



# A Closer Look at the Data on First-Time Homebuyers

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**First-time homebuyers are the lifeblood of our housing system. They allow current homeowners to sell and move to a new town, a new job, a retirement community, or the bigger house next door. Because of their critical role in creating and sustaining a strong housing market, first-time buyers have long been an important focus of housing policy. Tailored support of this segment became particularly critical in the aftermath of the housing crisis, when the weak labor market and strict mortgage lending standards made it harder to purchase a first home. In 2009 and 2010, for example, the American Recovery and Reinvestment Act offered first-time homebuyers a tax credit of up to \$8,000 in an effort to promote homeownership and housing recovery.**

Given their central role and recent policy focus, it's important to accurately measure the percentage of first-time homebuyers. But traditional, widely accepted measures—such as those published by the National Association of Realtors (NAR)—are overbroad and sometimes misleading.

Until recently, a major problem in developing a more accurate measure has been the lack of publicly available data on the largest group of US mortgage loans: those backed by the Federal Housing Administration (FHA) and the government-sponsored enterprises (GSEs) Fannie Mae and Freddie Mac. Fortunately, the agencies began making loan-level data publicly available in 2013.<sup>1</sup> Accordingly, we can now calculate more accurately the share of first-time homebuyers.

This brief uses the newly available data to calculate the percent of first-time homebuyers in 2013 and 2014. Our calculations are based on the complete loan-level single-family purchase-money mortgage information released by the GSEs and Ginnie Mae, which guarantees and securitizes FHA-

insured loans.<sup>2</sup> We also combine our estimates with those reported by the Federal Housing Finance Agency (FHFA, the GSEs' regulator) and the FHA<sup>3</sup> to review the trend in first-time homebuyer shares over the past 14 years.

Our analysis is similar to a recent FHFA study, but it extends to more recent years and uses only the publicly available data, rather than the internal data the agency used (FHFA 2013). Our analysis reveals that although the percent of first-time homebuyers increased from 2011 to 2014 for GSE-guaranteed loans and FHA-insured loans, the national share of first-time homebuyers with either a GSE or FHA loan was 54 percent of all purchase mortgages in 2014, down from 57 percent in 2011. This change was likely driven by a decline in FHA's market share.

In addition, we identified a problem with Ginnie Mae's publicly reported data on FHA loans. Our analysis also explains why our finding of a 54 percent first-time homebuyer rate in 2014 is actually consistent with NAR's recent survey reporting that the share of first-time buyers was 33 percent in 2014.<sup>4</sup>

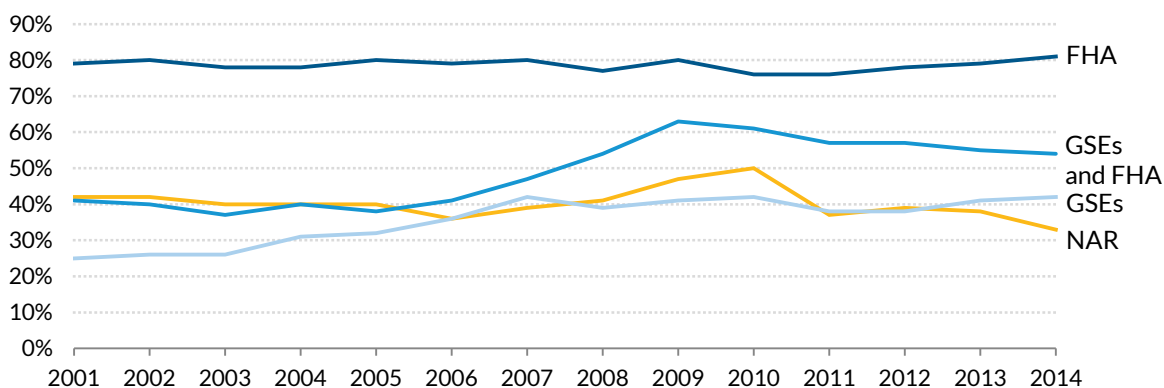
## First-Time Homebuyer Trends by Agency

### Fannie Mae and Freddie Mac

From 2001 to 2003, about one-quarter of GSE-guaranteed mortgages were made to first-time homebuyers for a home purchase. This share grew steadily during the housing boom to 42 percent in 2007. Between 2008 and 2012 mortgage interest rates fell significantly, leading to a spike in GSE refinances. As a result, the first-time homebuyer share had dropped to 38 percent by 2012. The only exceptions are 2009 and 2010, when the temporary tax credit lifted the first-time homebuyer share to 41 and 42 percent, respectively. In the beginning of 2013, the GSEs' refinance activity started to fall as interest rates edged up; the first-time homebuyer share bounced back to 42 percent in 2014.

FIGURE 1

#### First-Time Homebuyer Shares



Sources: eMBS, Federal Housing Finance Agency (FHFA), Federal Housing Administration (FHA), National Association of Realtors (NAR), and the Urban Institute.

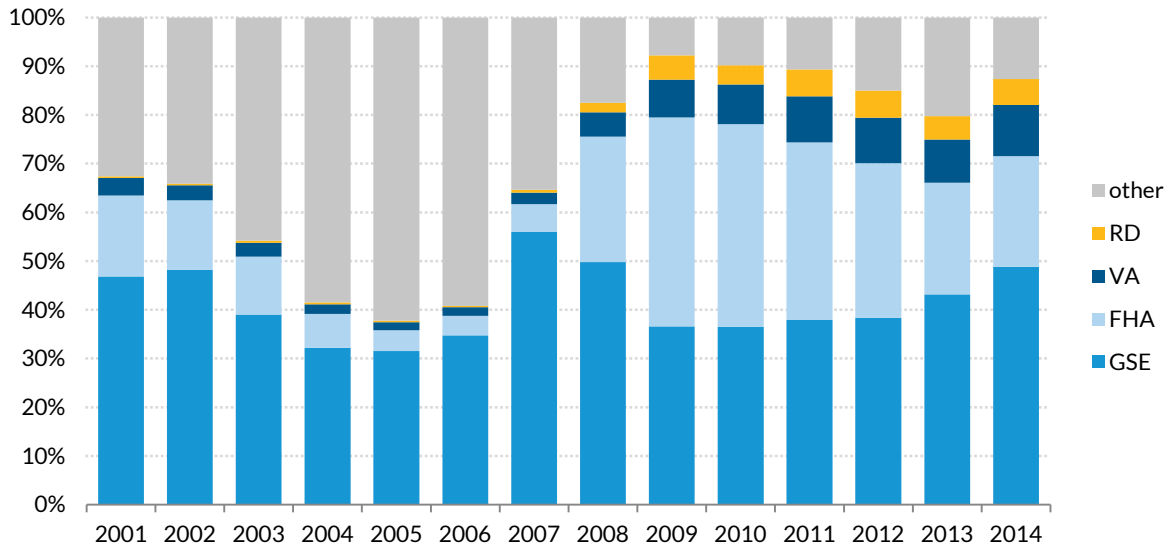
**Note:** The GSEs and FHA series measure the first-time buyer share of purchase loans for principal residences.

## Federal Housing Administration

The FHA helps ensure access to homeownership for households not adequately served by the conventional market, especially low- to median-income families and first-time homebuyers. This role is evident from figure 1, which shows the share of first-time homebuyers among FHA-insured purchase loans has always fluctuated around 80 percent and reached a high of 81 percent in 2014.<sup>5</sup>

Since the meltdown of the housing market in 2007, the GSEs and the FHA have stepped in to provide the vast majority of home mortgage financing. Figure 2 shows the changes in the loan count composition of all first-lien purchase-money mortgage originations for principal residences in the United States over time, covering the GSEs, the FHA, the Department of Agriculture, and the Veterans Administration as well as private-label and bank portfolio loans.<sup>6</sup> The share of purchase mortgages backed by the US government either implicitly (as in GSE guarantees) or explicitly (as in FHA insurance) rose from 39 percent in 2006 to 62 percent in 2007, when the private sector evaporated. Since then, these entities have continued to dominate the market, accounting for between 67 and 79 percent of all purchase mortgage loans between 2008 and 2014.

**FIGURE 2**  
**Purchase Mortgage Market Composition by Loan Count**



**Sources:** Home Mortgage Disclosure Act, Securities Industry and Financial Markets Association, eMBS, CoreLogic, and the Urban Institute.

**Notes:** Principal residences only. FHA = Federal Housing Administration; GSE = government-sponsored enterprises; RD = US Department of Agriculture Rural Development loan; VA = Veterans Administration.

Because the FHA has always been more focused on first-time homebuyers than the GSEs, the joint first-time homebuyer time series tends to be driven by shifts in FHA's market composition. Following the crisis, the FHA's share of the purchase mortgage market mushroomed from around 6 percent in 2007 to over 40 percent in 2010. The joint first-time homebuyer share thus reflected FHA's higher share. From 2011 to 2014, as FHA insurance premiums rose significantly, more borrowers shifted to conventional loans; as a result the FHA market share shrank to 23 percent in 2014. Consequently, the joint first-time homebuyer share declined from 61 percent in 2010 to 54 percent in 2014, even while both FHA and the GSEs' own shares edged up in the same period.

## Reconciling Our Calculation with NAR's Calculation

While NAR's survey of recent homebuyers looks at all recent buyers, our analysis focuses only on buyers who obtain GSE or FHA mortgages, since the vast majority of first homes were financed through these agencies, particularly after the housing crisis. The bright blue line in figure 1 represents the combined GSE and FHA first-time homebuyer share. Before 2006, the combined share fluctuated around 40 percent. Historically, the NAR estimate for first-time homebuyers has also hovered around 40 percent, which is widely regarded as the healthy first-time homebuyer share. (The temporary spike in 2009 and 2010 to 47 and 50 percent, respectively, coincided with the new tax credit program.)

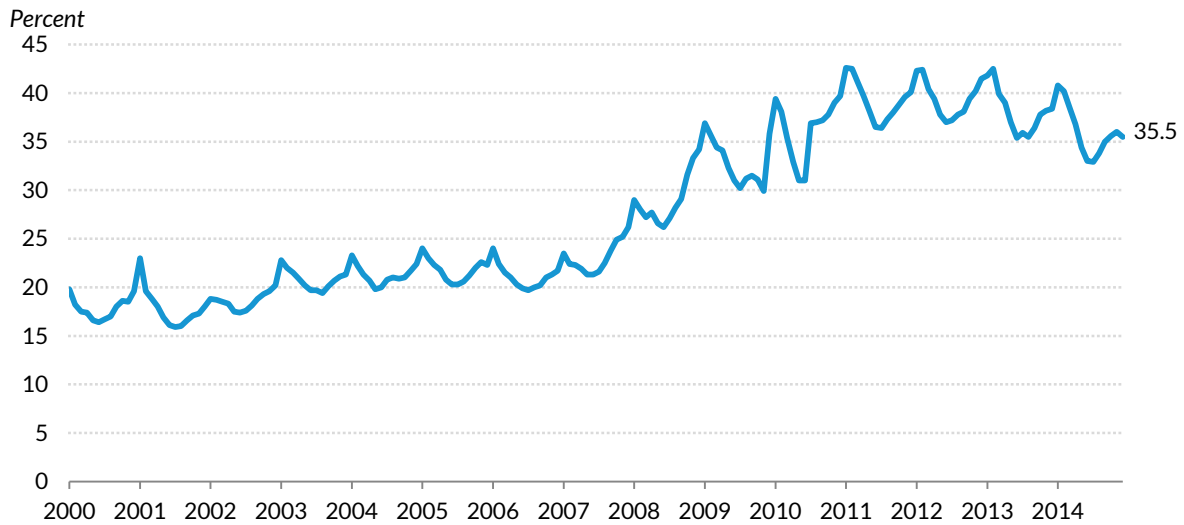
After 2006, the numbers diverge and, as of 2014, NAR estimated that the first-time homebuyer share was 33 percent while our analysis puts it at 54 percent. Why are these numbers so far apart? Two differences in the NAR sample and our work are important:

1. **Sample size.** The NAR survey examined a relatively small sample of recent homebuyers and sellers: 148,011 in 2014, with a 6.1 percent response rate. Our survey looked at over 1.8 million loans.
2. **Different denominators.** NAR's survey includes home purchases that differ in two important ways from the ones we analyzed. First, our loans were limited to mortgages used to purchase homes the buyers will live in (owner-occupied). The NAR survey includes owner-occupied homes as well as homes purchased for investment or as vacation homes. Second, we analyzed only mortgage loans. The NAR survey includes homes purchased with no mortgage at all (all-cash purchases).

In particular, because the NAR survey includes cash sales, the difference between our two numbers could be partly explained by the nationwide surge in cash sales in the same period (figure 3). Thanks to short sales and foreclosures, the collapse of the housing market provided an excess supply of cheap single-family homes that were purchased with cash, mostly by investors with an eye on rising home values and a stream of rental income. A surge in cash sales by investors would reduce the percentage of first-time homebuyers in any survey that counts both cash sales and mortgage purchases.

FIGURE 3

Cash Sales as a Share of all US Home Sales



Source: CoreLogic.

Taking the denominator differences into account also helps explain the discrepancy in the numbers. For example, in 2014, the joint GSE and FHA share would drop from 54 to 49 percent if we added purchase mortgages for purposes other than principal residences. Given the dominant share of these agencies in the mortgage market, this change would mean that about 49 of every 100 purchase loans would be taken out by first-time buyers. Assuming 30 percent of purchase transactions were all cash,<sup>7</sup> for each of these 100 purchase loans there would be 143 total transactions ( $100/0.70$ ). So the first-time homebuyer share of all transactions would be around 34 percent ( $49/143 = 0.34$ ) in 2014, which is very close to NAR's 33 percent. Once we account for these two main differences,<sup>8</sup> the joint GSE and FHA share is fairly consistent with the share calculated by NAR.

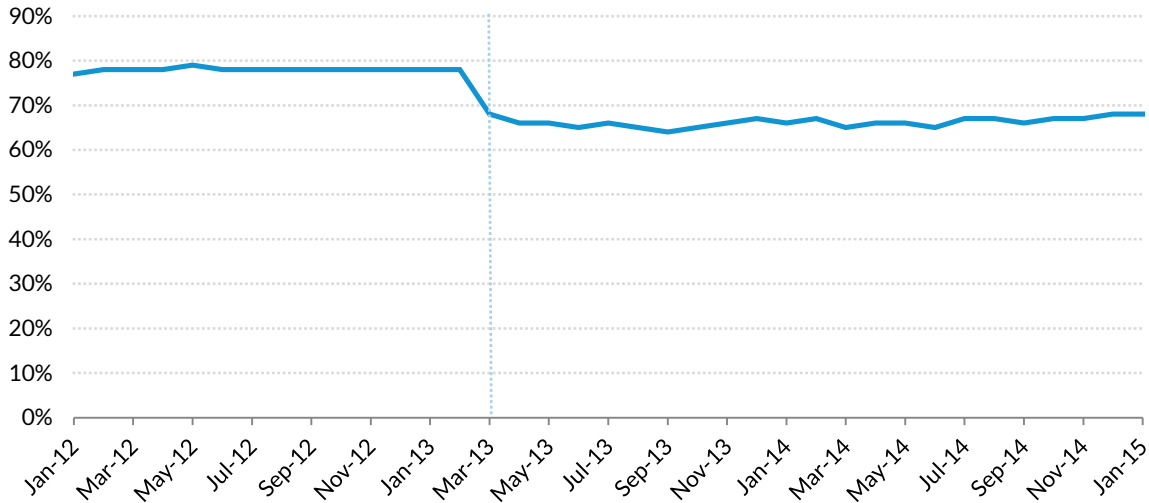
## FHA First-Time Homebuyer Data Issue

Since the housing crisis, the FHA has originated nearly one in three purchase mortgages; around 80 percent of these loans have gone to first-time buyers. The FHA no doubt performs a key role in providing support to these households. Thus, solid data on these loans are critical to any effort to evaluate the FHA's current programs, develop insight on the housing market, and inform future housing policies.

However, the FHA loan-level data are still available only for internal use. The only public FHA loan-level information available is Ginnie Mae's single-family mortgage-backed securities (MBS) loan-level data. Starting in September 2012, Ginnie Mae required all issuers to provide a first-time homebuyer indicator. Figure 4 shows the monthly time series of the first-time homebuyer share of FHA purchase loans for primary residences, based on the Ginnie Mae data.

FIGURE 4

### FHA First-Time Homebuyer Share According to Ginnie Mae Mortgage-Backed Securities Loan-Level Data



Source: eMBS.

Note: Dotted line marks change from internal FHA data to Ginnie Mae issuer-reported data.

According to the Ginnie Mae data, the FHA first-time homebuyer share remained stable at around 78 percent until March 2013, when the share dropped abruptly to 68 percent. Since then it has fluctuated within a small range of 64 to 68 percent. Although it may appear alarming, this sharp 10 percentage point drop actually reflects only a change in the structure of the data. According to Ginnie Mae, before March 2013, first-time homebuyer information was pulled from internal FHA data. These data are consistent with FHA’s annual reporting of 78 percent for 2012 (HUD 2012). Starting with March 2013, Ginnie Mae began to use its own first-time homebuyer information as reported by the issuers, which yielded significantly lower values than those generated from FHA’s internal data (79 and 81 percent for 2013 and 2014, respectively; HUD 2013, 2014).

The potential cause for this data discrepancy could be that Ginnie Mae issuers are underreporting first-time homebuyer information; the data element was a relatively new addition in late 2012. Ginnie Mae is aware of this data disparity and is identifying and correcting it by alerting issuers with deficient information. Until the data issue is fixed, however, we urge Ginnie Mae to revert to reporting the first-time homebuyer information using the FHA data, so the reporting is consistent and comprehensive.

Although the FHA routinely reports monthly and annual summary first-time homebuyer shares, only rich information from loan-level data currently provided through Ginnie Mae can help us link first-time homebuyer status to borrowers’ characteristics and loan performances.<sup>9</sup> Such links enable more in-depth research in this important area, such as the comparison analysis described in the next section.

# First-Time Homebuyers versus Repeat Homebuyers

We also compared first-time homebuyers with repeat homebuyers using GSE and FHA owner-occupied purchase loan-level data (table 1).<sup>10</sup> We were able to examine the differences between these two types of borrowers in loan amounts, credit scores, loan-to-value ratios (LTV), debt-to-income ratios (DTI), and mortgage rates for loan originations in 2014 (the 2013 comparison results, which are similar to 2014, are available upon request). Earlier years as well as many other important comparisons, such as age, income, race/ethnicity, property value, and marital status, are not available in the public data.

TABLE 1

Comparison of First-Time and Repeat Homebuyers, 2014 GSE and FHA Originations

Characteristic	GSE		FHA		GSE and FHA	
	First-time	Repeat	First-time	Repeat	First-time	Repeat
Loan amount (\$)	210,050.00	236,539.00	169,650.00	196,058.00	192,785.00	228,201.00
Credit score	741.92	756.16	682.14	684.31	716.4	741.37
LTV (%)	85.06	79.41	95.44	94.85	89.22	82.28
DTI (%)	33.45	34.13	40.34	41.43	36.32	35.61
Loan rate (%)	4.41	4.29	4.24	4.21	4.34	4.27

Sources: eMBS and the Urban Institute.

Note: Purchase loans for principal residences only. DTI = debt-to-income ratios; LTV = loan-to-value ratios.

As shown in table 1, first-time homebuyers took out smaller loans. This finding is unsurprising, because these buyers were more likely to have less savings and lower incomes and thus to purchase a cheaper property. Although GSE borrowers originated larger loans, the gap in the average loan amounts between first-time and repeat homebuyers was slightly above \$26,400 for the GSEs and FHA.

The average credit score was lower for first-time homebuyers, as they were more likely to be young and still building their credit profile. The average score of first-time homebuyers lagged 14 points behind the score of repeat homebuyers for GSE purchase loans, compared with only a 2 point difference for FHA loans.

Often in the beginning of their careers and with low savings and no home equity, first-time homebuyers had lower down payments than repeat buyers. For GSE borrowers, the average LTV for first-time buyers stood at 85 percent; the average repeat buyer was able to pay slightly more than 20 percent up front to avoid mortgage insurance. Because of its low down payment requirement, FHA's LTV averaged about 95 percent for both types of buyers.

“Back-end” DTI is reported in table 1. It is usually higher than “front-end” DTI as the debt contains other payment obligations (e.g., credit card payment) besides homeownership-related obligations (e.g., mortgage payment, property tax). Despite higher incomes, repeat homebuyers had to make even higher monthly payments, exhibiting a slightly higher DTI on average.

With higher credit scores and lower LTVs, the GSE repeat homebuyers enjoyed more favorable interest rates, 12 basis points lower than their first-time buyer counterparts. By contrast, the rates were about the same for FHA borrowers, as both types of buyers shared similar credit scores and LTVs.

## Conclusion

As the economy slowly recovers from the housing crisis, first-time buyers still face several obstacles on the road to homeownership, including a weak labor market, the tight credit box, higher housing prices, burdensome student loans, and rising rents. Holding the lion's share in the purchase mortgage market, the FHA and the GSEs play a critical role in providing support to first-time homebuyers to overcome those difficulties. According to publicly available agency MBS loan-level data, both the GSE and FHA first-time homebuyer shares went up from 2011 to 2014. But the overall share of first-time homebuyers among combined pools of GSE and FHA purchase borrowers edged down to 54 percent in 2014, partly driven by the shrinking FHA market share. In addition, during the past two years, an average first-time homebuyer was more likely than an average repeat buyer to take out a higher loan and have a higher credit score and lower LTV and DTI, thus obtaining a lower interest rate. Our future research will explore how economic and housing market conditions affect repeat homebuyers as well.

More research is needed to better understand this important area, but the lack of data poses a major challenge. Although rich data have been collected and used within the GSEs and FHA, only since 2013 has a small part of this information—agency MBS loan-level data—been available to the public. The discrepancy in the first-time homebuyer shares between Ginnie Mae and the FHA calls for the FHA's loan-level information to be made publicly available. Even the released GSE and Ginnie Mae loan-level data are missing many key fields (e.g., income, age, gender, race/ethnicity, loan performance) that could help make future analysis and research more in depth.



## Notes

1. Freddie Mac began releasing loan-level information for the mortgages underlying its new mortgage-backed securities (MBS) issuances in December 2005. Similar data were not available from Fannie Mae and Ginnie Mae until after 2013.
2. The FHA reports the first-time homebuyer share in its monthly production reports, but it has not made its loan-level data available directly. Instead, we obtained this information from Ginnie Mae's MBS data. (FHA production reports are available at [http://portal.hud.gov/hudportal/HUD?src=/program\\_offices/housing/hsgroom/fhapodrpt](http://portal.hud.gov/hudportal/HUD?src=/program_offices/housing/hsgroom/fhapodrpt).)
3. See the US Department of Housing and Urban Development's annual reports to Congress on the financial status of the FHA mutual mortgage insurance fund, available at <http://portal.hud.gov/hudportal/HUD?src=/fhammifrpt>. Because the public data were not available until 2013, the 2001–12 annual first-time homebuyer shares shown in figure 1 use the FHFA and FHA calculations from their internal data.
4. National Association of Realtors, “NAR Annual Survey Reveals Notable Decline in First-Time Buyers,” news release, November 3, 2014.
5. Because of the data discrepancy between FHA and Ginnie Mae (as discussed on page 4), 2013–14 FHA first-time homebuyer shares were first calculated based on Ginnie Mae loan-level data and then adjusted to match the estimates from FHA's annual reports.
6. Figure 2 differs from the origination volume and composition chart on page 8 of our April 2015 chartbook (Goodman et al. 2015) in three ways: (1) it is by loan count, not dollar volume; (2) it is for purchase-money originations only, excluding refinance originations; and (3) it is limited to principal residences.
7. The 2014 all-cash sale share reported by NAR is slightly lower than the CoreLogic share depicted in figure 3.
8. The differences between the combined GSE and FHA measure and the NAR survey have several other causes. For example, the GSEs and FHA have a broader definition of first-time homebuyers than NAR (US Department of Housing and Urban Development, “HUD HOC Reference Guide: First-Time Homebuyers,” archived November 7, 2012, <http://archives.hud.gov/offices/hsg/sfh/ref/sfh3-02.cfm>).
9. Given the data issue, we adjusted our 2013–14 FHA first-time homebuyer share calculations from Ginnie Mae data in figure 1 to match the FHA's summary reports.
10. The underreporting issue with the Ginnie Mae data may introduce some bias to the FHA comparison results.

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