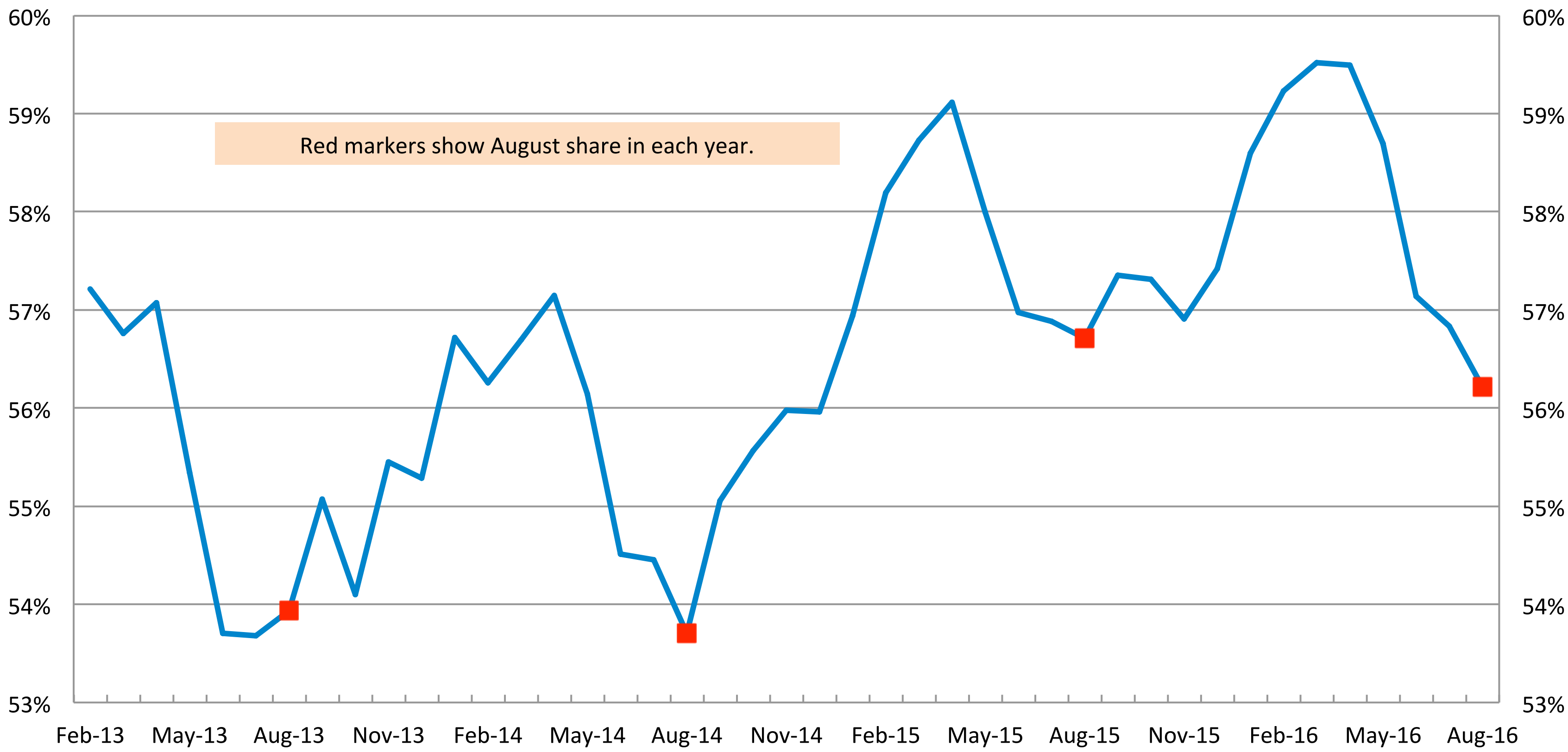
Agency FTB volume is up 14 percent and 39 percent compared to one and two years ago, respectively.



Note: The number of primary owner-occupied home purchase mortgages with a government guarantee. August 2016 count is a preliminary estimate.
Source: AEI International Center on Housing Risk, www.HousingRisk.org.

Agency First-Time Buyer Mortgage Share Index

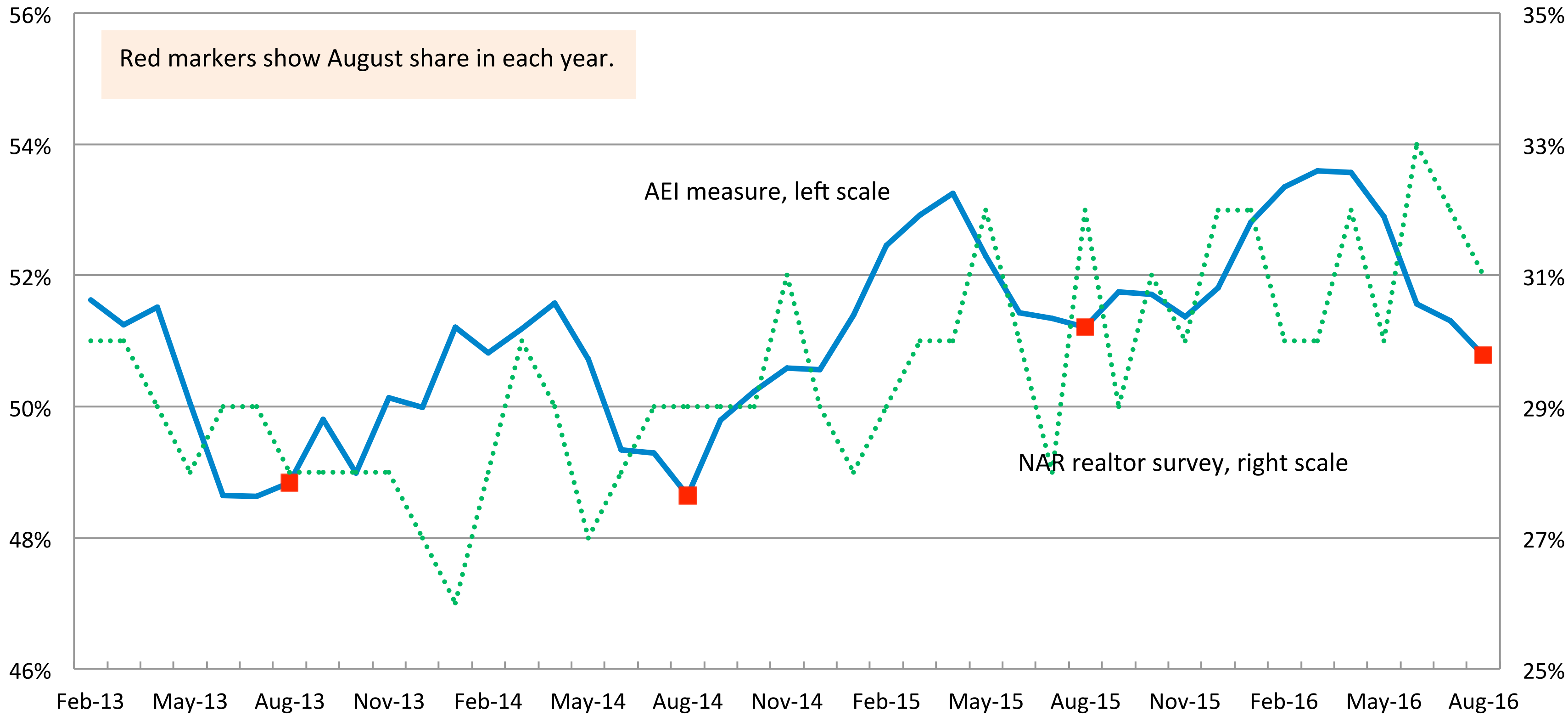
The number of FTBs as a share of the overall market declined slightly from the prior year. Compared to 2 years ago, the FTB share is up 2.5 percentage points.



Note: Calculated as a share of primary owner-occupied home purchase mortgages with a government guarantee.
Source: AEI International Center on Housing Risk, www.HousingRisk.org.

Combined First-Time Buyer Mortgage Share Index

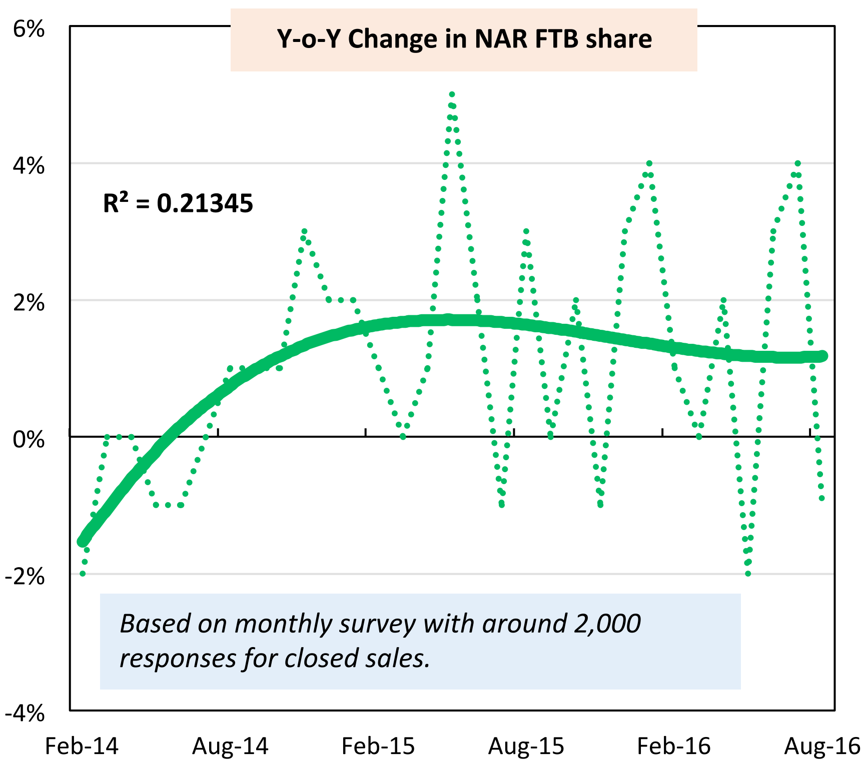
Combined first-time buyer share also slightly lower in August than a year earlier. The NAR's monthly realtor survey is badly flawed, providing a much noisier picture - and as of recently, perhaps the wrong trend.

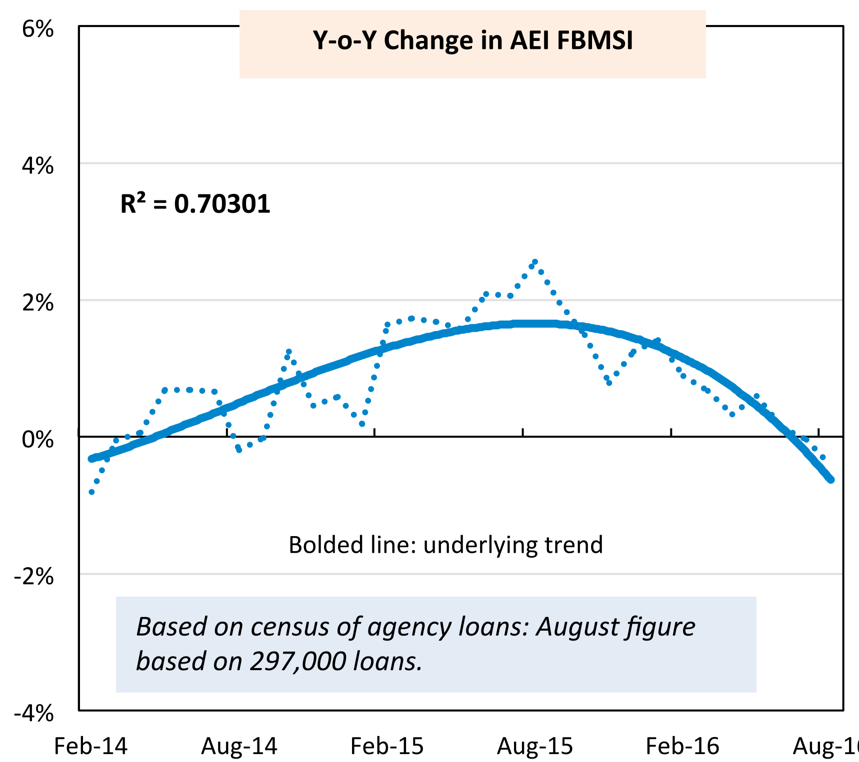


Note: Calculated as a share of primary owner-occupied home purchase mortgages (both government guaranteed and private-sector mortgages). The NAR's monthly survey (http://www.realtor.org/reports/realtors-confidence-index) is sent to more than 50,000 realtors (out of a total of 1.1 million members), but has a low response rate; only 3,603 responses (1,864 of which were for a closed sale) were received for the October 2016 survey.
Source: AEI International Center on Housing Risk, www.HousingRisk.org, and the NAR.

The NAR's first time buyer series is fatally flawed. After removing seasonality, most of what remains is noise

As a result, the NAR series yields little real trend information.
AEI's First-time Buyer Market Share Index (FBMSI) conveys real trend information.
Bottom line: don't use the NAR survey.

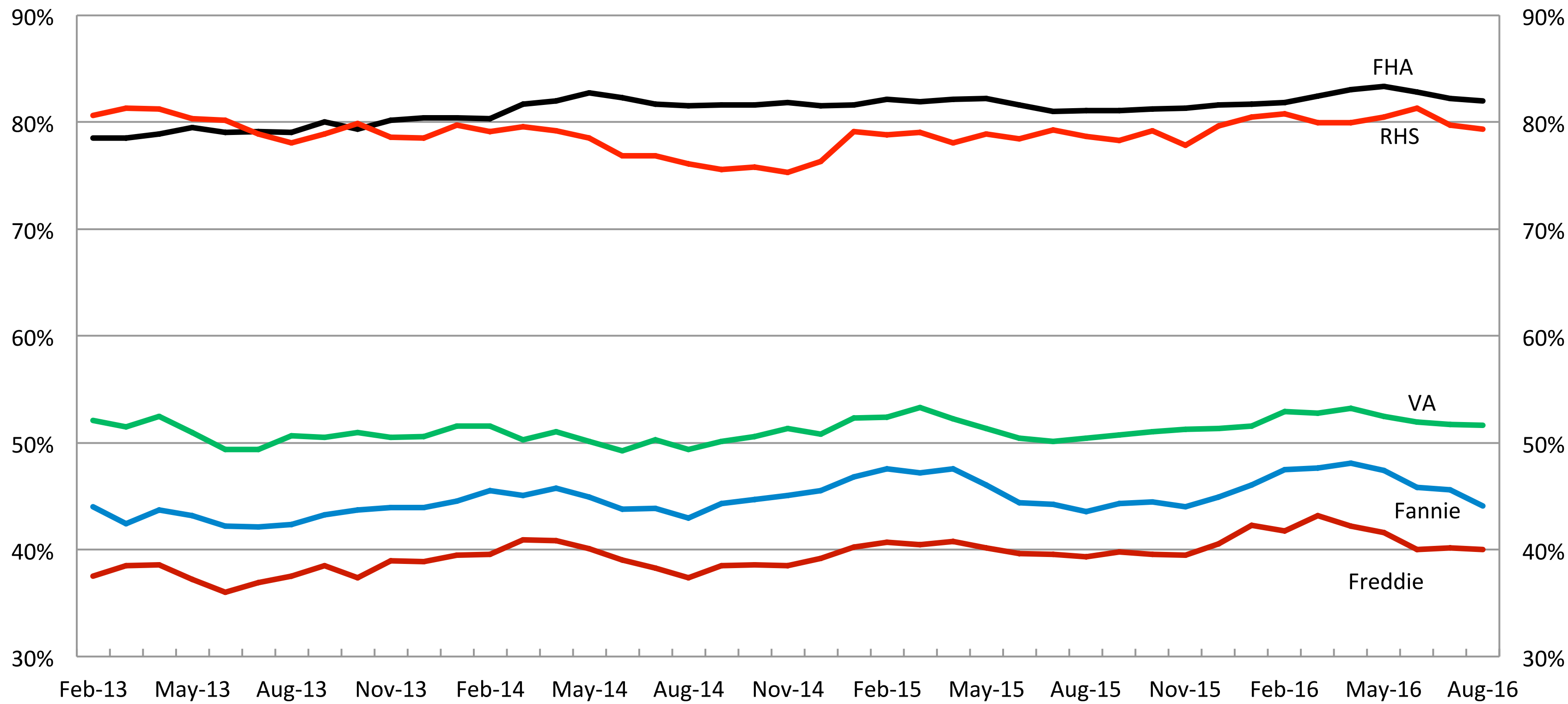




Note: Calculated as a share of primary owner-occupied home purchase mortgages (both government guaranteed and private-sector mortgages). The NAR's monthly survey (http://www.realtor.org/reports/realtors-confidence-index) is sent to more than 50,000 realtors (out of a total of 1.1 million members), but has a low response rate; only 3,603 responses (1,864 of which were for a closed sale) were received for the October 2016 survey.
Source: AEI International Center on Housing Risk, www.HousingRisk.org, and the NAR.

Agency-Specific First-Time Buyer Mortgage Share Indices

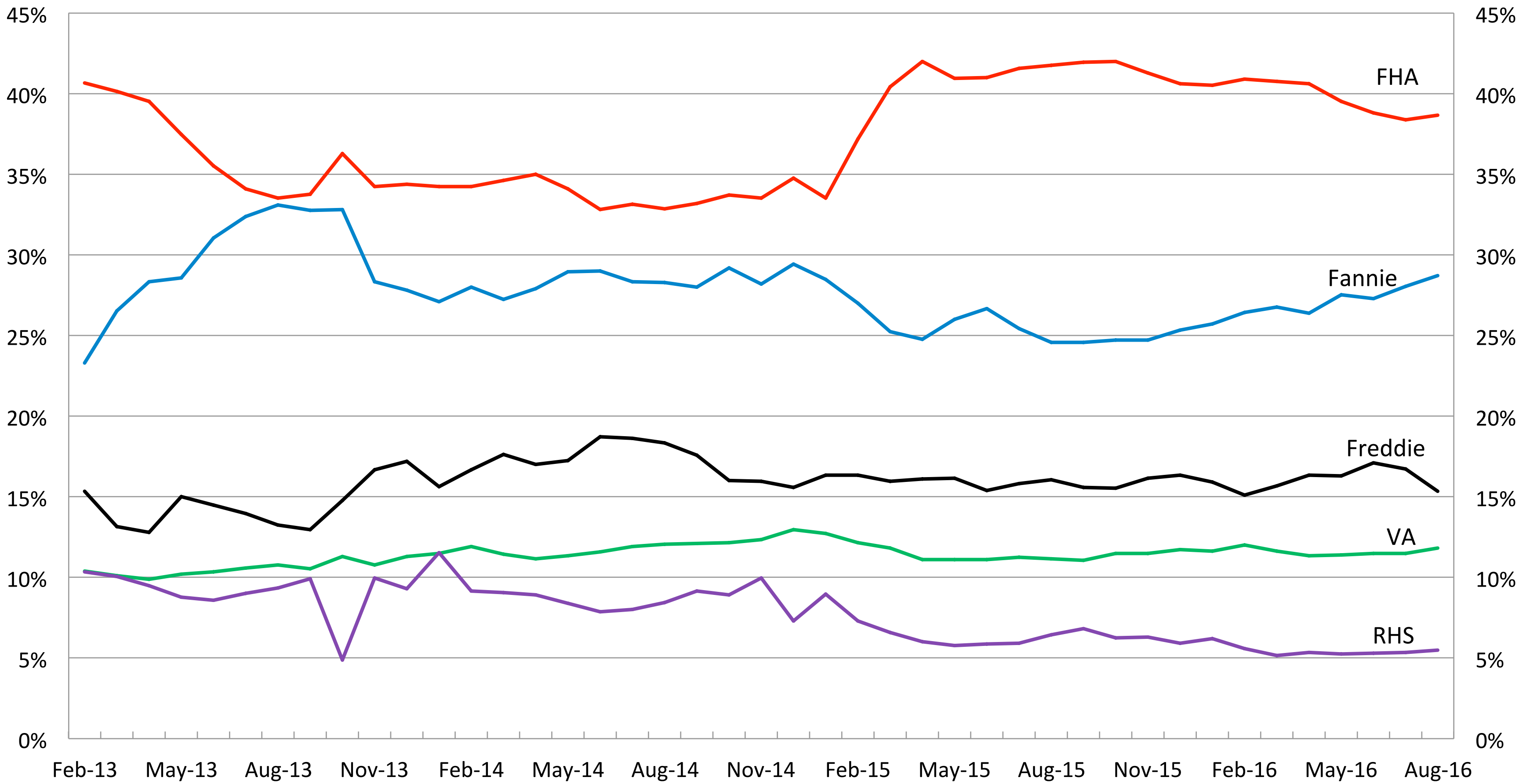
Share varies widely across agencies. FHA is at the high end with a share of 82 percent, while Freddie Mac is at the low end with a share around 40 percent.



Note: Calculated as a share of primary owner-occupied home purchase mortgages. RHS is Rural Housing Service. FHA share is taken directly from FHA's monthly production report, due to concerns about the accuracy of the first-time buyer classification in the NMRI dataset.
Source: AEI International Center on Housing Risk, www.HousingRisk.org.

Agency Origination Shares, FTB Purchase Loans

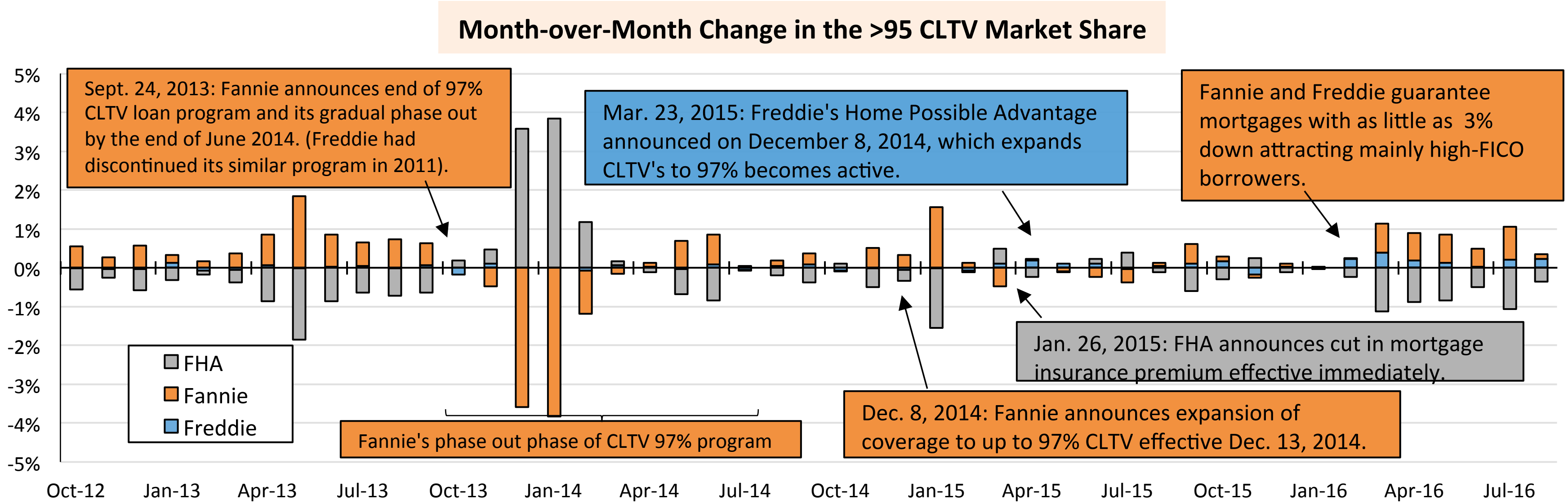
FHA's share at 38.7%, trending down over past couple months, but up from 34.8% in December 2014, prior to the cut in mortgage insurance premium in January 2015. Fannie has been gaining share since November 2015. RHS's share has halved.

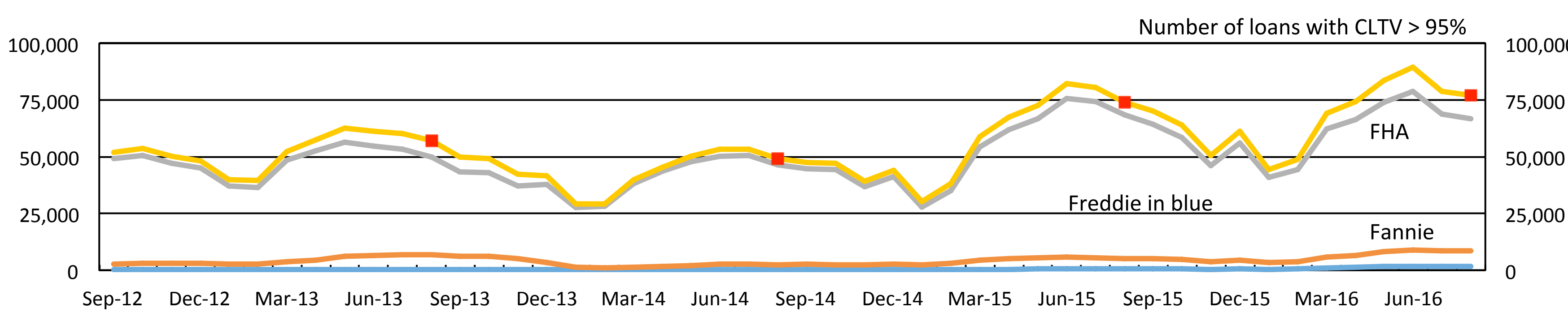


Source: AEI International Center on Housing Risk, www.HousingRisk.org.

Changes in the >95% CLTV Purchase Loan Market

"We compete with Freddie Mac and, especially for loans with higher LTV ratios to finance home purchases, with FHA. Competition to acquire mortgage assets is significantly affected by pricing and eligibility standards." (Fannie Mae 10K 2013)

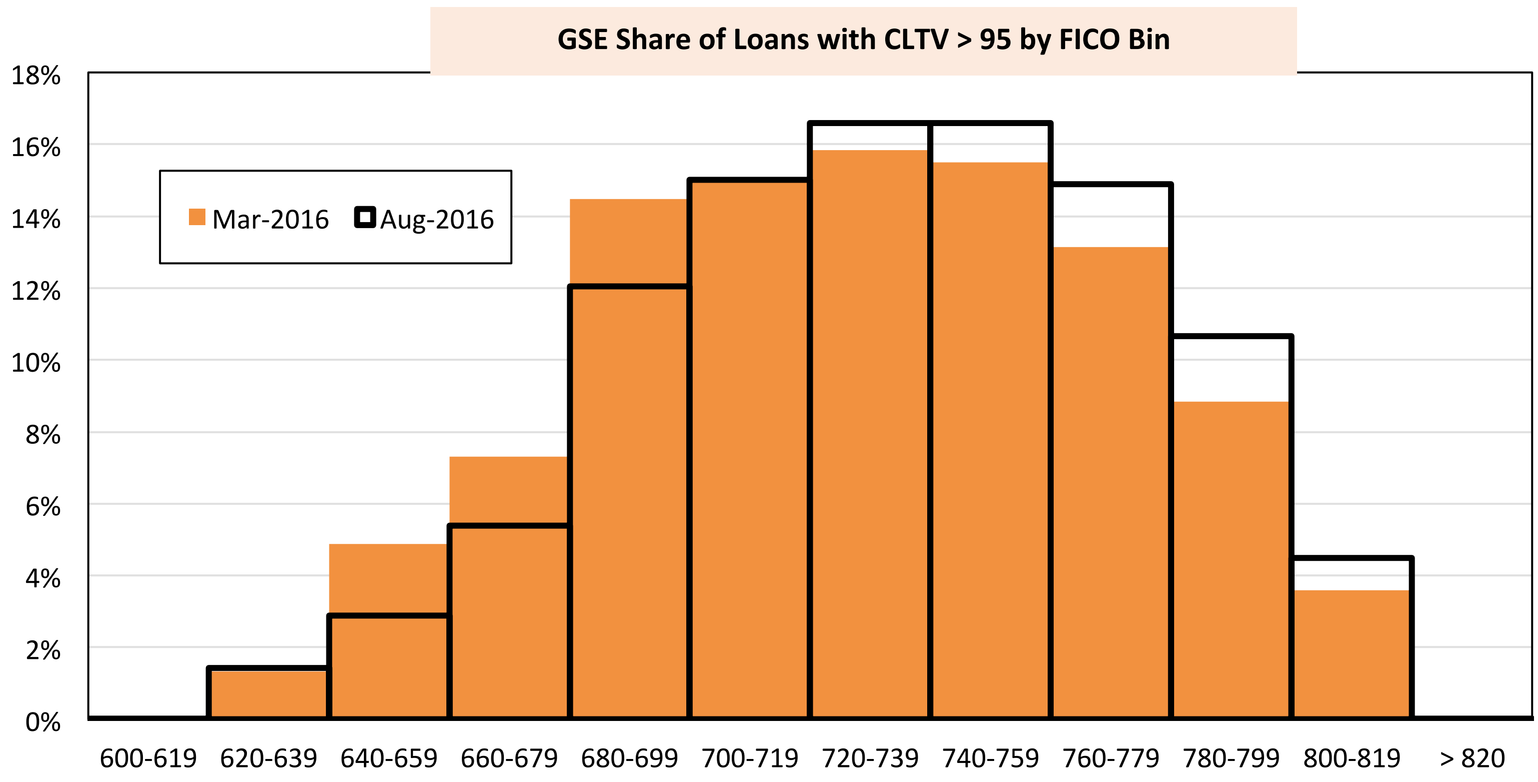




Source: AEI International Center on Housing Risk, www.HousingRisk.org.

Profiles of GSE First-time Buyers with >95% CLTV

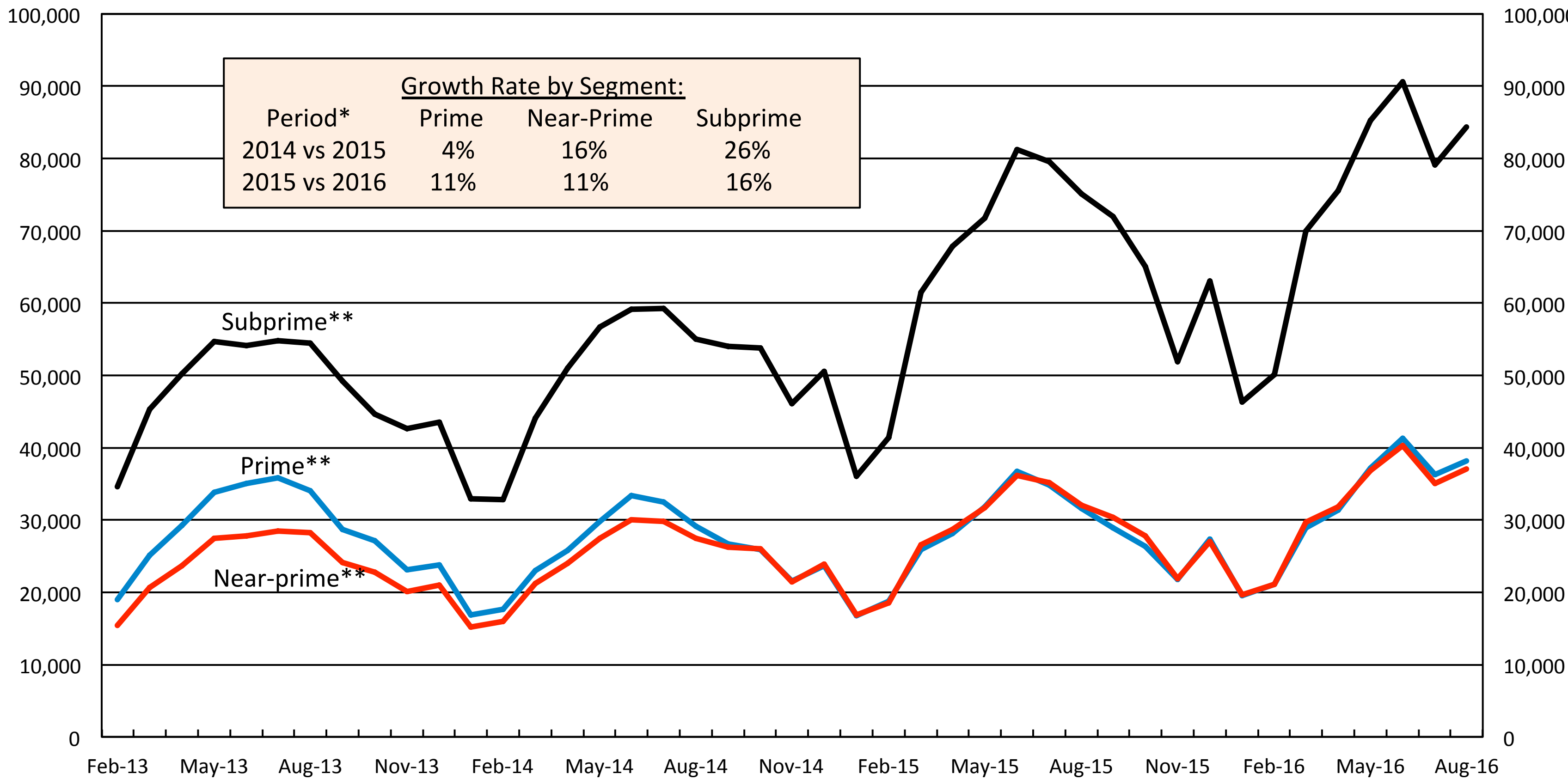
The GSEs are primarily expanding their high CLTV business to higher credit score borrowers. These borrowers mainly profited from lower PMI capital requirements which resulted in lower insurance fees. In addition, they need less income leverage. With high credit scores and relatively low DTI, GSE risk index (13.6%) is about half of FHA's (25%).



Source: AEI International Center on Housing Risk, www.HousingRisk.org.

Originations by Market Segment, FTB Purchase Loans

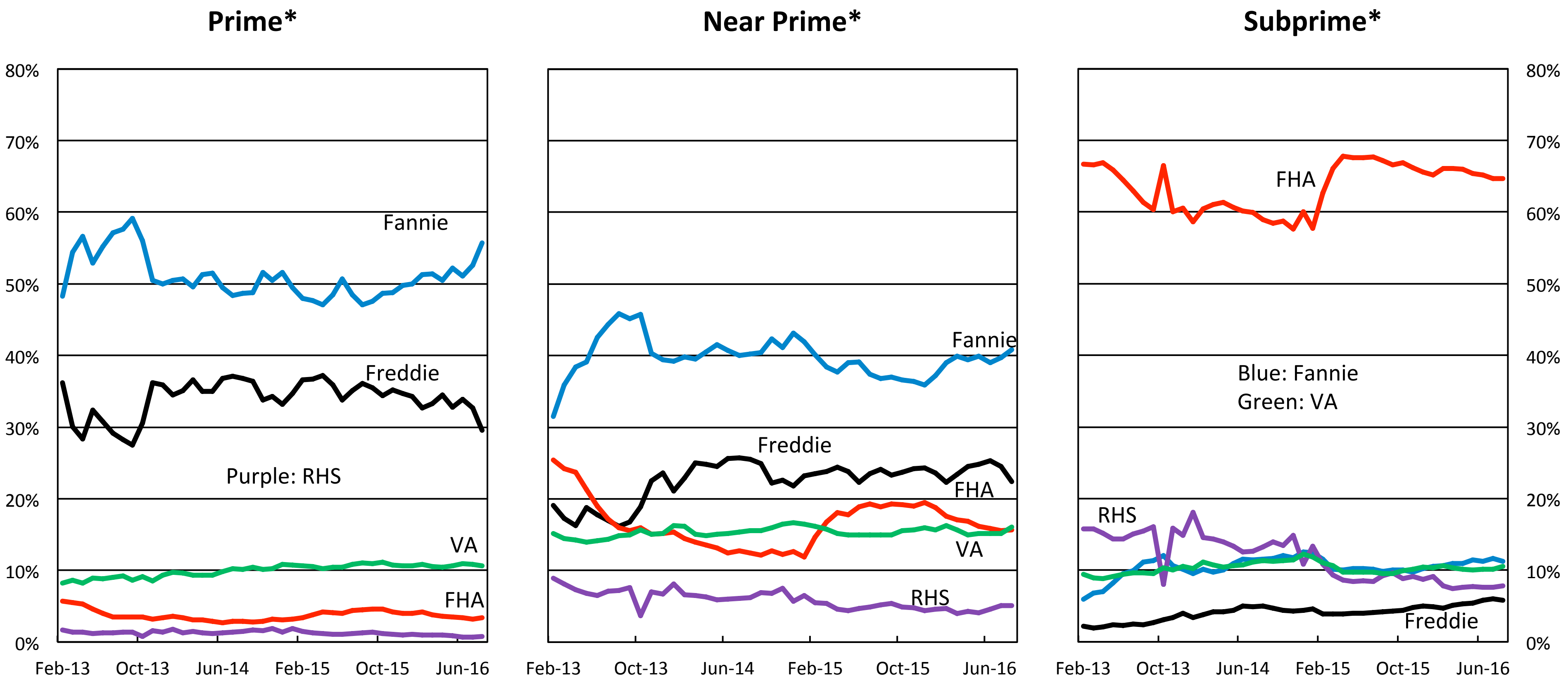
Historically, the highest growth in the FTB market has been concentrated in high risk subprime market segment. Over the past year, however, the gap between the growth rate in subprime and low risk prime has narrowed.



* Calculated from September to August vs September to August subsequent year.
** We define prime loans as low-risk (with a stressed default rate of less than 6%), near prime as medium risk (with a stressed default rate of 6% to less than 12%), and subprime as high risk (with a stressed default rate of 12% or greater).
Source: AEI International Center on Housing Risk, www.HousingRisk.org.

Agency Origination Shares, FTB Purchase Loans by Market Segment

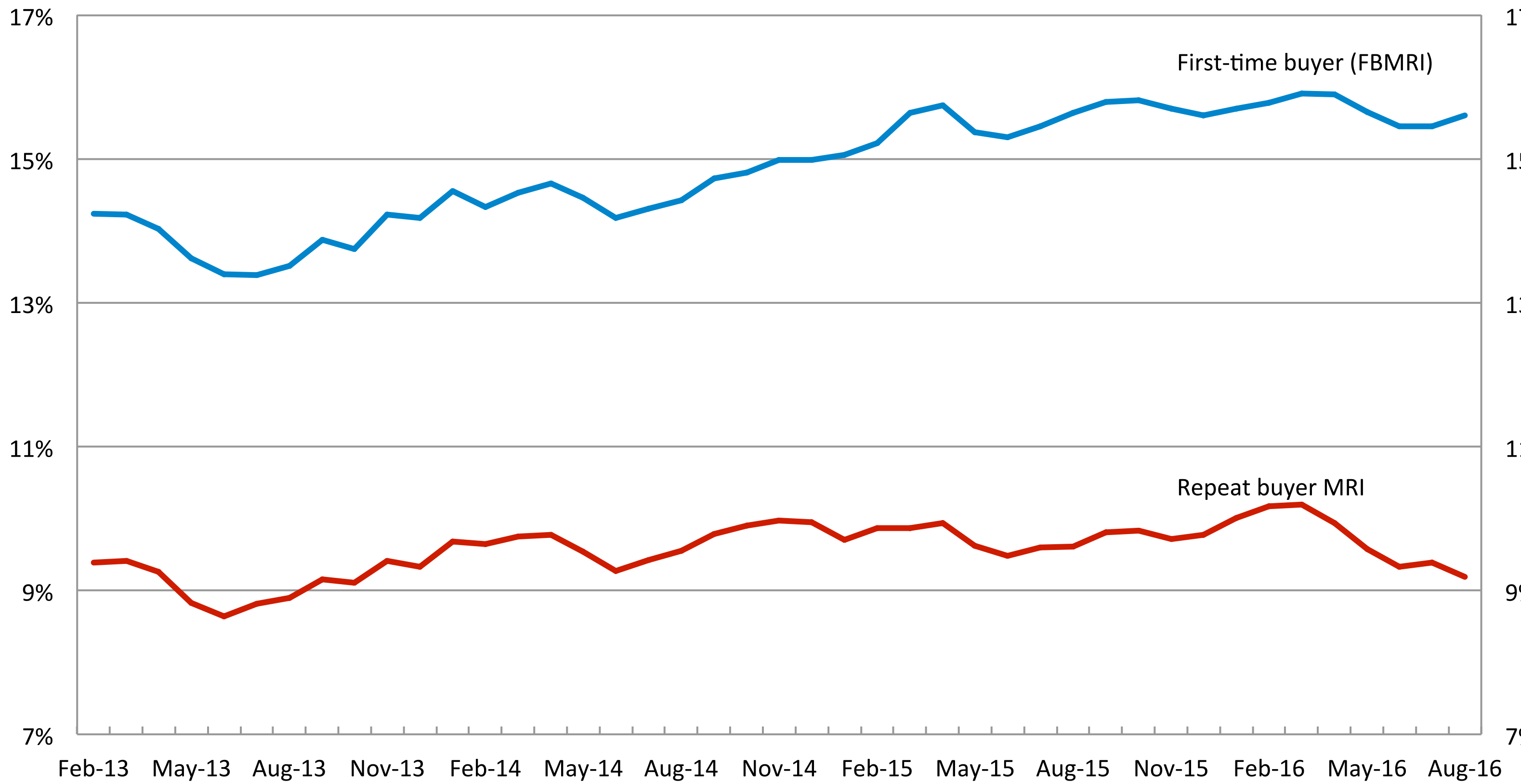
GSEs dominate prime segment accounting for 85% of that market. FHA has consolidated most of the subprime segment. Competition is greatest in near-prime segment.



* We define prime loans as low-risk (with a stressed default rate of less than 6%), near prime as medium risk (with a stressed default rate of 6% to less than 12%), and subprime as high risk (with a stressed default rate of 12% or greater).
Source: AEI International Center on Housing Risk, www.HousingRisk.org.

Agency First-time and Repeat Buyer Mortgage Risk Indices

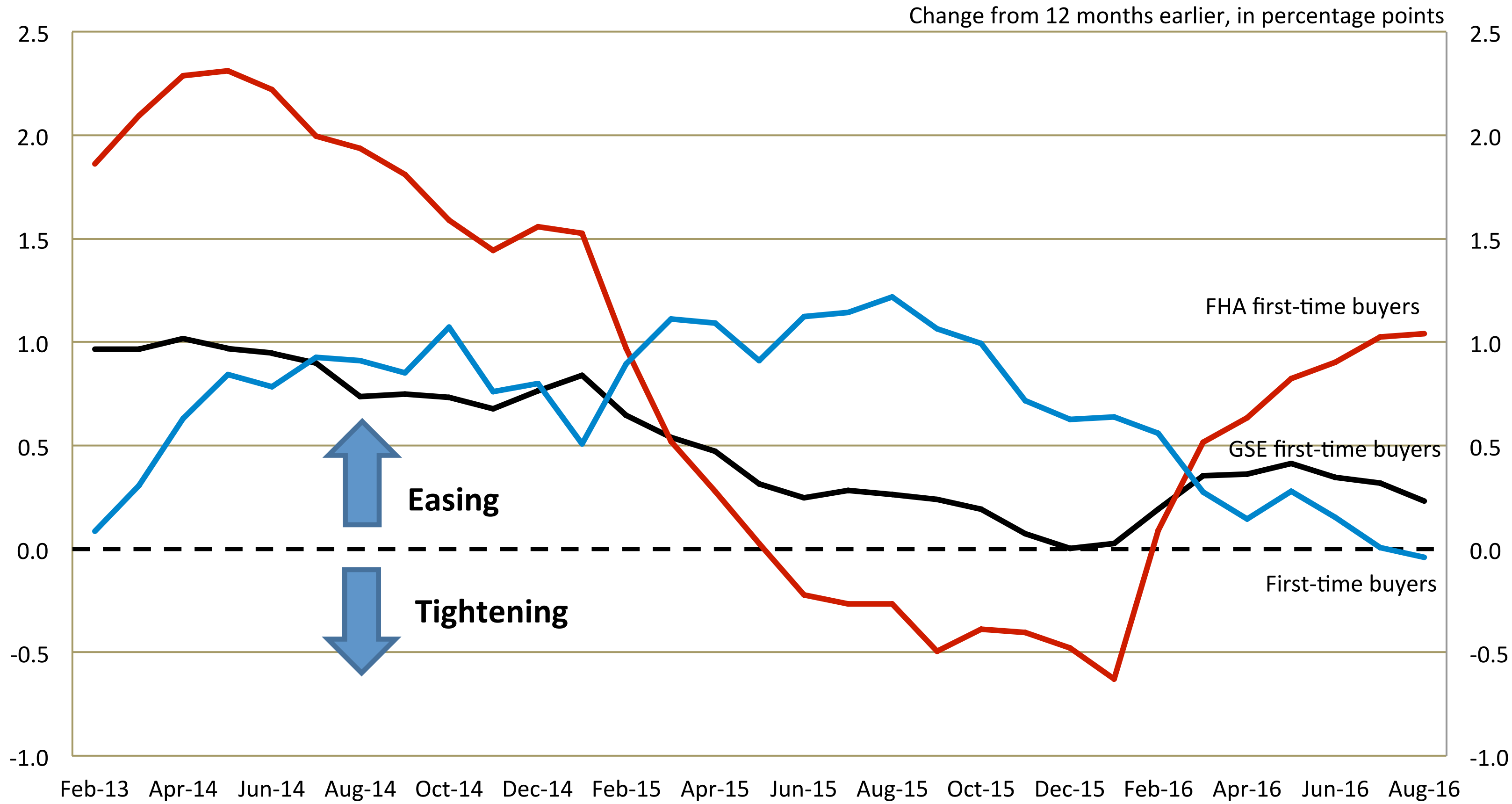
The Agency FBMRI stood at 15.6% in August, virtually unchanged from a year earlier. The Agency FBMRI is 6.4 ppts higher than the mortgage risk index for repeat buyers, 0.4 ppt wider than the gap a year earlier.



Note: Calculated for primary owner-occupied home purchase mortgages.
Source: AEI International Center on Housing Risk, www.HousingRisk.org.

FTB Purchase Loan NMRI: Credit Easing Flat

First-time buyer NMRI, which has been increasing for the entirety of the series, was flat in August due to share shift to lower risk GSE loans. Yet, individual agencies are easing, which poses risk after share shifts subside.



Note: Includes all types of NMRI purchase loans (primary owner-occupied, second home, and investor loans).
Source: AEI International Center on Housing Risk, www.HousingRisk.org.

Characteristics of Mortgages Taken Out by First-Time and Repeat Homebuyers

	August 2016				
	CLTV ≥ 95%	30-year Term	FICO < 660	DTI > 43%	Risk Layering
First-time Buyers	71%	97%	21%	27%	36%
Repeat Buyers	42%	92%	10%	24%	16%

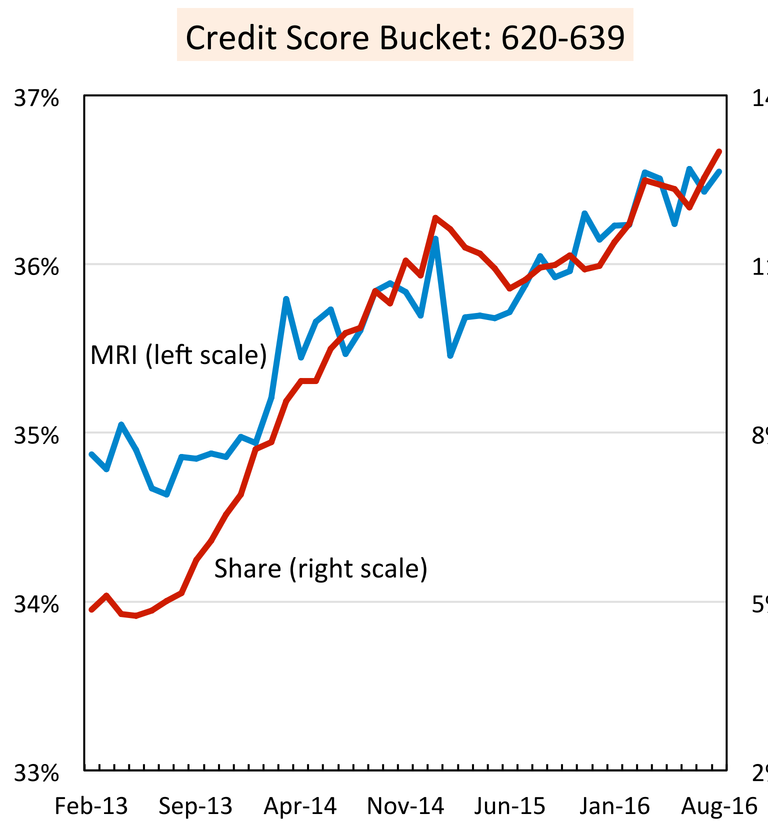
Note: Calculated for primary owner-occupied home purchase loans with a government guarantee.
Risk layering is defined as having at least 3 of the 4 risk features presented in the table above present in a loan.
Source: AEI International Center on Housing Risk, www.HousingRisk.org.

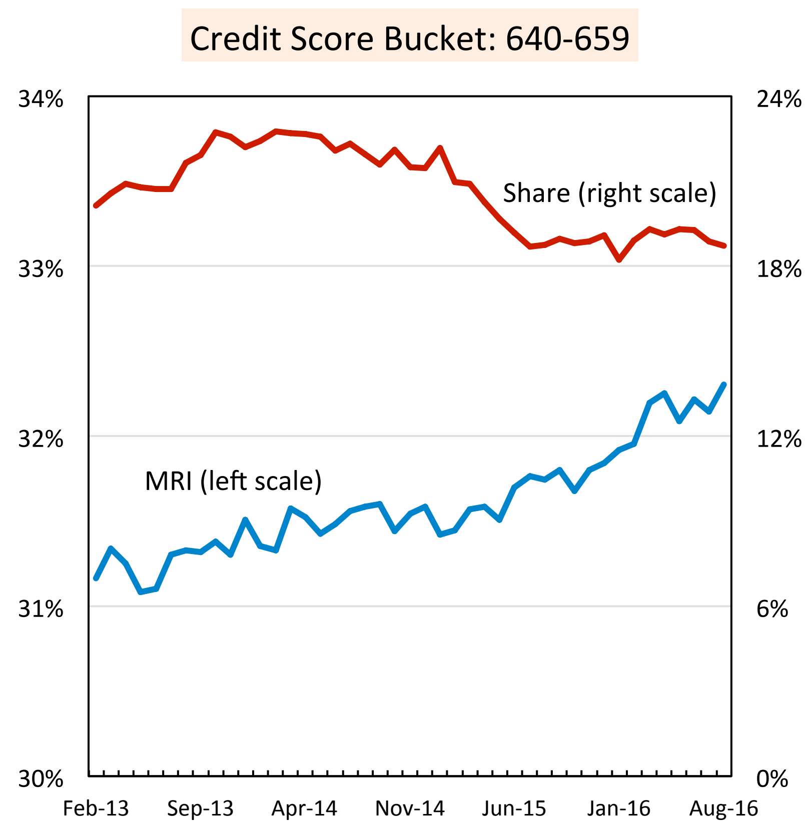
- The higher risk for the mortgages taken out by first-time buyers is largely due to risk layering.
- Given the combination of little money down and slow amortization, these buyers will have very little home equity for a number of years unless their house appreciates substantially.
- The mortgages taken out by repeat buyers are less risky along two dimensions in particular:
  - a much smaller share had a CLTV of 95 percent or higher and
  - a smaller share had a FICO score below 660.
- Bottom line: the supply of mortgage credit to first-time buyers is not tight.

Source: AEI International Center on Housing Risk, www.HousingRisk.org.

FHA First-time Buyer Mortgage Risk Indices, by Credit Score Bucket

FHA is constantly loosening lending. Holding credit score constant, the driving factors are lower downpayments and more importantly, higher DTIs.

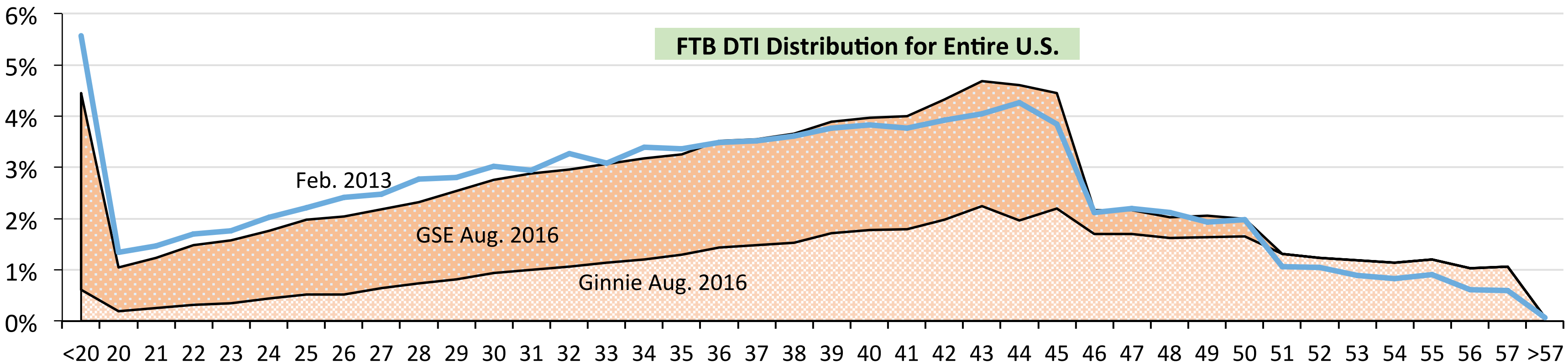




Note: Calculated for primary owner-occupied home purchase mortgages.
Source: AEI International Center on Housing Risk, www.HousingRisk.org.

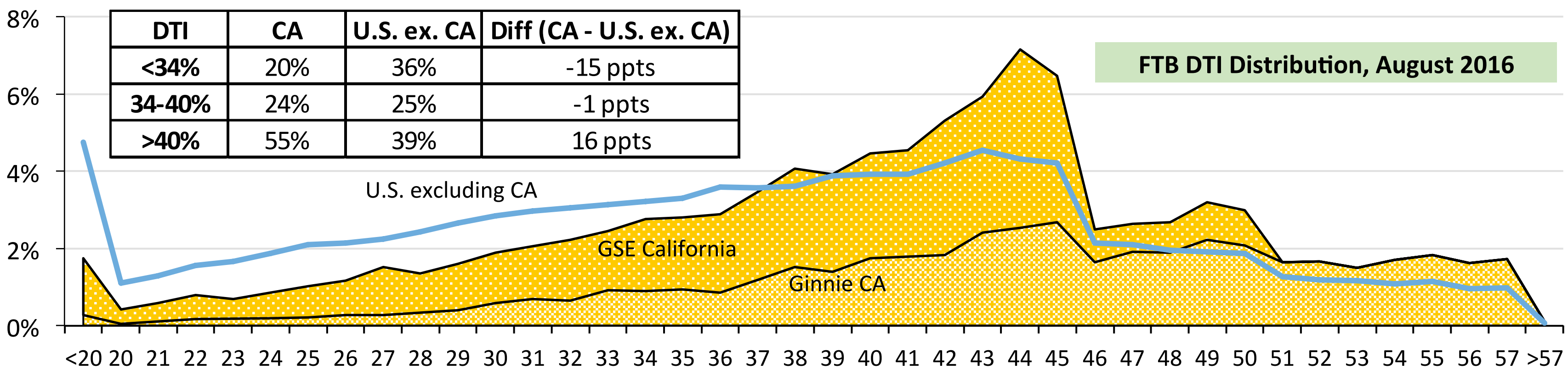
DTI Distributions, Agency FTB Purchase Loans*

DTIs have been shifting higher as the rise in house prices has been outpacing income gains. The share of DTIs below 34% has declined, offset by a greater share of DTIs above 40%. While bullish for home prices in the near term, this presents long-term sustainability problems for both homeowners and the FHA.



California shows how the shift could intensify as affordability worsens.

DTI	CA	U.S. ex. CA	Diff (CA - U.S. ex. CA)
<34%	20%	36%	-15 ppts
34-40%	24%	25%	-1 ppts
>40%	55%	39%	16 ppts

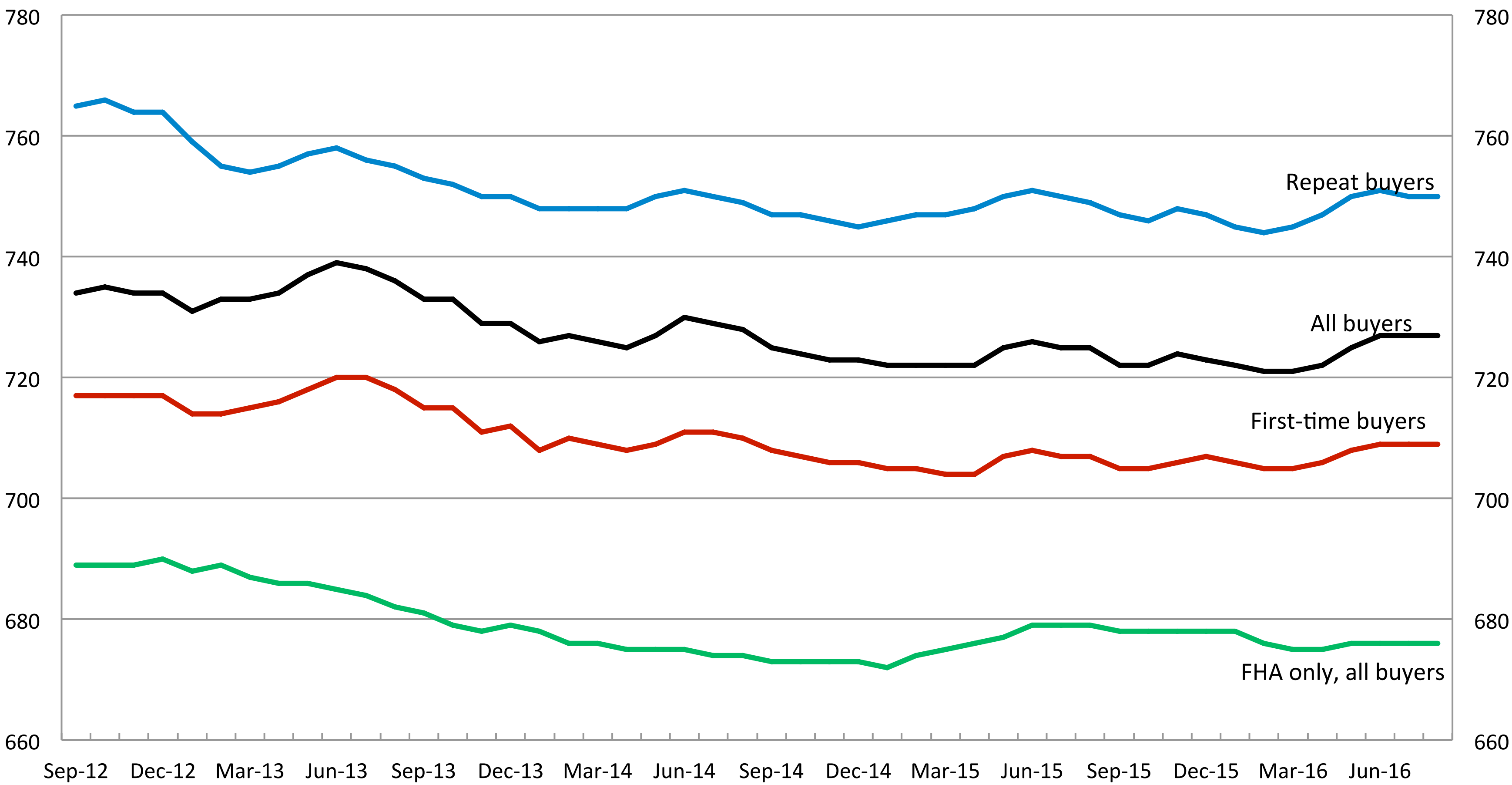


*Data pertain to all first-time buyer agency purchase loans for primary owner-occupied properties.

Source: AEI International Center on Housing Risk, www.HousingRisk.org.

Median Credit Score on Primary Purchase Loans*

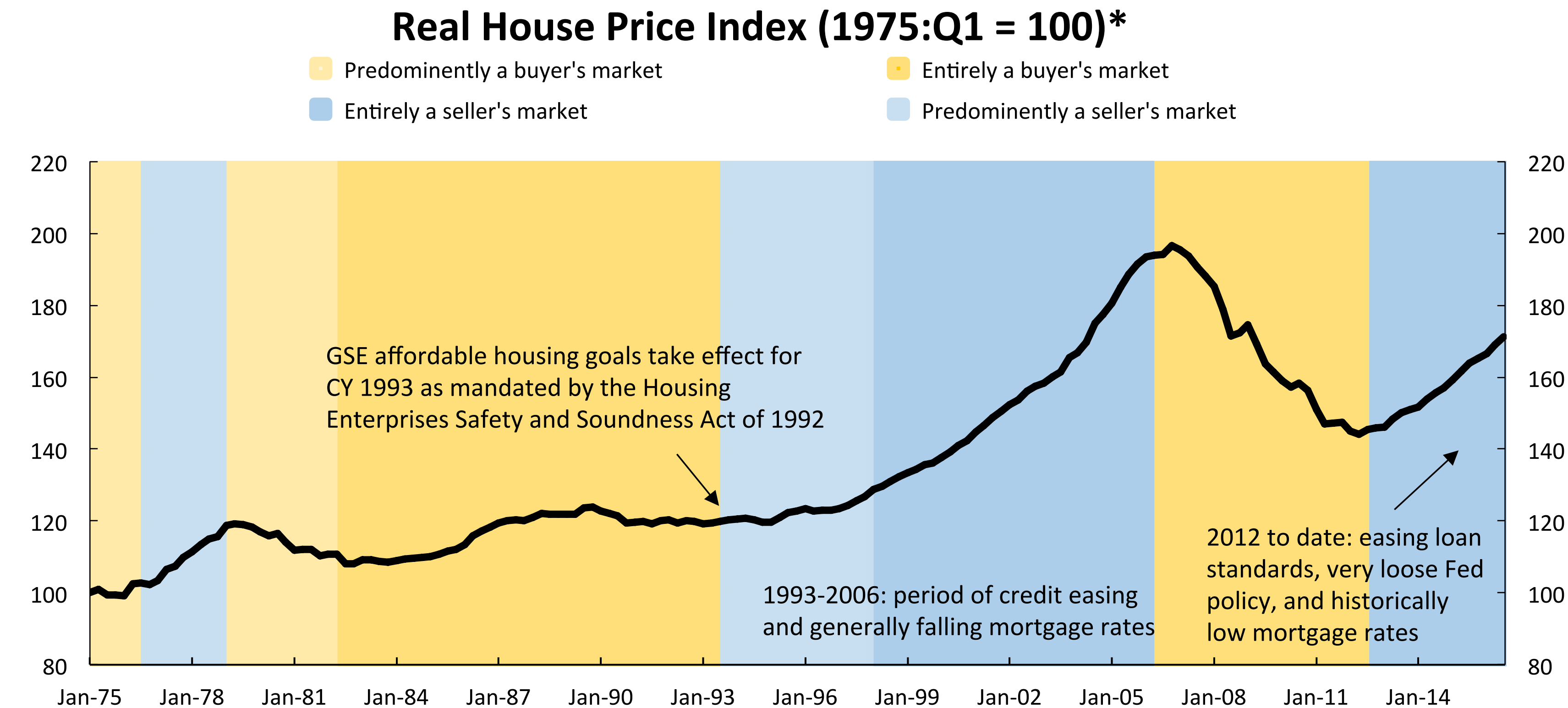
Median scores slightly higher from August 2015. FHA's all-buyer median at 40th percentile of scored distribution, with room to drop given FHA's minimum scores. In current seller's market, this will boost home prices faster than income.



*Data pertain to purchase loans for primary owner-occupied properties. Percentiles based on population of all scorable individuals.
Source: AEI International Center on Housing Risk, www.HousingRisk.org

Unforgiving Home Price Cycles: Booms Fueled by Increasing Leverage in a Seller's Market, Followed by Mean Reversion

19% increase in real home prices since early 2012 trough, fueled by growing loan leverage. Contrary to prevailing view, post-crisis underwriting/regulatory changes promote rather than constrain a boom. Pattern is similar to initial years of the full-blown seller's market that begin in 1998. If this trend continues, risk of a serious house price correction will become ever larger.



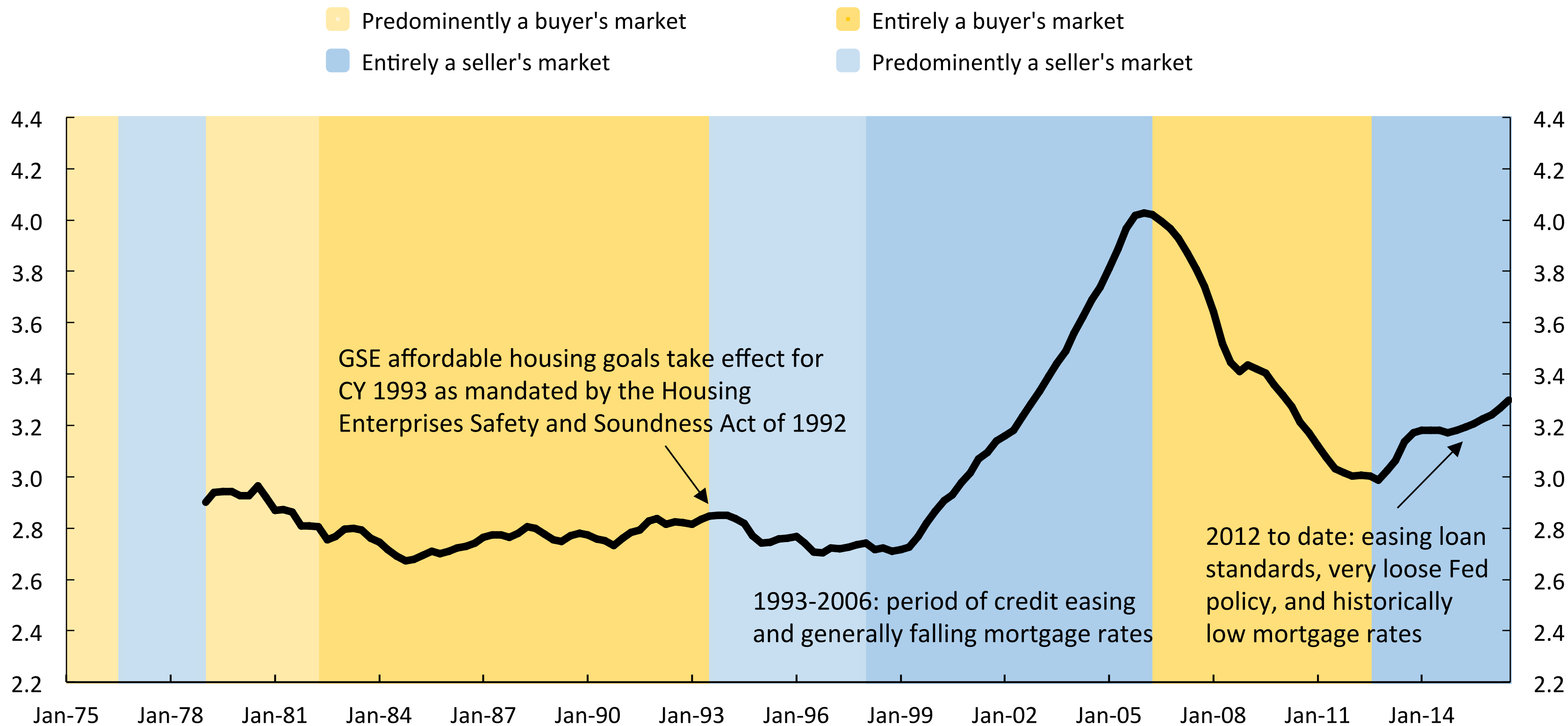
* Calculated as FHFA's all-transaction house price index divided by BEA's price index for personal consumption expenditures.

Note: National Association of Realtors (NAR) defines a seller's market as inventory that is less than or equal to 6 months of sales. NAR data pertain to existing homes; not available before June 1982. Data from the Census Bureau for new home inventories used before June 1982.

Affordability Worsens in a Seller's Market

Nominal Price-to-Income Ratio* has retraced about a third of the drop from the 2006 peak to the 2012 trough. Combination of a highly accommodative monetary policy and easier lending promotes further capital flows into real estate, increasing potential for economic damage as highly leveraged lending fuels cyclically volatile housing sector.

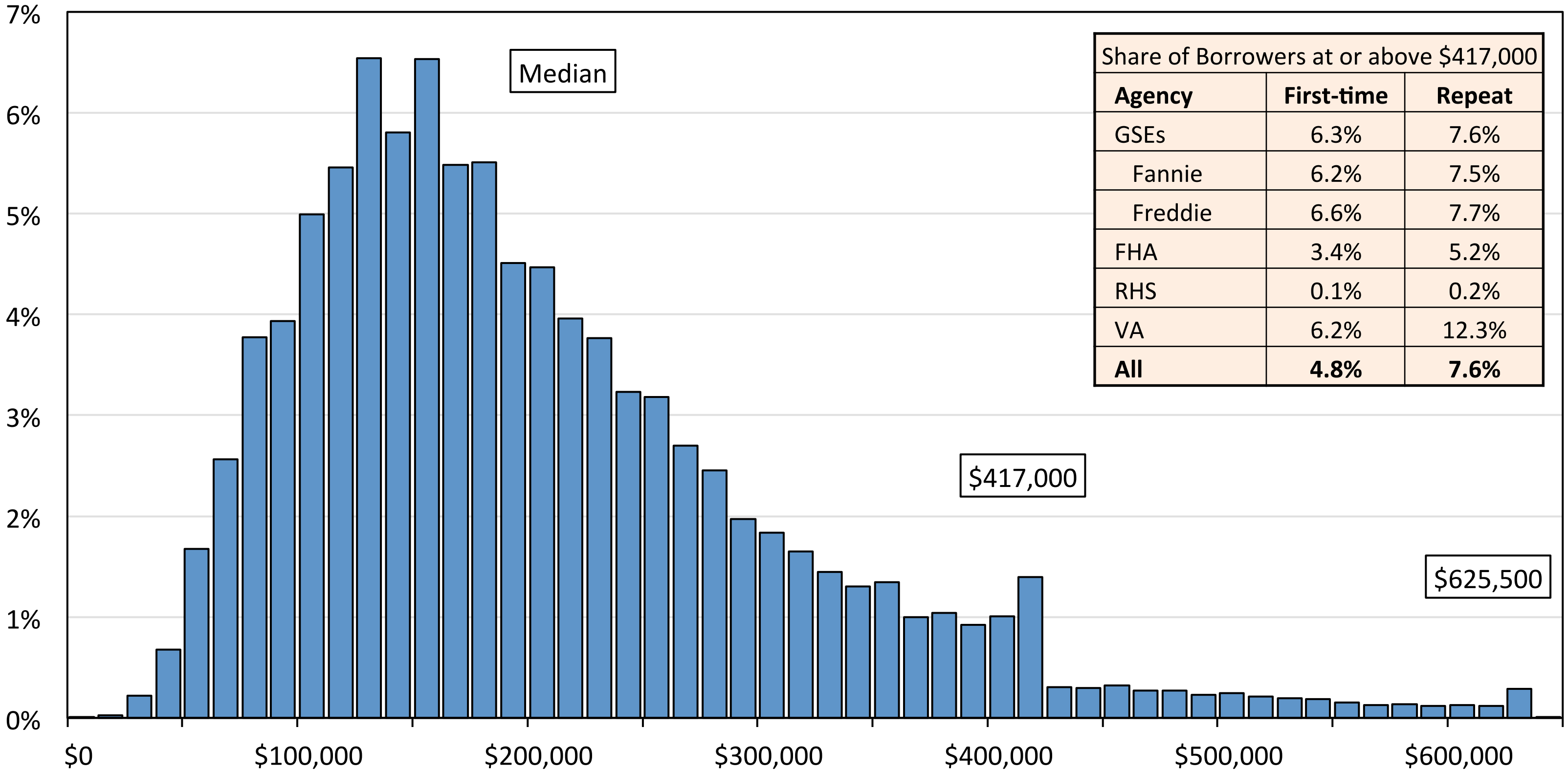
Nominal Price-to-Income Ratio*



* Calculated as median house price divided by median household income.
Source: Zillow.

Raising the Conventional Loan Limit – A Good Idea?

Raising the conforming loan limit would be of no value to the vast majority of FTBs. Furthermore, conforming loan limit acts as a constraint on house prices during a seller's market. Removing it will: 1) drive up borrowing, 2) increase house prices, and 3) shift market share away from the private lenders to the GSEs. Thus the impact on affordability is largely overstated.



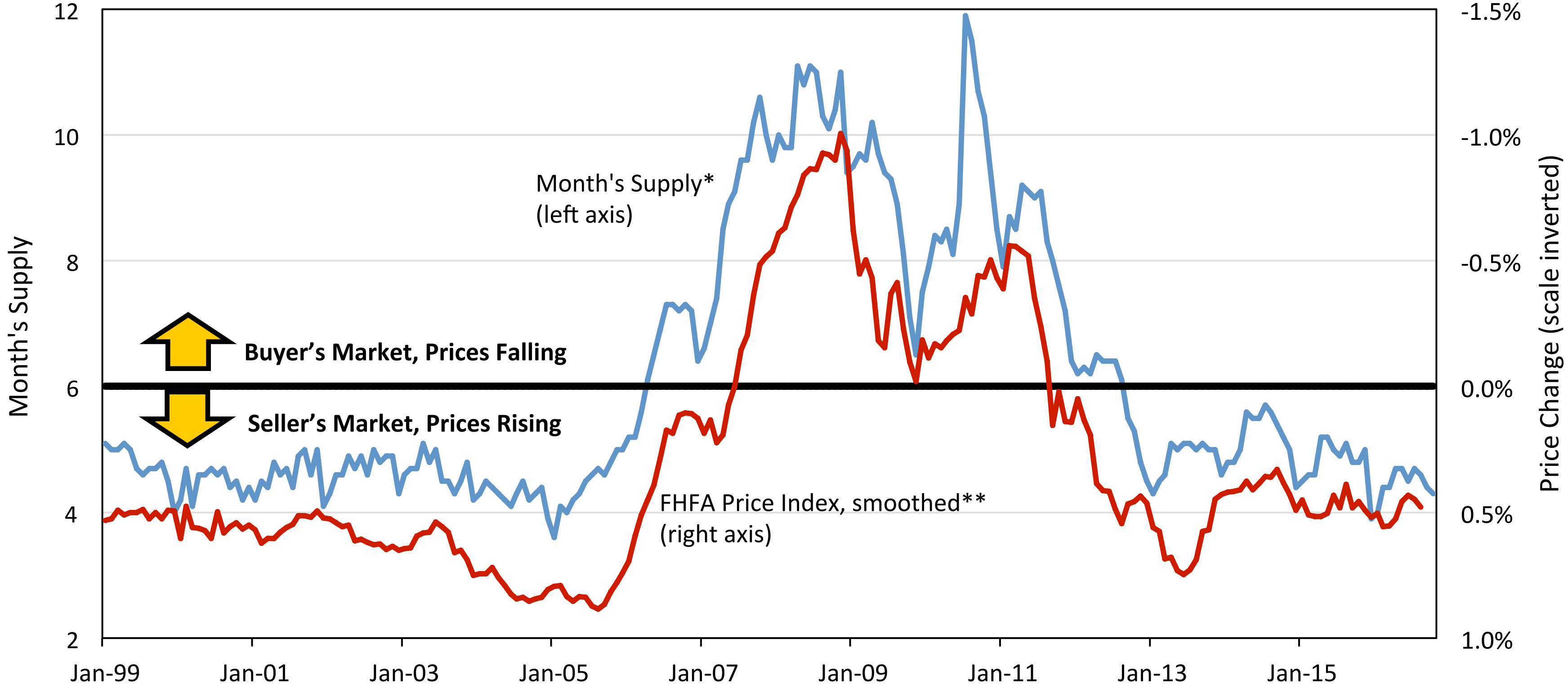
Share of Borrowers at or above $417,000		
Agency	**First-time**	**Repeat**
GSEs	6.3%	7.6%
Fannie	6.2%	7.5%
Freddie	6.6%	7.7%
FHA	3.4%	5.2%
RHS	0.1%	0.2%
VA	6.2%	12.3%
All	**4.8%**	**7.6%**

Note: Bar chart refers to first-time buyer loans originated from September 2015 – August 2016.
Source: AEI International Center on Housing Risk, www.HousingRisk.org.

Supply-Demand Imbalance in the Market Driving Prices Up

The fundamental problem in the housing market today is too much demand chasing too little supply. Historically, there is a strong relationship between the level of supply and price movements.

National Month's Inventory & Changes in House Prices



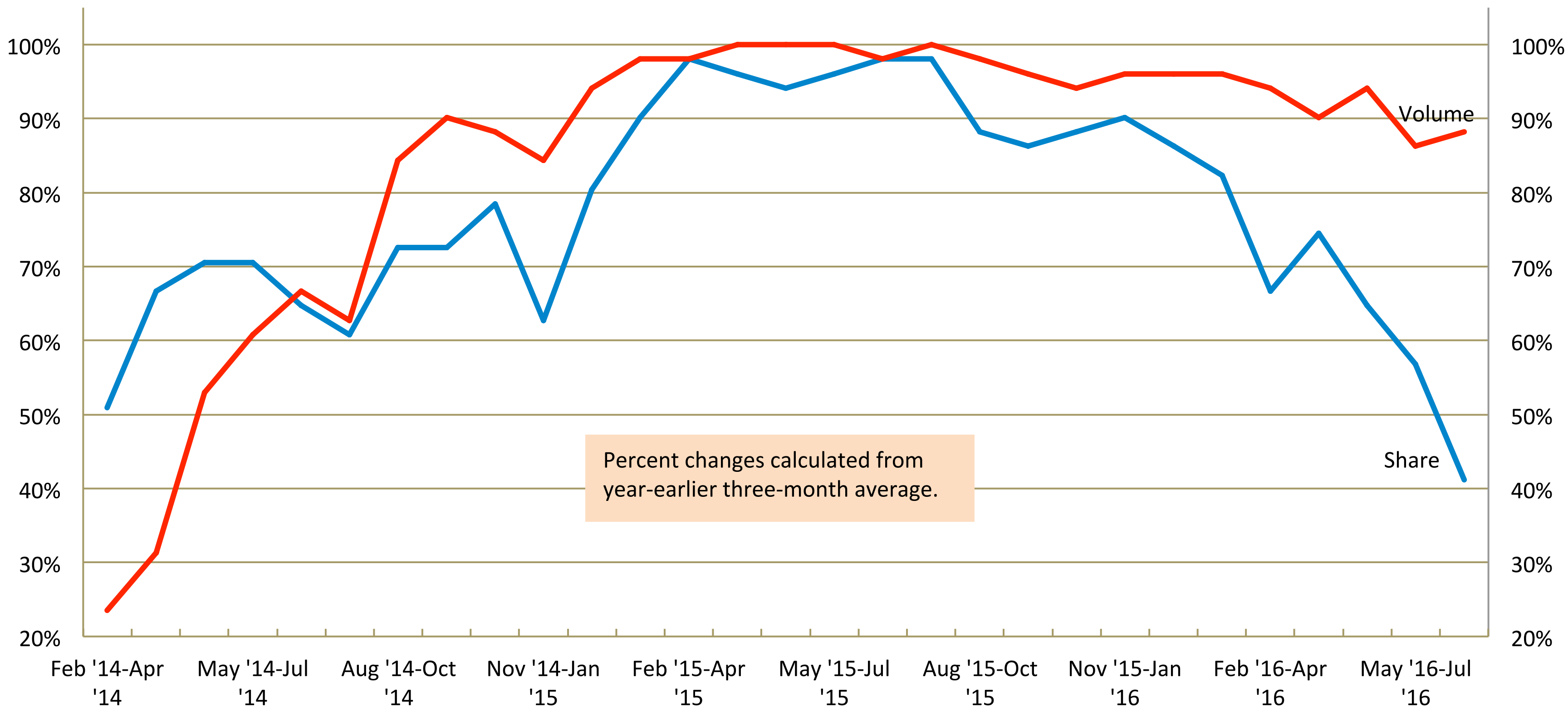
* The NAR defines a seller's market to exist when the inventory of existing homes for sale would be exhausted in six months or less at the current sales pace. Conversely, a buyer's market exists when the inventory of existing homes for sale exceeds six months at the current sales pace. (http://www.realtor.org/news-releases/2013/04/march-existing-home-sales-slip-due-to-limited-inventory-prices-maintain-uptrend).

** FHFA Monthly Purchase-Only Not Seasonally Adjusted house price index. The series is a 6 month trailing average.

Source: National Association of Realtors, FHFA

Share of States with Rise in First-time Buyer Loan Volume and Share from Year-Earlier Period*

First-time buyer loan volume is trending up in vast majority of states, but first-time buyer share is trending down in over half of states due to faster growth from repeat buyers.

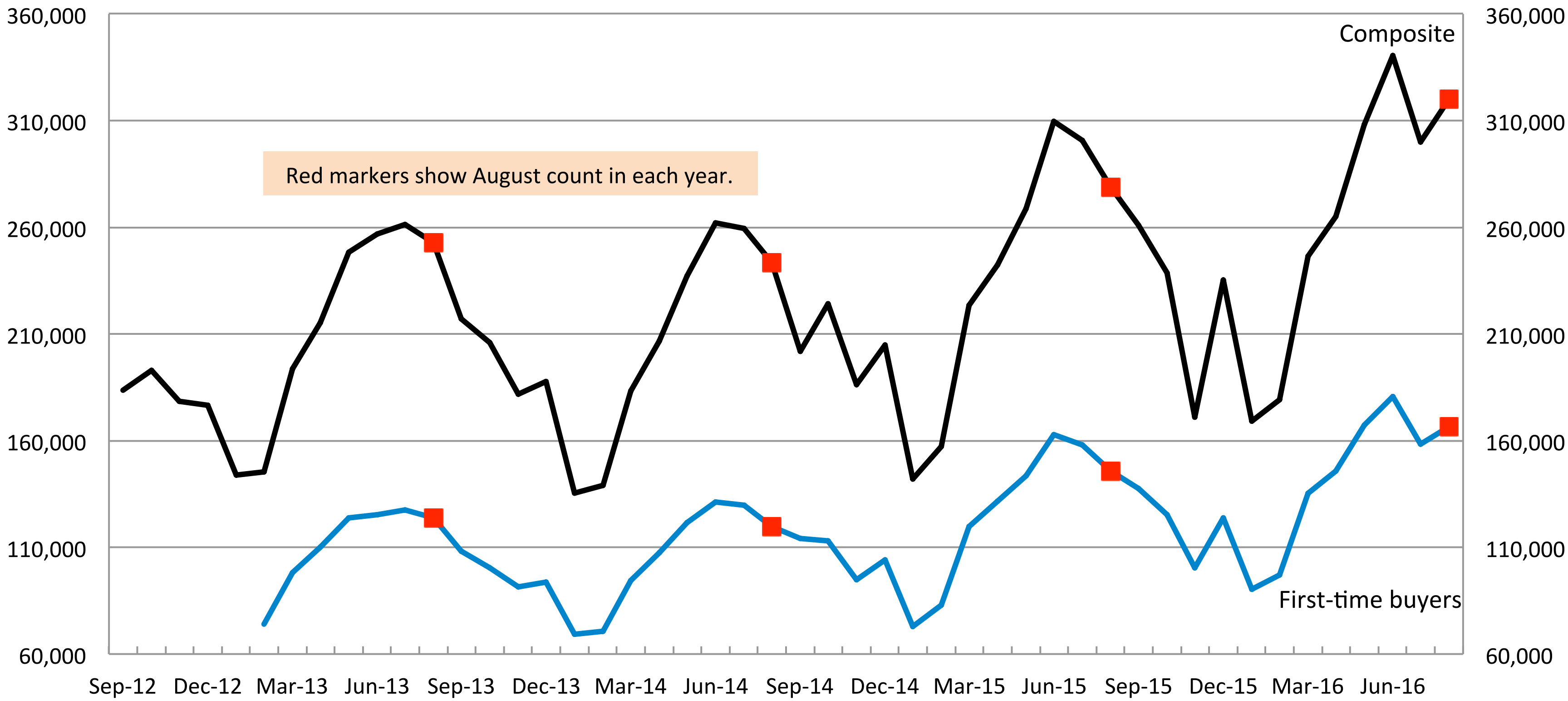


*Final value for each series based on change in each state from June-August 2015 average to June-August 2016 average. Earlier values calculated analogously.
Source: AEI International Center on Housing Risk, www.HousingRisk.org.

Leaving First-time Buyers / Update to the NMRI

Housing Demand Remains Strong

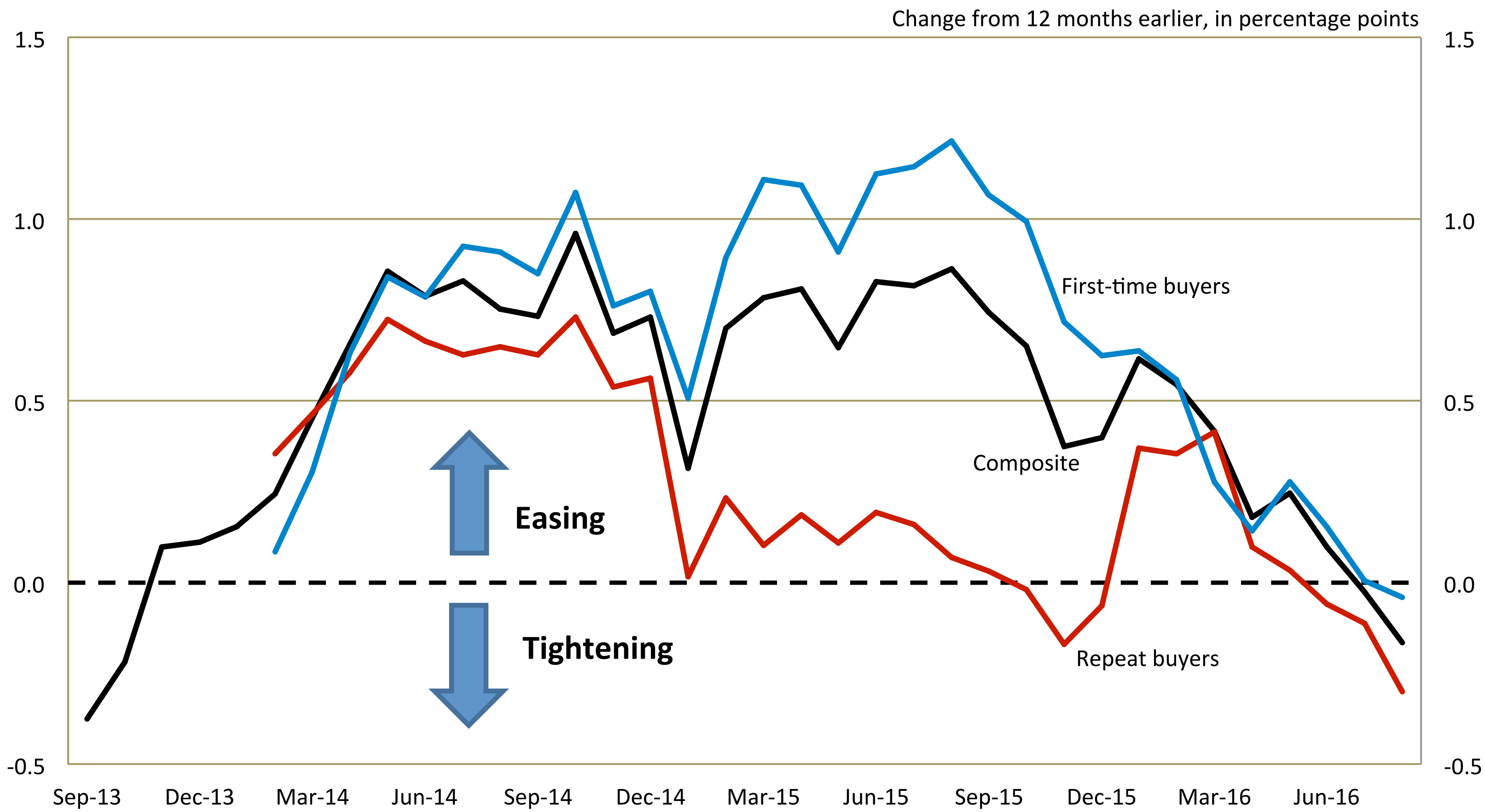
Agency purchase loan volume in August was up 15 percent from a year earlier. (FTB volume up by 14 percent.) The August NMRI volume signals a return to strong market growth, continuing the trend from the very bullish spring buying season.



Note: The number of agency home purchase mortgages with a government guarantee. August 2016 count is a preliminary estimate. First-time buyer volume not available before February 2013.
Source: AEI International Center on Housing Risk, www.HousingRisk.org.

Purchase Loan NMRI: Credit Easing Trend On Hold

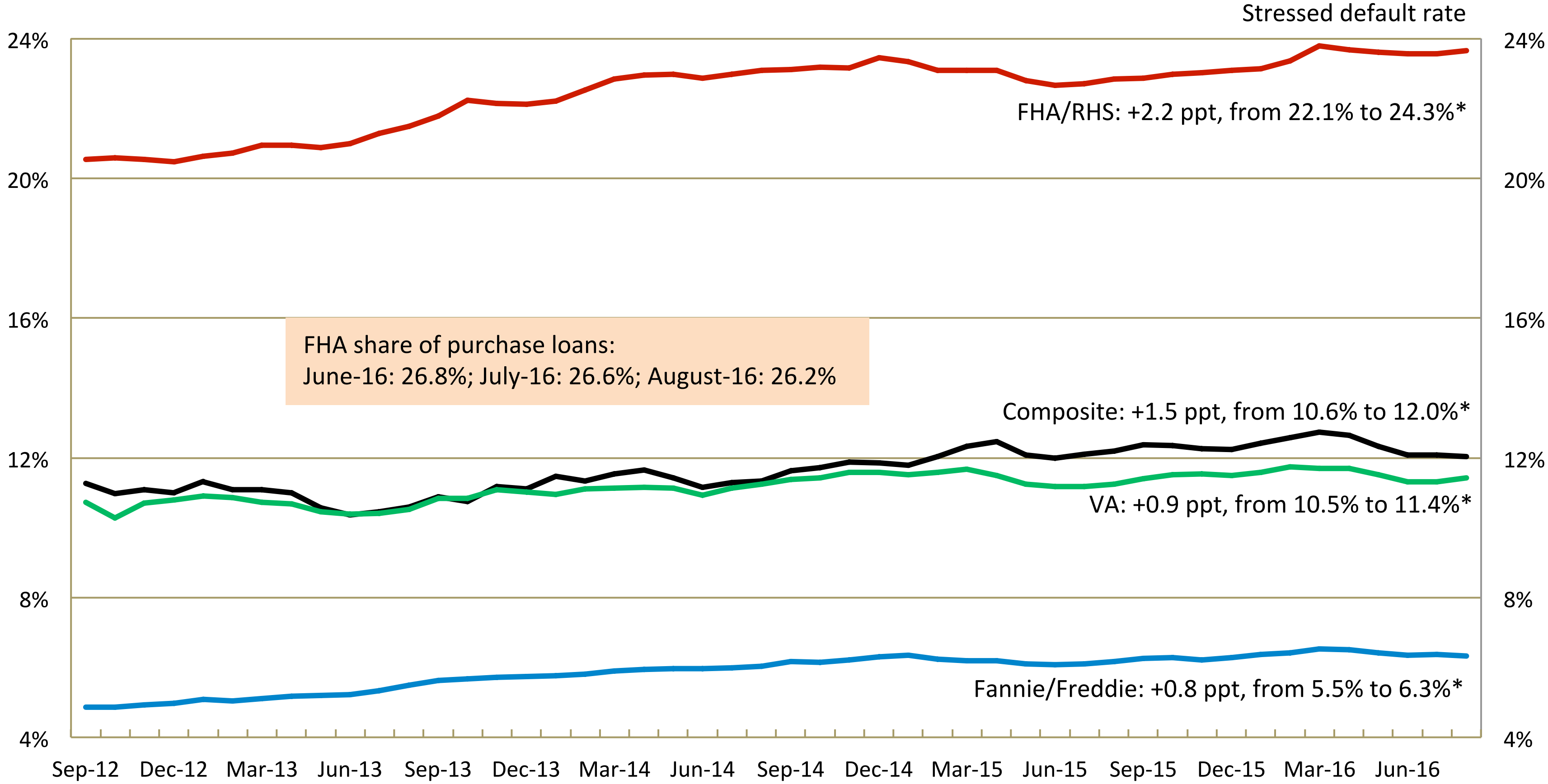
Composite NMRI for purchase loans, which has been increasing for the majority of the series, was slightly lower in August, mainly driven by tighter lender to repeat buyers. It is still too early to tell whether these are new trends or not.



Note: Includes all types of NMRI purchase loans (primary owner-occupied, second home, and investor loans).
Source: AEI International Center on Housing Risk, www.HousingRisk.org.

Update: NMRI for Home Purchase Loans

FHA/RHS index remained close to its series high in June. The other indexes were also higher than a year ago. Unless household income accelerates, future support for housing market likely to involve an increase in leverage from an already high level.



*Change from August 2013 to August 2016.
Note: Dates refer to origination month.
Source: AEI International Center on Housing Risk, www.HousingRisk.org. RHS is Rural Housing Service.

Briefing Dates for January 2017

- Continuing with the shift to a monthly rotation of three briefing topics: mortgage risk (NMRI), first-time buyers, and mortgage market trends. One topic per month.
- Briefings will be shorter, leave more time for questions, and have less repetition from month to month
- Will continue to take place at 11 AM on last Monday of the month, except as shown in bold italics.
- Due to the holidays, the December Market briefing will be held in early January:

Monday	***January 9, 2017***	**Market**
Monday	January 30, 2017	Risk

- Monthly first-time buyer press release has been replaced by briefing.

List of Acronyms

Term	Description
MRI	The **Mortgage Risk Index** (MRI) measures how the loans originated in a given month would perform if subjected to the same stress as loans originated in 2007, which experienced the highest default rates as a result of the Great Recession.
NMRI	The **National Mortgage Risk Index** (NMRI) currently covers home purchase and refinance loans (except for VA refinances) that have been (1) acquired and securitized by Fannie Mae or Freddie Mac or (2) insured or guaranteed by the Federal Housing Administration (FHA), the Department of Veterans Affairs (VA), or the Rural Housing Service (RHS).
SMRI	The **State-level Mortgage Risk Index** (SMRI) measures mortgage risk on a state level. It employs exactly the same stress-test methodology as the national index.
FBMSI	The **First-time Buyer Mortgage Share Index** (FBMSI) equals the number of loans made to first-time buyers divided by the number of all home purchase loans excluding those made to investors and second home buyers for any given month (see first-time buyer (FTB) definition below). The agency FBMSI covers government-guaranteed loans, while the combined FBMSI covers both government-guaranteed and private-sector loans. The agency loans are from the same database used for the NMRI, while the private-sector component of the combined FBMSI is estimated based on CoreLogic data and assumptions believed to be reasonable.
FBMRI	The **First-time Buyer Mortgage Risk Index** (FBMRI) is calculated using the same methodology as for the NMRI. The only difference is that the set of included loans is restricted to first-time buyers.
FTB	AEI uses the federal government's definition of a **first-time homebuyer** (FTB). A FTB is an individual borrower who (1) is purchasing the mortgaged property, (2) will reside in the mortgaged property as a primary residence, and (3) had no ownership interest (sole or joint) in a residential property during the three-year period preceding the date of the purchase of the mortgaged property. Investment properties, second homes, and refinance transactions are not eligible to be considered first-time homebuyer transactions. Other organizations such as the National Association of Realtors (NAR) use a different definition of FTB based on self-identification.
RB	Repeat Buyers (RB) are all home buyers that are not first-time buyers.

List of Acronyms (cont'd)

Term	Description
GSE	A **Government-Sponsored Enterprise** (GSE) is an entity created by Congress that operates under a government-defined mission and charter. There are two housing-related GSEs: Freddie Mac and Fannie Mae. They purchase mortgages on the secondary market and subsequently pool them into mortgage-backed securities (MBS), which are purchased by government and private investors.
Fannie Mae	The **Federal National Mortgage Association** (FNMA), known as Fannie Mae, was founded in 1938 as part of the New Deal legislation.
Freddie Mac	The **Federal Home Loan Mortgage Corporation** (FHLMC), known as Freddie Mac, was created in 1970 to complement Fannie Mae.
Ginnie Mae	The **Government National Mortgage Association** (Ginnie Mae) is a federal government corporation that aims to promote homeownership for low- and moderate-income families. It ensures the timely payment of principal and interest on mortgage-backed securities formed from mortgages that are guaranteed or insured by FHA, VA, RHS, or smaller programs for Native Americans. Ginnie Mae was created in 1968. Prior to 1968 its role was performed by Fannie Mae.
FHA	The **Federal Housing Administration** (FHA), founded in 1934, is a federal agency that today provides mortgage insurance for residential loans made to high-risk borrowers. The borrower pays an upfront mortgage insurance premium as well as monthly insurance premiums for the service. In return, FHA covers 100% of the lender's loss in case of the borrower's default.
RHS	The **Rural Housing Service** (RHS) is a program within the U.S. Department of Agriculture that guarantees mortgages in rural areas. The borrower pays an upfront annual fee for the service. In return, RHS covers 100% of lender's loss in case of the borrower's default.
VA	The **Department of Veterans Affairs** (VA) guarantees mortgages to eligible veterans and generally pays 25% of lender's loss in case of the borrower's default. The borrower pays an upfront annual fee for the service.
HUD	FHA has been overseen by the **Department of Housing and Urban Development** (HUD) since its creation in 1965.

List of Acronyms (cont'd)

Term	Description
FICO®	The **FICO Credit Score** is a statistical credit evaluation score developed by Fair, Isaac and Co. The FICO score attempts to measure a borrower's risk of default through his or her personal financial history. FICO scores range from a high default-risk score of 300 to a low default-risk score of 850. The term "credit score" is used to connote a generic score.
LTV / CLTV	The **Loan-to-Value Ratio** (LTV) is the ratio of the 1st lien loan amount to the property's value. Since the down payment on a purchase transaction is the property's value minus the loan amount, the LTV is inversely related to the down payment. The **Combined Loan-to-Value** (CLTV) is the ratio of all loan amounts at 1st lien origination to the property's value. Both ratios are a measure of a borrower's skin in the game.
DTI	The total **Debt-to-Income Ratio** (DTI) gauges the ability of a borrower to repay a mortgage by measuring the amount of income consumed for repayment of all outstanding debts of the borrower.
ARM	An **Adjustable-Rate Mortgage** (ARM) is a mortgage whose interest rate varies over the lifetime of the loan based on market conditions. ARMs have on average a higher default risk than FRMs.
FRM	A **Fixed Rate Mortgage** (FRM) maintains the interest rate at origination throughout the lifetime of the loan.
MSA	A **Metropolitan Statistical Area** (MSA) is a geographical region with a population of at least 50,000 inhabitants at its core and close economic ties throughout the region.
PCE price index	The **Personal Consumption Expenditure** (PCE) price index measures the prices of goods and services purchased by consumers in the U.S. economy. It is published monthly by the Bureau of Economic Analysis in the Department of Commerce. The PCE price index is the measure of inflation targeted by the Federal Reserve.
SLOOS	The **Senior Loan Officer Opinion Survey on Bank Lending Practices** (SLOOS) is a survey of lending conditions conducted quarterly by the Federal Reserve among roughly eighty large domestic banks and twenty-five U.S. branches and agencies of foreign banks.

List of Acronyms (cont'd)

Term	Description
QM/QRM	The **Qualified Mortgage** (QM) and the **Qualified Residential Mortgage** (QRM) are mortgage terms created under the Dodd-Frank Act. A mortgage that meets the QM requirements provides legal protection for lenders against a claim that the loan was made without due consideration of the borrower's ability to repay. The QRM designation relates to the securitization of mortgages. If the loans in a mortgage-backed security are QRMs, the securitizing agent is not required to retain any risk position in the security. Although the initial proposed QRM definition was relatively strict, the final definition was watered down to be equivalent to the looser QM definition. The five guarantee agencies (Fannie Mae, Freddie Mac, FHA, VA, and RHS are exempt from substantial portions of the QM rules and entirely from the QRM rules. (For Fannie and Freddie, this exemption applies only while they are in conservatorship).
MIP	The **Mortgage Insurance Premium** (MIP) is a payment to compensate for the risk of default on the mortgage. As noted above, FHA mortgages carry both upfront and monthly MIP payments. Fannie Mae and Freddie Mac generally require mortgage insurance for loans they guarantee with LTVs above 80%; borrowers with these GSE-guaranteed loans may make monthly MIP payments depending on the premium plan.
TRID	The **TILA-RESPA Integrated Disclosure (TRID)** rule – commonly also known as Know Before You Owe – requires lenders to summarize and more prominently display the loan terms on the mortgage form. It also institutes a three-day waiting period before closing to allow borrowers time to review the contract. The form change is currently suppressing sales volume as it is delaying loan closings by creating additional burdens on lenders. TRID was mandated by the Consumer Financial Protection Bureau (CFPB) and applies to mortgage applications filed on or after October 3, 2015.

Appendix

Additional slides and those not included every month:

- Background: Financial Crisis and AEI's Response
- Definition of Low-Risk Loans
- FICO® Score Distribution
- Origination Shares by Credit Score Bin, First-time Buyer Purchase Loans
- Median Credit Score on Primary Purchase Loans
- Median Downpayments
- Ratio of Sales Price for First-time to Repeat Buyers
- FHA's MIP Cut and House Prices for First-time Buyers
- FHA's MIP Cut = Bad Policy. Little Additional Accessibility, Higher Priced Homes
- FHA Insurance Premium Cut – New Analysis
- While FHA's Capital Reached Required 2% Statutory Level for 1st Time since 2008, It Is Insufficient

Background: Financial Crisis and AEI's Response

- Financial crisis largely stemmed from a failure to understand buildup of housing risk:
  - Mortgage risk
  - House-price (collateral) risk
  - Capital adequacy

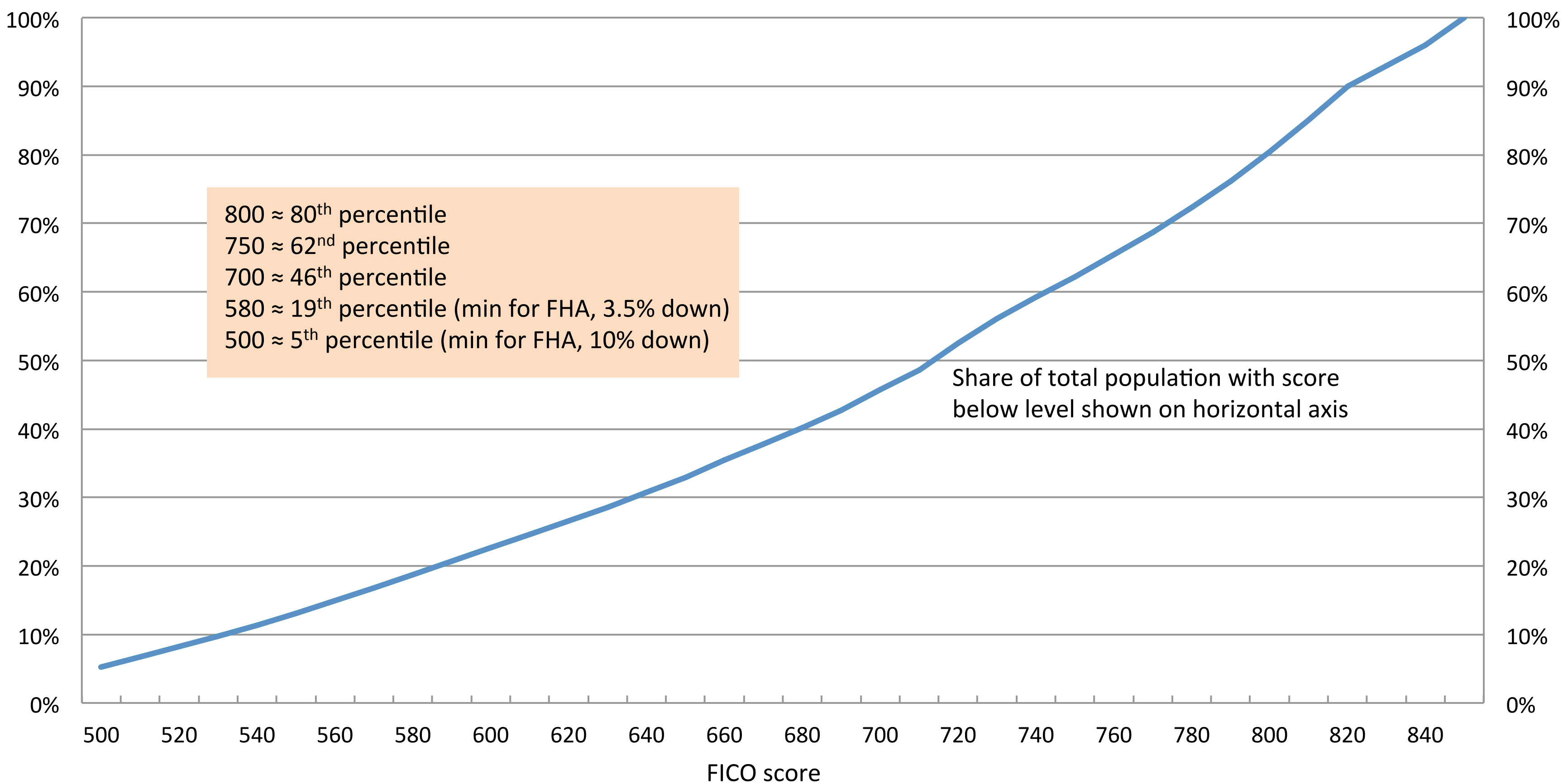
- AEI's International Center on Housing Risk (HousingRisk.org) is addressing this problem:
  - Provides objective and transparent risk measures
  - Mortgage risk indices published monthly
  - Monthly tracking of housing cycle risk for California and Texas metro areas and regions alongside mortgage risk indices
  - Indices of collateral risk to be released later this year

Definition of Low-Risk / Prime Loans

- We define low-risk / prime loans as those with a stressed default rate of less than 6%. Why?
- Low-risk / prime definition calibrated from two sources
  - Original QRM proposal to implement Dodd-Frank
  - FHA underwriting standards over 1935-55
  - Both yield an average stressed default rate of ≈ 3%
    - This is consistent with a maximum stressed default rate of ≈ 6% on individual loans, assuming a uniform distribution starting near 0%
    - Hence the use of 6% as the highest stressed default rate for a low-risk / prime loan

FICO® Score Distribution

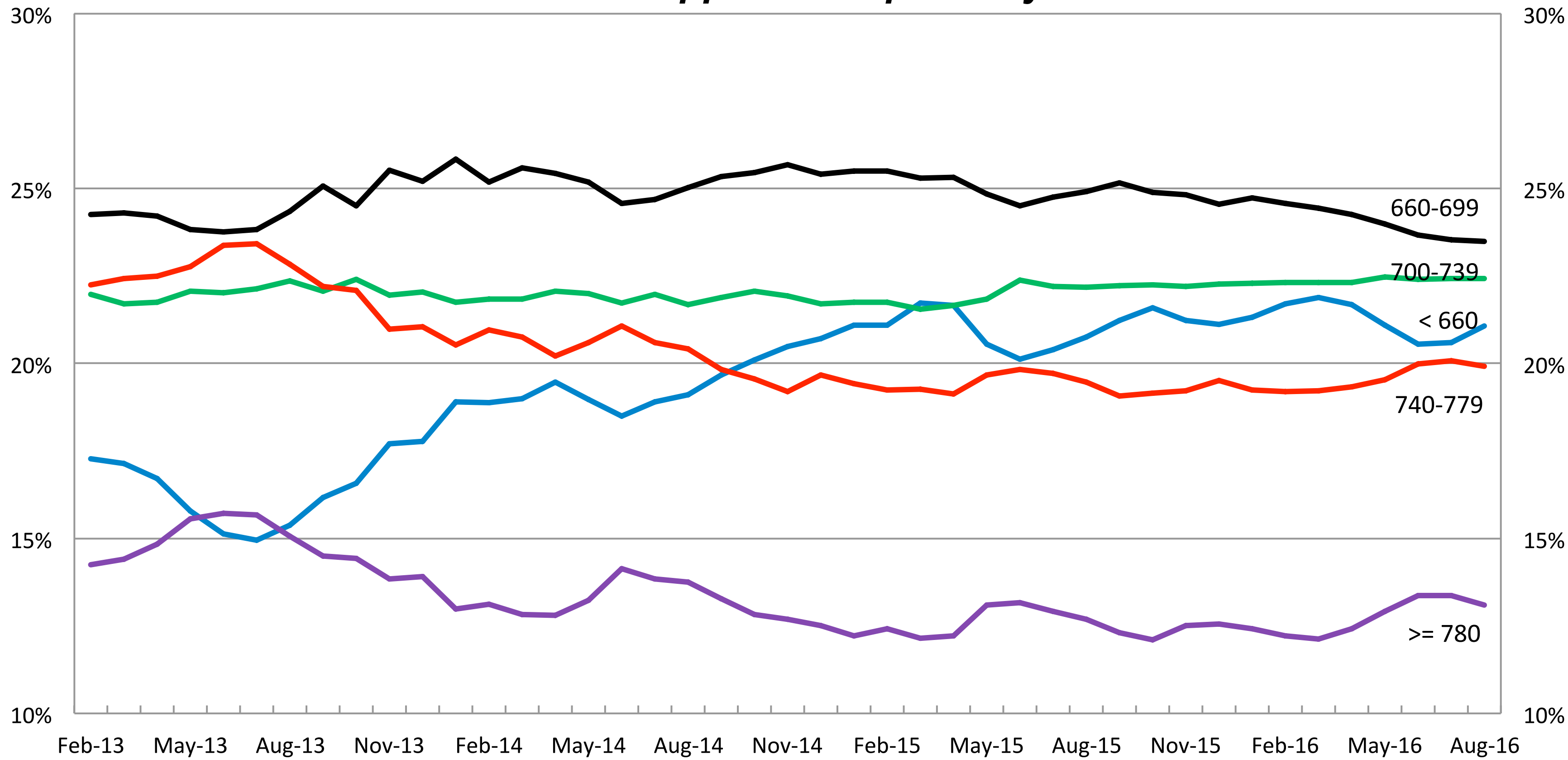
FHA's minimum scores are near the bottom of the FICO credit score distribution. An FHA borrower with a 500 credit score has an NMRI of 50%, twice as risky as today's median FHA loan and eight times riskier than today's median GSE loan.



Source: AEI International Center on Housing Risk, www.HousingRisk.org, from FICO 8 score distribution for October 2014. Distribution for FICO scores of 300-800 and 850 directly from FICO; distribution between 800 and 850 interpolated by Edward Pinto.

Origination Shares by Credit Score Bin, First-time Buyer Purchase Loans

Story in the media has been of too tight credit holding back first-time buyers. Reality is the long-term trend has been towards looser credit and record setting volume (especially FTB). But starting with March 2016, there has been an influx of higher credit score borrowers, the result of recent private mortgage insurance premium changes. The same trend also applies to repeat buyers.



Source: AEI International Center on Housing Risk, www.HousingRisk.org.

Median Downpayments

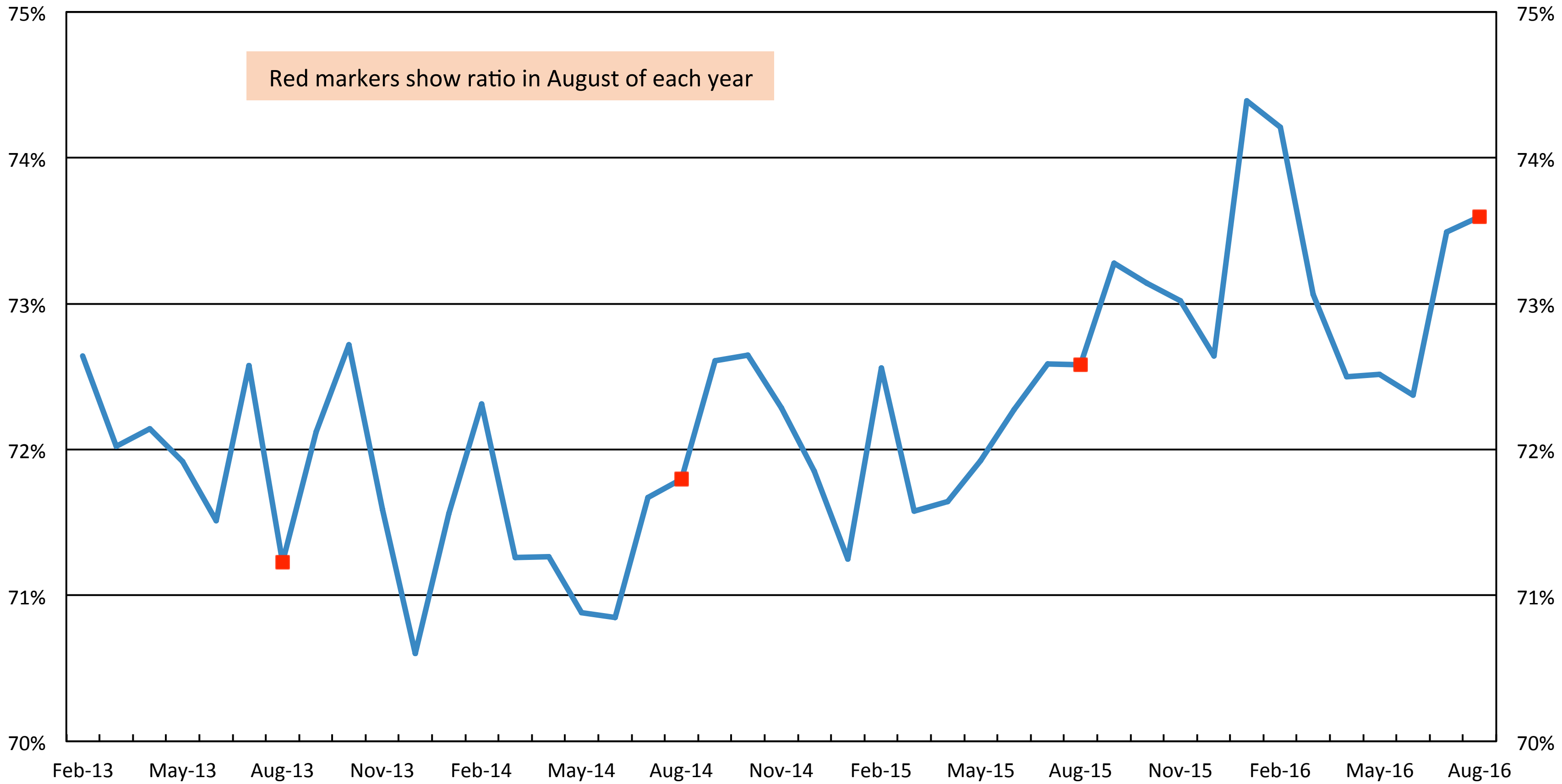
	Median downpayment on primary home purchase loans, August 2016		
Guarantee agency	**All buyers**	**First-time buyers**	**Repeat buyers**
Composite	5.0% / $13,800	3.5% / $8,500	10.0% / $29,000
Fannie, Freddie	15.0% / $34,600	10.0% / $21,000	20.0% / $46,000
Ginnie (FHA, VA, RHS)	3.5% / $5,600	3.5% / $5,400	3.5% / $6,200

Note: Calculated for primary home purchase loans with a government guarantee.
Source: AEI International Center on Housing Risk, www.HousingRisk.org.

- For agency market as a whole, median downpayment is small (5%, $13,800)
- Median is even smaller for first-time buyer loans, especially for Ginnie loans (3.5%, $5,600). Ginnie accounts for almost 60% of agency first-time buyer volume
- Traditional 20% downpayment is the norm only for Fannie/Freddie repeat buyers. Ginnie repeat buyers typically put down barely more than first-time buyers
- Hence, in today's market, little saving or accumulated equity is needed to buy a home, particularly a first home

Ratio of Sales Price for First-time to Repeat Buyers

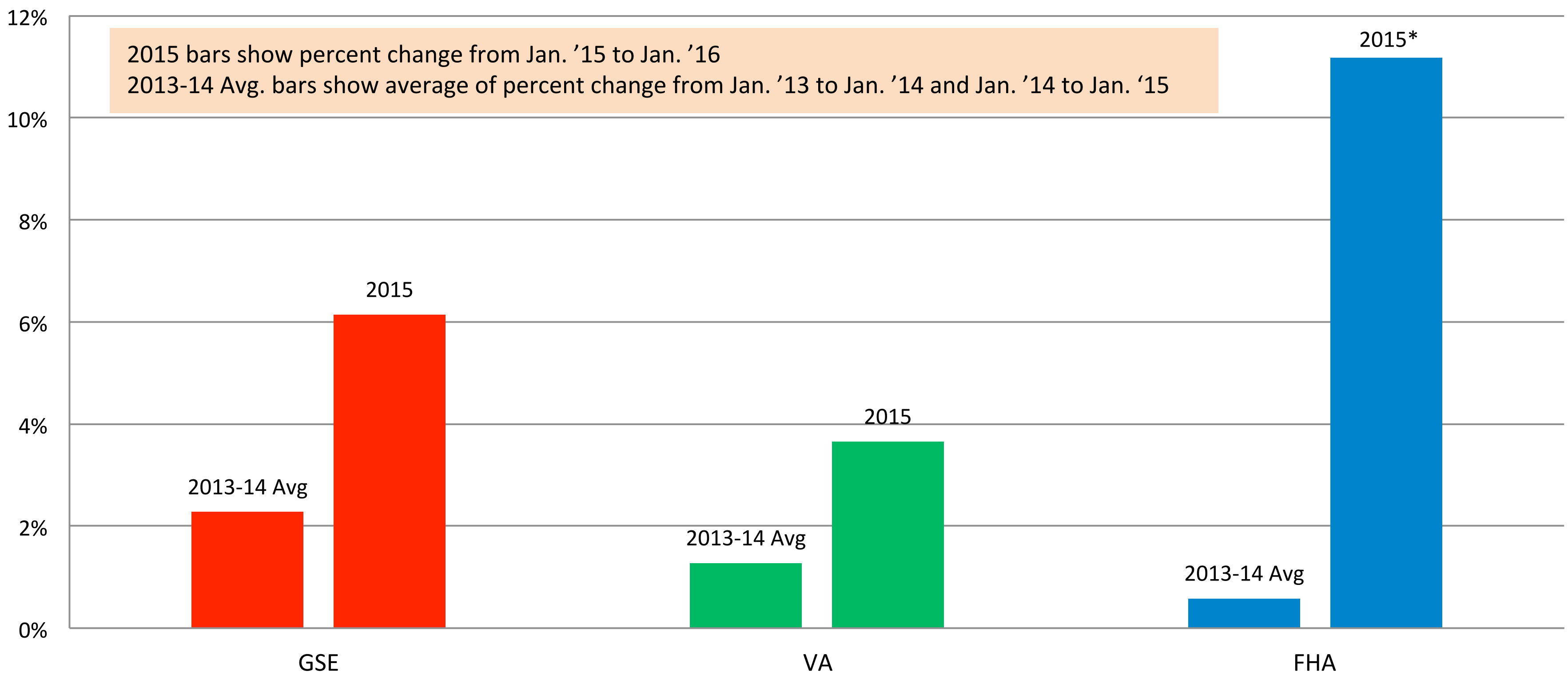
This ratio has moved substantially higher on a year-over-year basis since FHA's premium cut in early 2015 – another signal that recipients used the added buying power to purchase more expensive houses. Same applies to higher loan limits.



Source: AEI International Center on Housing Risk, www.HousingRisk.org.

FHA's MIP Cut and House Prices for First-time Buyers

Continued sharp price increase for homes purchased with FHA loans, reflecting boost to buying power from MIP cut. FHA price acceleration from 2013-14 is 7 to 8 percentage points more than for GSE- and VA-financed purchases.



*Excludes Jan. 2015 loans with the lower mortgage insurance premium.
Note: Price changes estimated from coefficients on monthly dummy variables in loan-level regressions that control for variation in CLTV, credit score, DTI, and property state. Regressions estimate median prices.
Source: AEI International Center on Housing Risk, www.HousingRisk.org.

FHA's MIP Cut = Bad Policy
Little Additional Accessibility, Higher Priced Homes

- 0.50% annual MIP cut effective on January 26, 2015
  - HUD: more than 250,000 new homebuyers over 3 years, making home ownership more accessible
  - MIP reduction added 7% in buying power which could result in demand pressure
  - Lower premium began to show up on loans with late-January origination date.

- FHA's share of agency purchase loans up 4.2 ppts. to 28.2% in Dec. from 24.0% in Dec. 2014
  - Nearly all of the share increase was at the expense of Fannie Mae and RHS[1]

- FHA's median credit score rose 5 points from Dec. 2014 to Dec. 2015, while that for the agency composite edged lower
  - Composite NMRI increased because FHA's looser underwriting allows manufacture of riskier loans
  - Taxpayer risk rose as FHA, with minimal capital, took business from private mortgage insurers

- From January 2015 to January 2016, the median price of FHA-insured homes for first-time buyers paying the lower premium went up 7% to 8% more than GSE- and VA-insured homes (study analyzed over 3 million loans, controlling for variation in CLTV, credit score, total DTI, seasonality, and property state)
  - This suggests that the extra 6% in buying power was used to purchase either larger, more expensive homes or that prices rose in response to increased demand pressure

- FHA on track to exceed HUD's original volume projection on a gross basis, but the number of net new agency homebuyers generated by MIP reduction likely to be fairly small

- Conclusion: premium cut did little to increase accessibility as the cut supported the purchase of higher priced homes financed with riskier loans. FHA 's volume increase appears to be largely a zero-sum game with three-quarters of the share pickup coming at the expense of Fannie and RHS.

[1] RHS' share decline may be due in part to changes in RHS property eligibility requirements made at about the same time of the FHA premium cut.

FHA Insurance Premium Cut – New Analysis

- We've shown before that FHA's Jan. 2015 MIP cut caused a sharp rise in prices of homes bought with FHA loans. Our new research addresses two questions:

- Question 1: How much of the rise reflects pure price pressure and how much reflects a shift to larger, higher-quality, or better-located homes?
  – Have begun to analyze this question with data from RealtyTrac
  – About ¼ of the acceleration in FHA-financed home prices vis-à-vis GSE-financed home prices is pure price pressure, which imposes a tax on all FHA buyers
  – The other ¾ is from buyers opting for bigger/better homes and/or better neighborhoods, which does not expand access to homeownership, the main benefit cited by FHA

- Question 2: How accurate was FHA's prediction that the cut would spur 250,000 first-time home purchases over the coming 3 years (≈ 83,000/year)?
  – FHA's first-time buyer volume increased about 180,000 in 1st year after MIP cut. Using the NMRI data, we estimate that roughly:
    - 85,000 of these loans (nearly half) were poached from the other Agencies
    - 60,000 represented market trend growth unrelated to the MIP cut
    - 35,000 went to new homebuyers brought in by the MIP cut
  – Upshot: FHA fell far short of its goal for new homebuyers despite a big rise in total volume