The Office of Economic Policy

HOUSING DASHBOARD

May 17, 2016

The housing recovery continues to support broader economic activity. Residential investment rose at an annual rate of 15 percent in 2016Q1, contributing 0.5 percentage point to GDP growth. Meanwhile, residential construction employment has continued to rise steadily. Single-family housing starts appear to remain on a gradual uptrend, but multifamily starts have pulled back somewhat from the strong levels seen in the first half of last year.

National home price appreciation has moderated—from a double-digit pace in late 2013 and early 2014 to a more sustainable mid-single-digit pace now. That said, home price valuations look to be somewhat elevated relative to pre-bubble norms. Housing affordability for the typical family has diminished considerably because of the rebound in home prices but remains high by historical standards because of very low mortgage rates.

Although some mortgage borrowers continue to struggle in the wake of the crisis, delinquency and foreclosure rates are closing in on their pre-crisis ranges. The number of distressed sales continues to drop, and the number of underwater borrowers is down by nearly two-thirds since 2011.

This month's dashboard includes a special topic that explores housing supply conditions in the United States, including the availability of homes for sale and how supply conditions appear to be affecting different geographies and market segments.

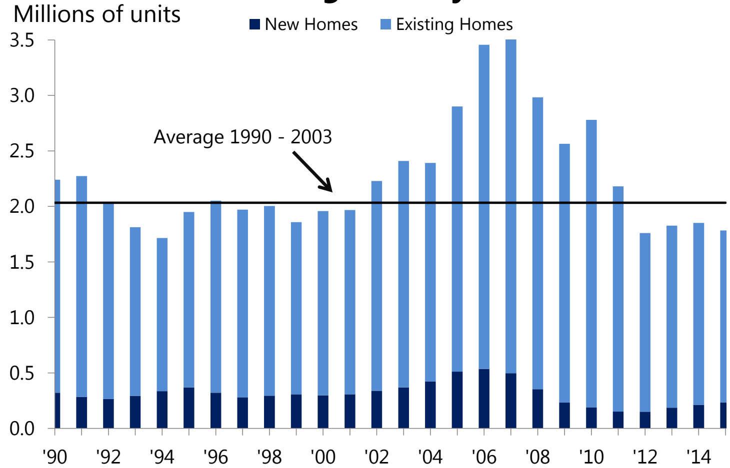
Housing Market Flash

Tuesday, May 17, 2016

		Pre-bubble norm (2000-2002 average)	Trough	Current level	Current 12-month average versus year-earlier value		Current level versus pre-bubble norm (2000-2002 average)
Single-family homes							
Sales (thousands)	**New**	921	270 Feb-11	511 Mar-16	8.5%	Improved	-44.5%
	Existing	4,779	3,060 Jul-10	4,760 Mar-16	6.1%	Improved	-0.4%
Inventory of homes available for sale (thousands)	**New**	311	142 Jul-12	246 Mar-16	21 *thousands*	Improved	-65 *thousands*
	Existing	1,836	1,550 Dec-15	1,740 Mar-16	-47 *thousands*	Weakened	-96 *thousands*
Construction activity (thousands)	**Housing starts**	1,289	353 Mar-09	778 Apr-16	13.4%	Improved	-39.6%
	Building permits	1,257	337 Jan-09	736 Apr-16	9.9%	Improved	-41.5%
Prices (index, Jan 2000 = 100)	**CoreLogic HPI**	115.7	137.3 Nov-11	190.0 Mar-16	5.4%	Improved	64.2%
	Inflation-Adjusted CoreLogic HPI	111.6	101.9 Nov-11	139.3 Mar-16	6.3%	Improved	24.8%
Housing affordability (NAR, index=100 when median family income qualifies for 80% LTV mortgage on a median priced home)		127	101.1 Jul-06	169.3 Mar-16	-2.6%	Weakened	33.7%
Sentiment							
Homebuilder (NAHB, over 50 means majority view conditions positively)		59	8 Jan-09	58 May-16	5 *point(s)*	Improved	-1 *point(s)*
Home-buying conditions (Reuters/Umich, index = good time - bad time + 100)		152	117 Oct-08	156 May-16	-3 *point(s)*	Weakened	4 *point(s)*
Demographics							
Household formation (thousands)		1,113	100 2008-Q4	541 2016-Q1	-261 *thousands*	Weakened	-572 *thousands*
Homeownership rate (percent)		67.7	63.5 2015-Q2	63.6 2016-Q1	-0.6 *percentage point(s)*	Weakened	-4.1 *percentage point(s)*

Since 2012, the inventory of unsold single-family homes has been 9 to 13 percent below its pre-bubble average. This shortfall mostly owes to fewer existing homes for sale, which typically make up the bulk of sales inventories. In 2015, the total number of unsold homes sat at 1.8 million, the second lowest it has been in 22 years.

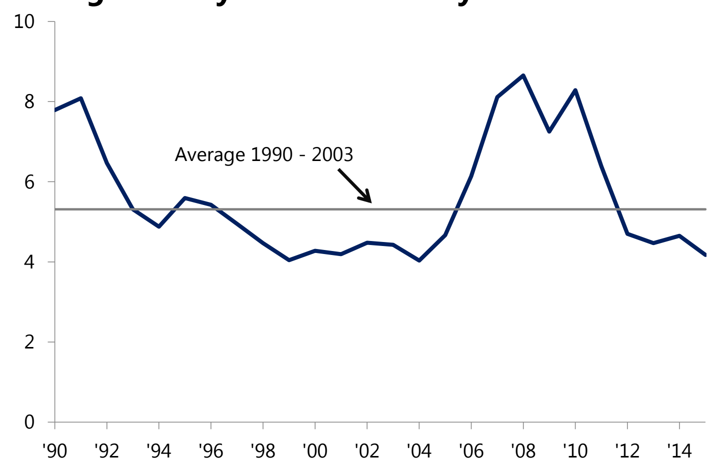
Unsold Single Family Homes



Source: National Association of Realtors, Census Bureau, Haver Analytics & Treasury calculations.

The current low level of the inventory to sales ratio is also suggestive of a low supply of homes for sale. In a balanced housing market, where the supply of homes for sale is sufficient to meet the implied demand for homes given by demographics and demolitions, it typically takes six to seven months to exhaust the available inventory of homes for sale. During the housing crisis, housing supply expanded and sales volume declined, increasing the inventory to sales ratio to a peak of 8.7 in 2008. By 2015, the ratio fell to 4.2, below its pre-bubble average.

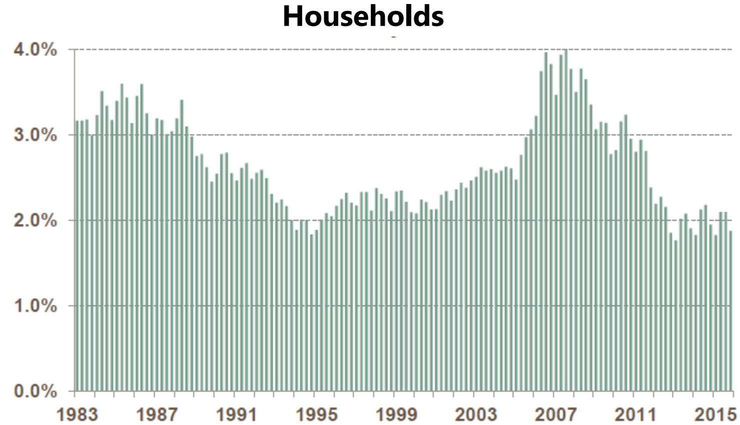
Single Family Home Inventory-to-Sales Ratio



Source: National Association of Realtors and Census Bureau.

The number of homes for sale as a percent of the number of households remains below pre-bubble levels. During the late 1990s and early 2000s, there were around 2 to 2.5 homes for sale for every 100 households. This figure increased to nearly 4 homes for sale per 100 households during the housing bubble. In more recent years, this figure has dropped to below 2 homes per hundred households.

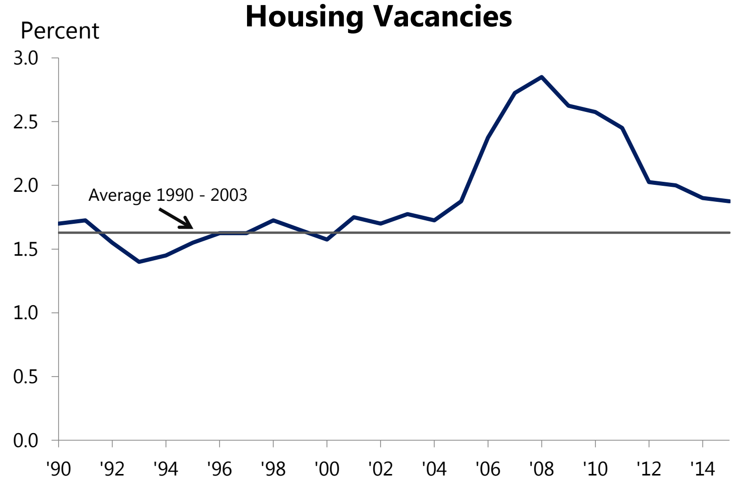
Homes-for-Sale Inventory as a Percent of Households



Source: CoreLogic.

Housing vacancies are down to 1.9 percent, approaching their pre-bubble average of 1.6 percent. The vacancy rate measures the number of vacant homes for sale as a percent of the housing stock that could be owner-occupied. Lower rates of housing vacancies indicate a tighter housing market, as there are fewer homes on the market as a proportion of the total housing stock.

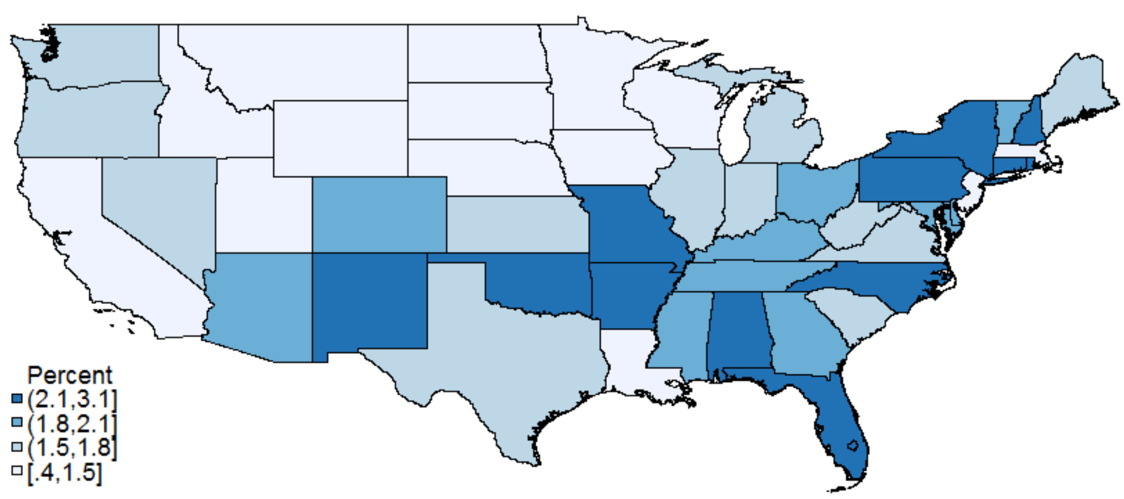
Housing Vacancies



Source: Census Bureau

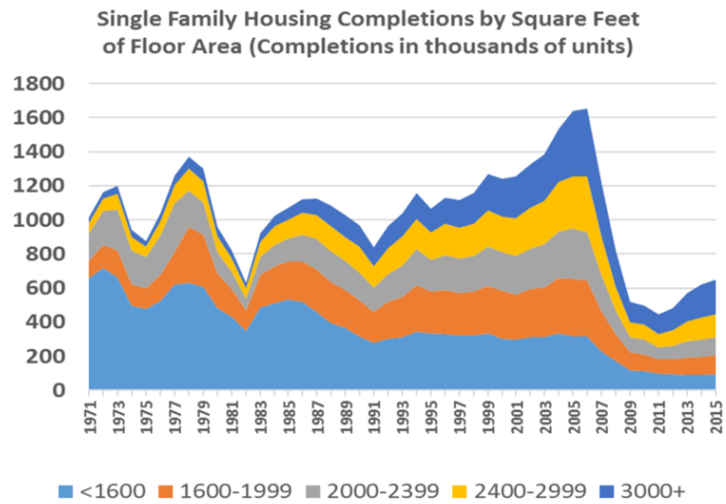
Housing vacancies vary considerably by state. Among those with low vacancies, shaded in light blue, many are western states like Utah, South Dakota, and Wyoming that were less affected by the housing crisis and have had consistently low vacancies over the past ten years. Other states with low vacancies include North Dakota and Texas, where net migration has been positive due to the oil and gas boom. States with high vacancy rates include New Jersey and Florida, where the foreclosure inventory remains elevated due to delays in processing foreclosures.

Housing Vacancies by State, 2015Q4



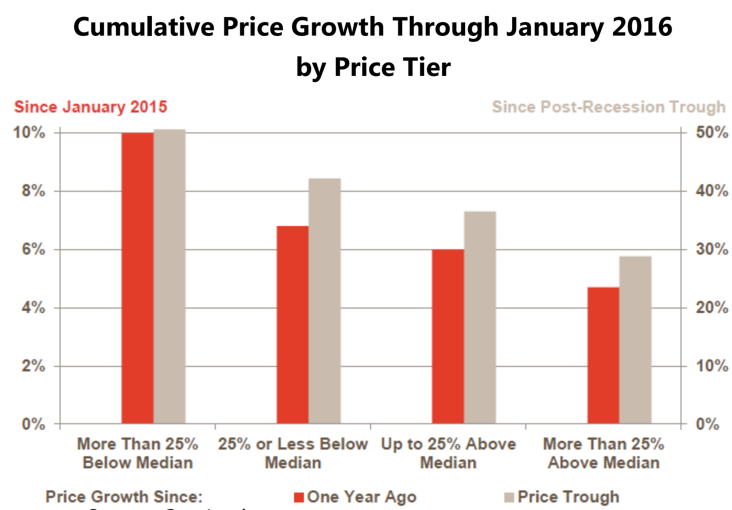
Source: Census Bureau. AK vacancy rate 2.3, HI vacancy rate 1.4.

The size of newly built homes has changed in recent years, with the construction of smaller homes lagging behind historical levels. Before 2003, homes less than 1600 square feet, typically considered starter homes, accounted for around 30-40 percent of the market, while homes greater than 3000 square feet were around 15 percent. Since 2011, 30 percent of newly-built units have been large homes, while the starter market share has been just 15 percent. Damped construction of smaller units is limiting starter home availability for first-time homebuyers.



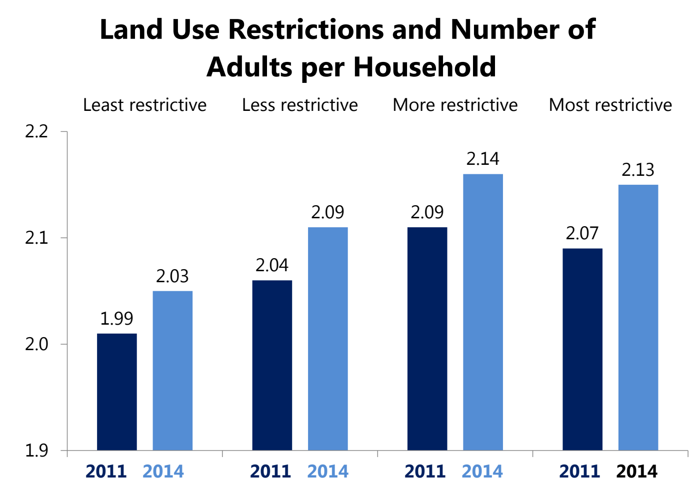
Source: Calculated Risk and Census Bureau.

Price increases have been strongest for homes priced below the median, reflecting in part the slowdown in new construction of starter homes. Since the recession, the least expensive homes (less than 25 percent of the median home price) have seen prices rebound more than 50 percent (gray bars) through January 2016, compared with just under 30 percent for homes priced more than 25 percent above the median. In the year ending January 2016, the least-expensive homes posted 10 percent price gains (red bars) versus 4 percent for the most expensive homes.



Source: CoreLogic.

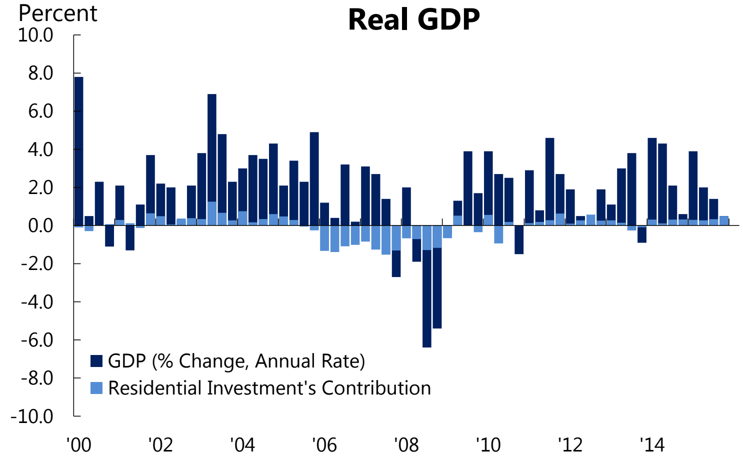
Restrictive land-use regulation is one explanation for why the supply of starter homes has lagged. Typically, rising prices signal to builders that new construction is likely to be profitable. However, restrictive land-use regulations discourage building and tilt construction in favor of more expensive homes, both of which worsen affordability. With rising housing costs, more adults are likely to share their home with family or friends. Compared to 2011, the number of adults per household in 2014 rose by slightly more in cities with more restrictive regulations.



Source: Zillow

Residential investment continues to support GDP growth. Residential investment rose at an annual rate of 15 percent in 2016Q1, adding 0.5 percentage point to real GDP growth, surpassing the 0.3 percentage point average contribution over the previous four quarters. (The recent flatness in housing starts will take some time to be reflected in residential investment because of the lags associated with construction.)

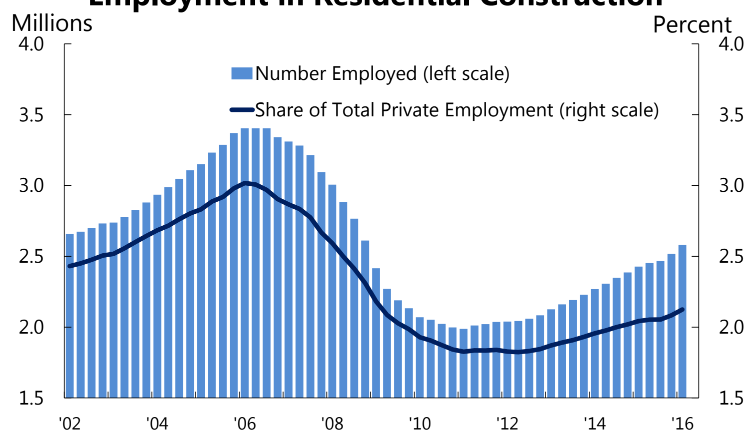
Residential Investment's Contribution to Real GDP



Source: Bureau of Economic Analysis

Employment in residential construction continues to recover. Over the past year, it has increased by 11,700 jobs per month, compared with 12,500 jobs per month in the year-earlier period. The level of employment remains relatively low: residential construction employment totaled just under 2.6 million workers in 2016Q1, accounting for roughly 2.1 percent of total private payroll employment, compared with around 2.6 percent in the early 2000s.

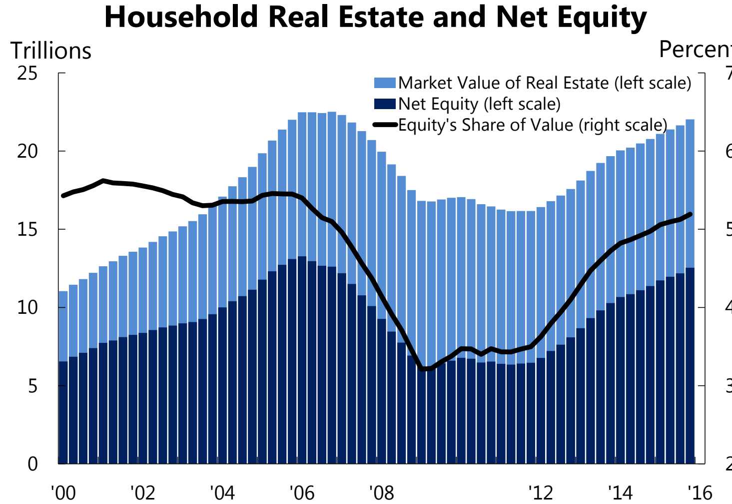
Employment in Residential Construction



Note: Includes those employed directly in residential construction as well as related specialty trades.
Source: Bureau of Labor Statistics

Housing wealth is nearing its earlier peak. The value of household real estate reached \$22.0 trillion in 2015Q4, up from a low of \$16.2 trillion in 2011Q4. The current level is close to its 2006Q4 peak, but the sustainable level is higher than in 2006 because of population-driven growth in the housing stock and overall inflation.

Household Real Estate and Net Equity



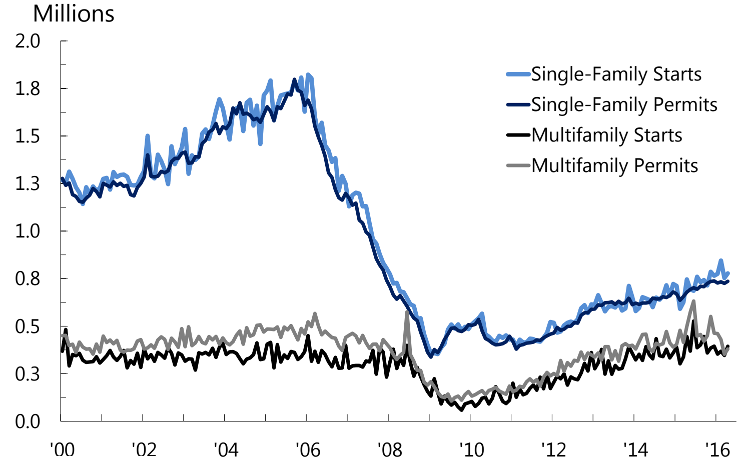
Source: Federal Reserve Board

Housing Starts and Inventories

May 2016

Since last summer, housing starts have been about flat, as further increases in single-family starts have about offset a pullback in multifamily starts. Single-family starts (light blue line) rebounded in April, and appear to be on a gradual uptrend. Multifamily starts (black line) surged in the first half of 2015 but have since moderated.

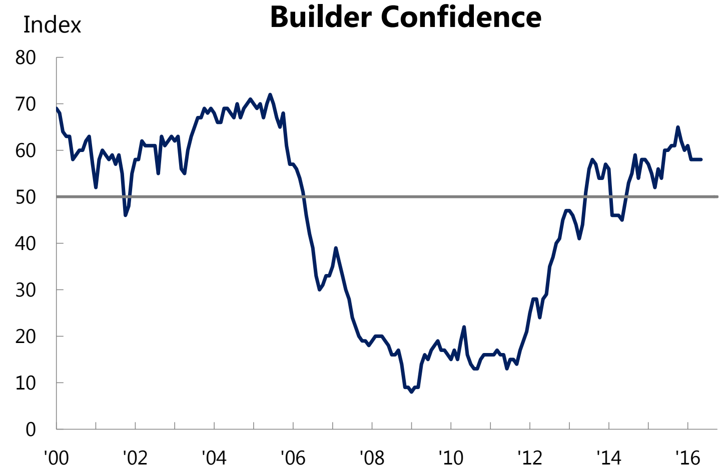
Starts and Permits



Source: U.S. Census Bureau

Builder confidence remained upbeat in May. The National Association of Homebuilders index has recorded readings above 50 (meaning a majority of builders view the market positively) for the last 23 months. All three of the index's components—sales expectations over the next six months, current sales, and buyer traffic—are above their 2014 averages.

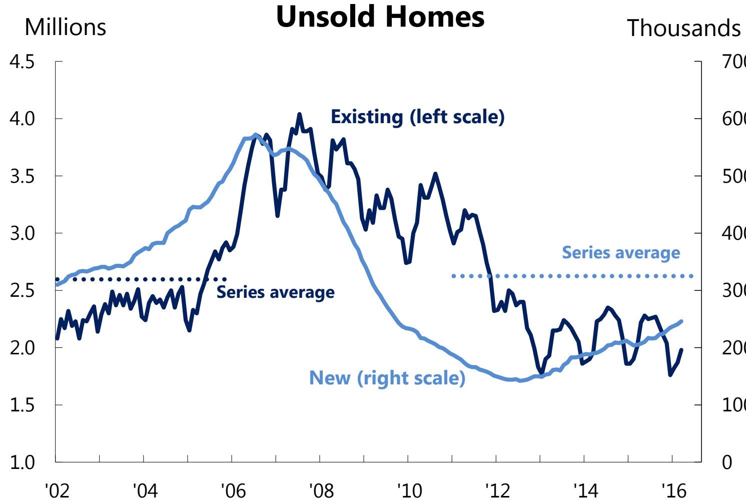
Builder Confidence



Source: National Association of Homebuilders

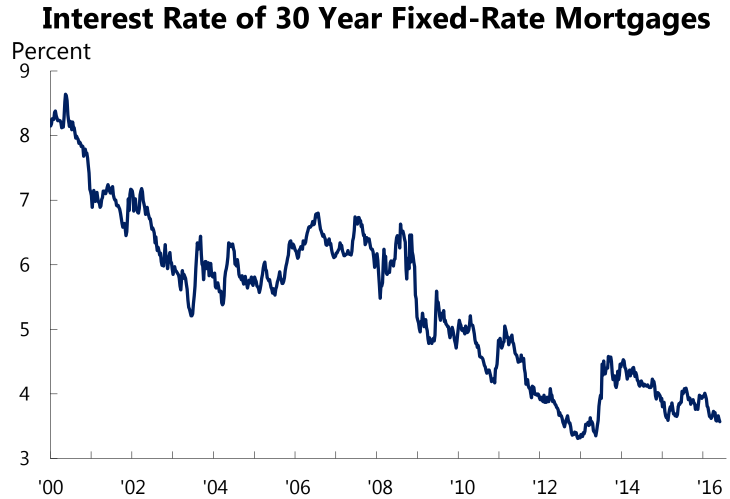
The inventory of homes for sale remains well below historical averages. The stock of existing homes for sale (dark blue line) was at 1.98 million units at the end of March, up from 1.76 million in December, which was the lowest level since December 1999. The stock of new homes for sale (light blue line) was at a 7½-year high of 246,000. At the current sales pace, there is 4.5-month supply of existing homes available for sale; for new homes, the available inventory is equivalent to a 5.8-month supply.

Unsold Homes



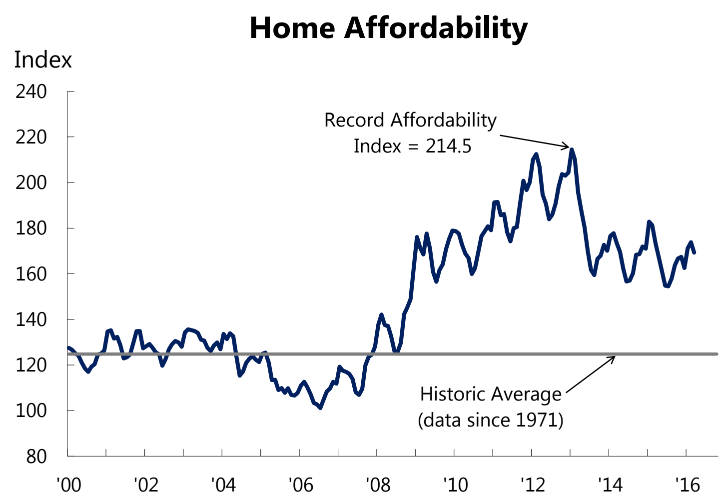
Source: National Association of Realtors and U.S. Census Bureau

Mortgage interest rates remain very low by historical standards. The average interest rate on new 30-year fixed-rate conventional mortgages settled at a three-year low of 3.57 percent in the week ending May 12. The current rate is only 26 basis points higher than the lowest rate recorded in 2012.



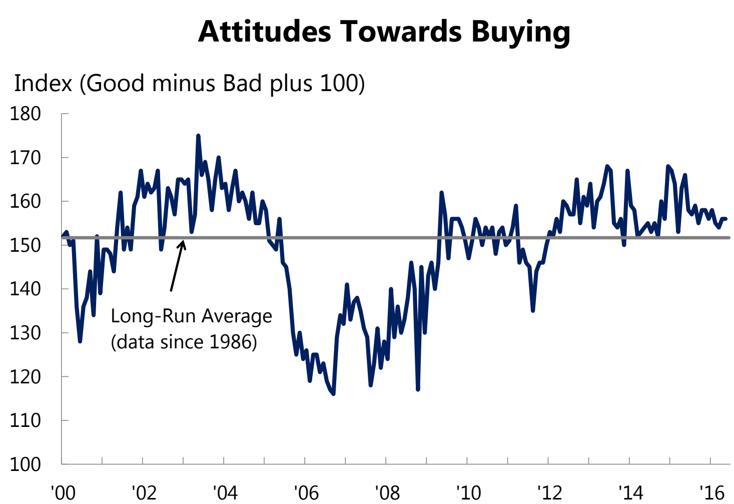
Source: Freddie Mac

The National Association of Realtors Housing Affordability Index suggests that housing remains affordable for the typical family. Affordability has diminished considerably since 2013 as home prices have risen, but has stabilized recently due to relatively low mortgage rates. (Note that the index assumes a 20 percent down payment; interest rates would be higher and affordability would be lower for a family that made a smaller down payment).



Source: National Association of Realtors

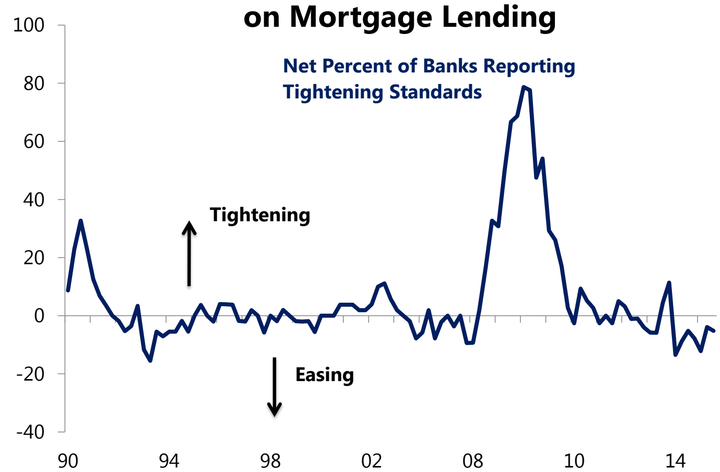
Households remain positive about home buying conditions. The University of Michigan Consumer Survey's "Good Time to Buy" Index remained slightly higher than the long-term average in mid-May. Low interest rates continue to be the main factor cited when respondents were asked why home-buying conditions are good.



Source: University of Michigan Consumer Survey

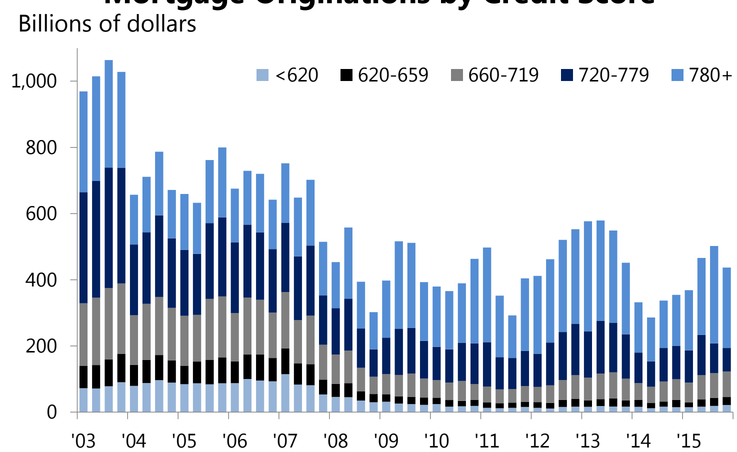
Senior loan officers at banks report easing mortgage lending standards in recent quarters. The last seven quarters mark the first period of sustained easing since the period of dramatic tightening during the financial crisis. (Note that the level of the line shown corresponds to the change in lending standards, with values below 0 representing an easing of lending standards and values above 0 representing a tightening).

FRB Senior Loan Officer Opinion Survey on Mortgage Lending



Despite the easing, lending is still restrained, and riskier borrowers continue to have very limited access to mortgage credit. Mortgage originations have risen, on net, over the past year, but the pick-up has been driven largely by borrowers with credit scores above 780. Originations by borrowers with credits scores below 780 are well below pre-crisis levels. Almost no mortgages are being extended to borrower with FICO scores below 660.

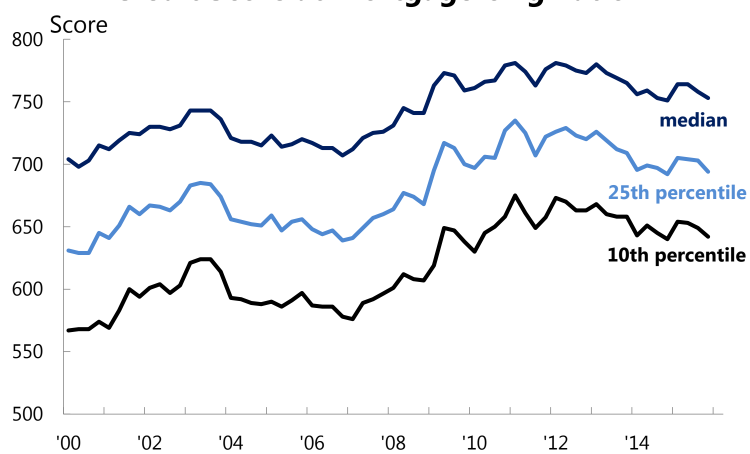
Mortgage Originations by Credit Score



Source: FRBNY Consumer Credit Panel/Equifax
Note: Credit Score is Equifax Riskscore 3.0;

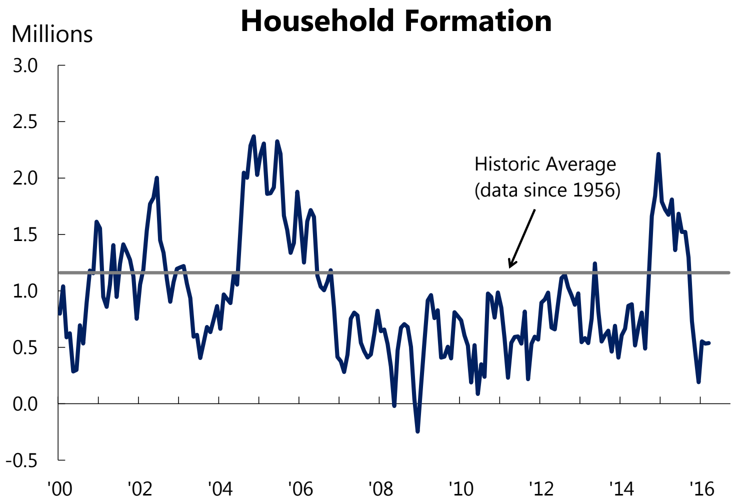
The median FICO score of newly originated mortgages has fallen slightly in recent quarters to around 750, but is still up from roughly 700 in the early 2000s. At the 10th percentile, the FICO score for new mortgages was down to 642 by the end of 2015, compared with less than 600 in the early 2000s.

Credit Score at Mortgage Origination



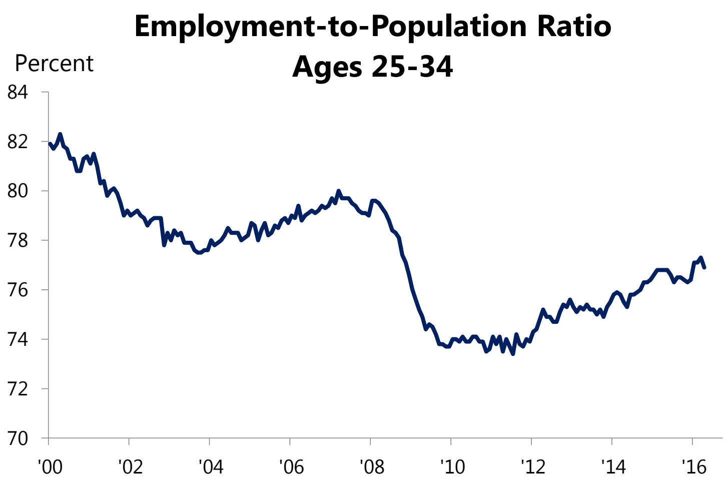
Source: FRBNY Consumer Credit Panel/Equifax
Note: Credit Score is Equifax Riskscore 3.0; mortgages include first-liens only.

Household formation fell sharply over the last two quarters. In the year ending in March, just 538,000 households were formed. The explanation for the decline over the past six months is unclear. Between mid-2006 and 2014Q3, the rate of household formation averaged roughly half its historical average of 1.2 million per year. Household formation surged at the end of 2014 and remained above its historical average through 2015Q3.



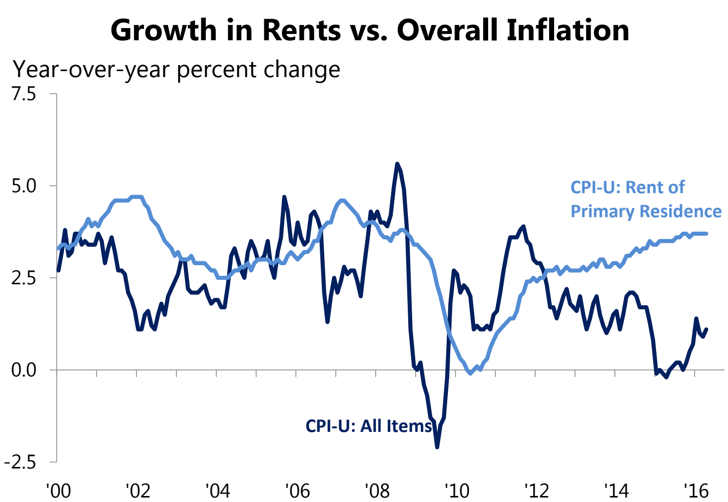
Source: U.S. Census Bureau, Treasury calculation

The proportion of young adults who are working has seen a partial recovery. The employment-to-population ratio for individuals ages 25-34 has reversed more than half of the decline that occurred during the recession. The strengthening labor market should support household formation going forward.



Source: Bureau of Labor Statistics

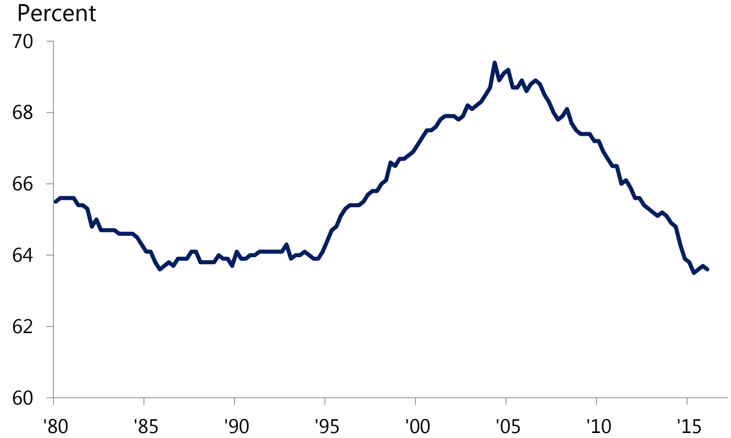
Higher rents are an obstacle to young adults establishing their own households. The supply of rental housing appears to have not risen as fast as demand and, as a result, rents have been increasing rapidly. They outpaced overall inflation by 2.6 percentage points over the year ending in April.



Source: BLS

The homeownership rate slipped in 2016Q1. The homeownership rate was 63.6 percent in 2016Q1, down from 63.7 in the previous quarter, and just marginally higher than the four-decade low of 63.5 percent in 2015Q2. The homeownership rate may stagnate in coming quarters as household formation continues to recover because newly formed households are more likely to rent before purchasing a home.

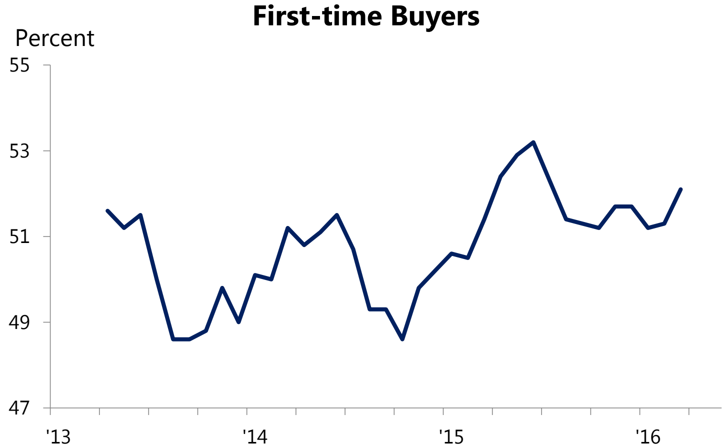
Homeownership Rate



Source: U.S. Census Bureau

First-time home buyers account for around half of purchase mortgage originations. The share of newly originated mortgages going to first-time buyers was 52.1 percent in March, higher than the 51.4 percent recorded a year ago.

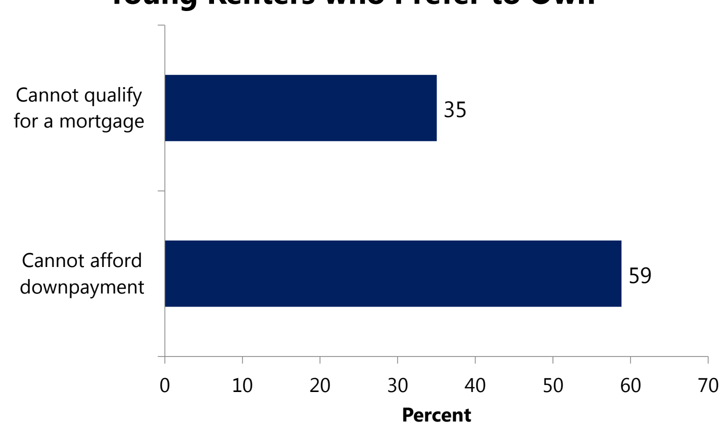
Share of Mortgages Accounted by First-time Buyers



Source: American Enterprise Institute

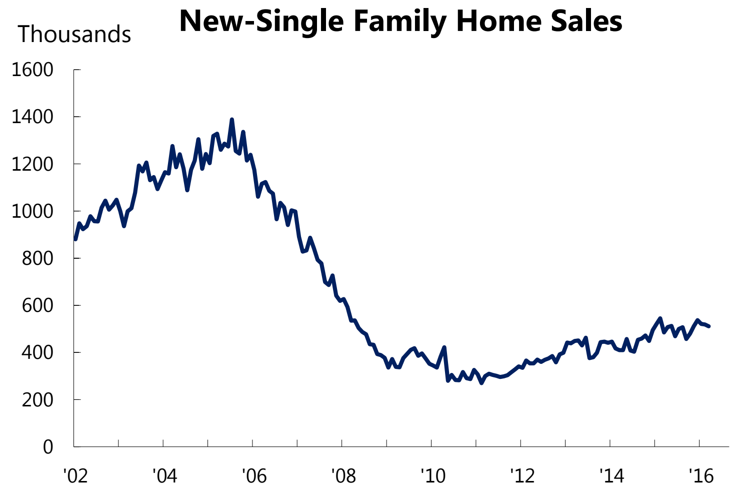
87 percent of households headed by young adults that are renting say that they would prefer to own if they could afford it. Of those households, the most commonly cited reasons for not owning are lack of downpayment (59 percent) and not being able to qualify for a mortgage to buy a home (35 percent).

Primary Reasons for Renting among Young Renters who Prefer to Own



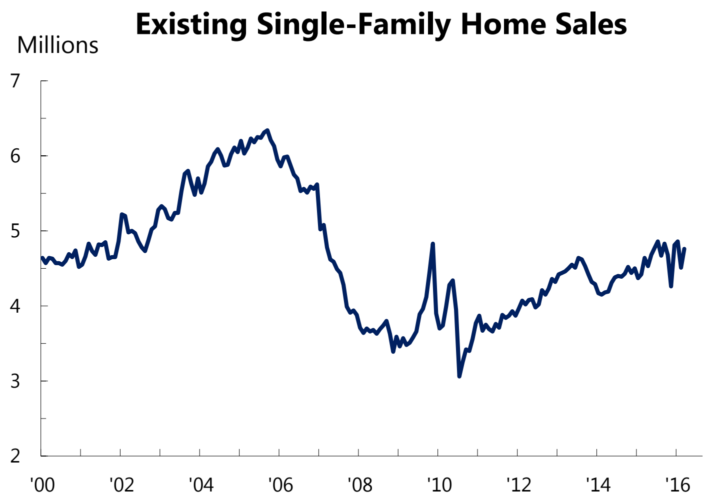
Source: Report on Economic Well-Being of U.S. Households in 2014, Federal Reserve Board

New single-family home sales remain on a very gradual uptrend. At an annual rate of 511,000 in March, they were 1.6 percent higher than their average level in 2015. New single-family home sales averaged 503,000 units for all of 2015, the best annual performance since 2007. Still, the current pace of sales is only about half the level seen prior to the boom in the early 2000s.



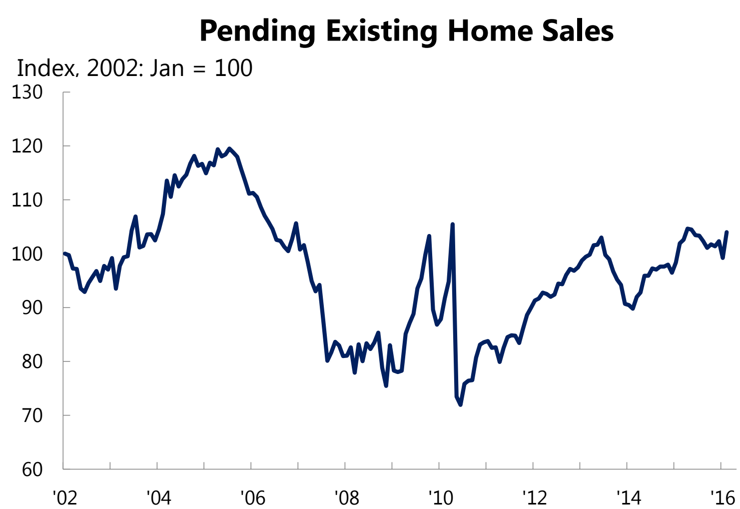
Source: U.S. Census Bureau

Sales of existing single-family homes have been moving sideways in recent months at a level that is only a little below that seen in the early 2000s. Existing single-family home sales rebounded in March following a sharp drop in the previous month. Existing home sales also showed sharp swings last fall because of new mortgage disclosure regulations that reportedly delayed contract signings by a few days.



Source: National Association of Realtors

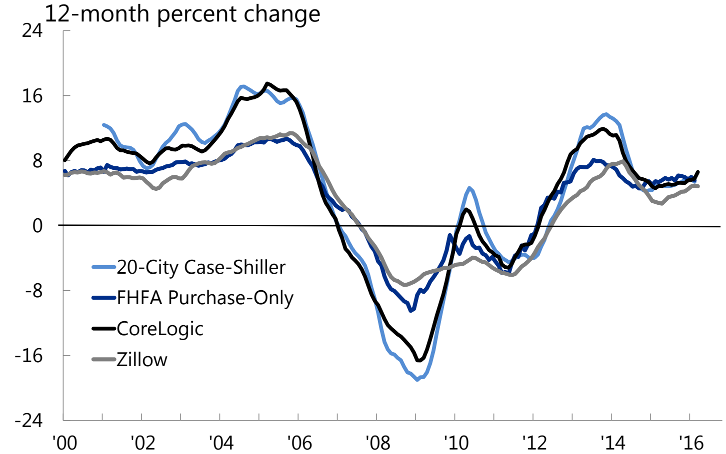
The National Association of Realtors index of pending sales of existing homes rose to a ten-month high in March. The index is a leading indicator of existing home sales, which are recorded at the closing of the sale. The National Association of Realtors is projecting that existing home sales will rise 2.4 percent in 2016.



Source: National Association of Realtors, Treasury Calculation

After rising at a high single-digit to low-double-digit pace in late 2013 and early 2014, the pace of home price appreciation has eased. Home prices are now growing at a more sustainable mid-single-digit pace.

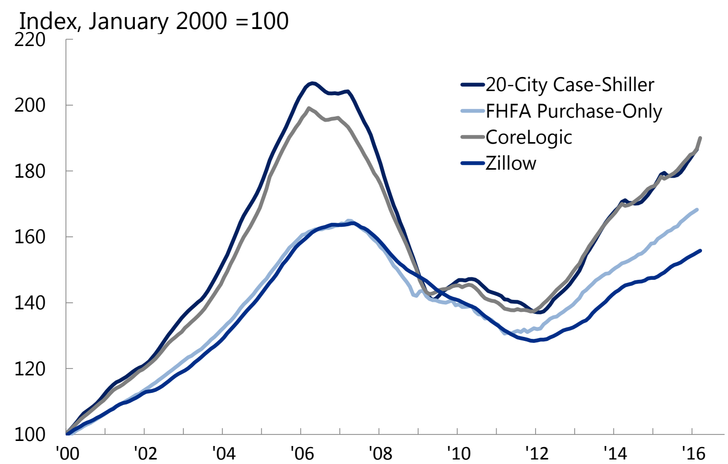
Changes in Home Prices



Source: Standard and Poors, FHFA, CoreLogic, Zillow

Home prices remain below their pre-crisis peaks. Most measures for the nation as a whole are currently around early 2005 levels. The FHFA Purchase-Only Home Price Index is the only one that has surpassed its pre-recession peak. Forecasters generally believe that home price appreciation will remain moderate going forward. Participants in the 2016Q1 Pulsenomics/ Zillow home price survey expect home prices to rise 3.7 percent over the four quarters of 2016.

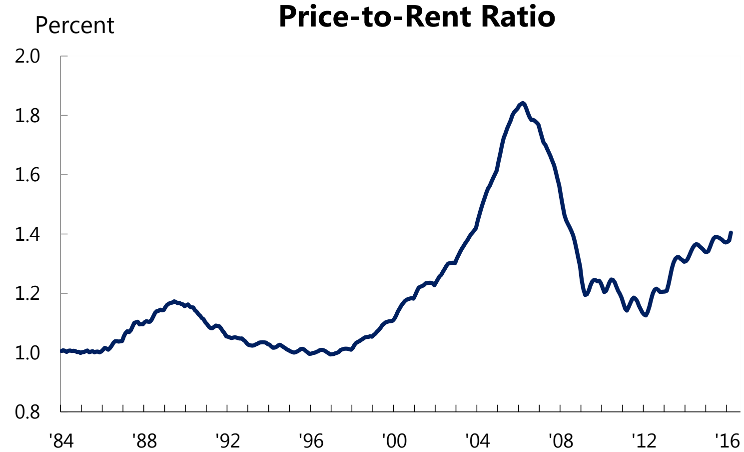
Home Prices



Source: Standard and Poors, FHFA, CoreLogic, Zillow

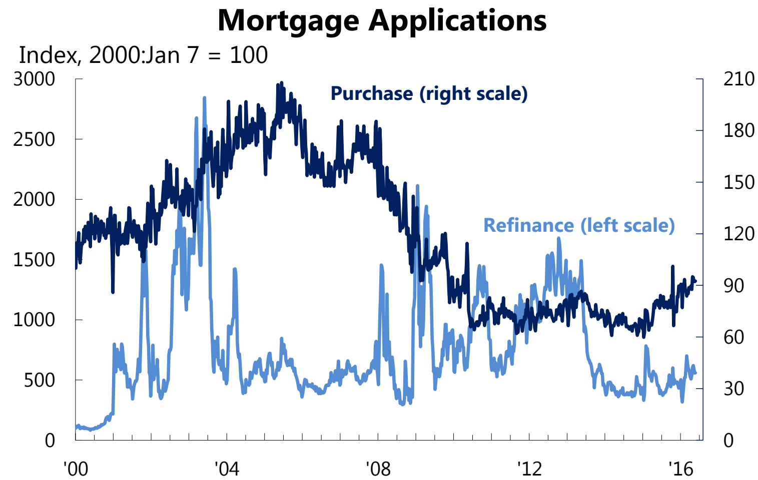
The ratio of home prices to rents, a common way to assess whether home prices are overvalued, remains well below its pre-crisis peak. That said, the substantial appreciation of home prices since late 2012 has pushed up this ratio, and it is now above its pre-crisis range.

Price-to-Rent Ratio



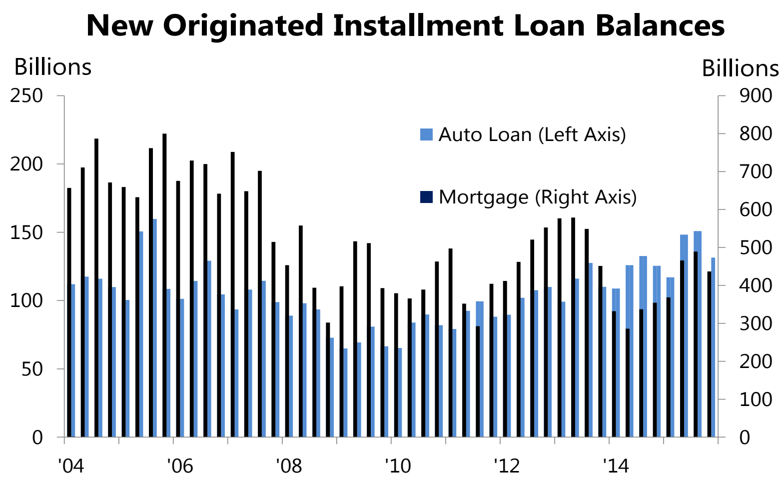
Source: Ratio of CoreLogic National Home Price Index to CPI Owner's Equivalent Rent. Both Indexes set to 100 in January 1983.

Applications for home purchase mortgages have been trending upward over the past year. Even so, purchase applications remain well below pre-crisis levels. Refinancing activity has been very low since mid-2013 as most borrowers who have been able to refinance have already done so.



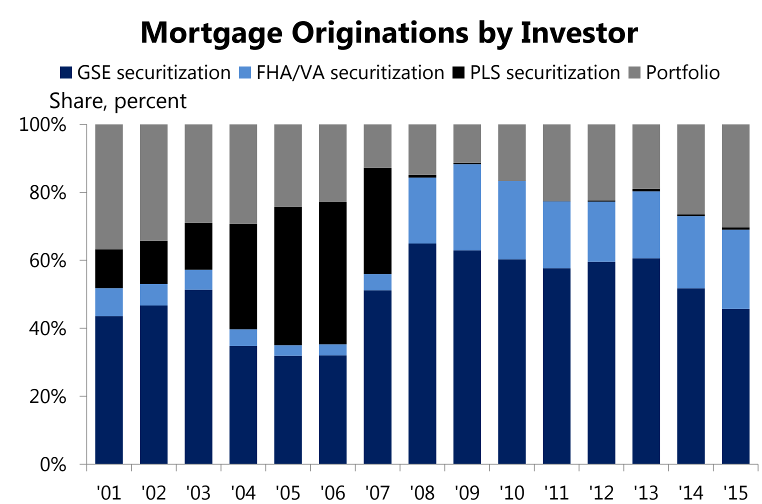
Source: Mortgage Bankers Association

New mortgage originations have increased over the past year but remain low by pre-crisis standards. New mortgage originations rose to $437 billion in 2015Q4, up from a low of $354 billion in 2014Q4. The low level of mortgage originations stands in contrast to the pattern of some other forms of household credit, including auto loan originations, which have been increasing briskly along with sales and now stand near the top of their historical range.



Source: Federal Reserve Bank of New York

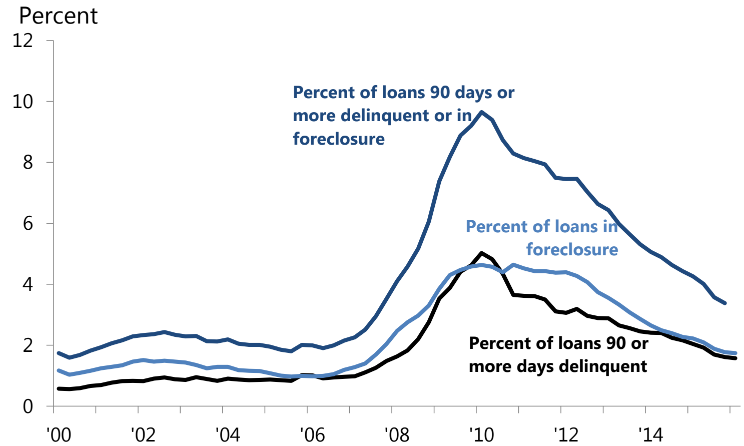
The share of new mortgage originations backed by the government has fallen since its 2009 high, but remains higher than boom levels. About 70 percent of new mortgages were backed by the FHA, VA, or GSEs in 2015 (dark blue and light blue portions of bars). While bank portfolio lending has increased noticeably, the private-label mortgage-backed securities market has experienced essentially no recovery since collapsing in late 2007.



Source: Inside Mortgage Finance and Urban Institute

Mortgage foreclosure and delinquency rates continue to normalize. The share of homes in foreclosure declined to 1.6 percent of outstanding loans in 2016Q1. The rate of mortgages in default (90+ days delinquent or in foreclosure) fell to 3.3 percent in 2016Q1, compared with a pre-crisis average of around 2 percent.

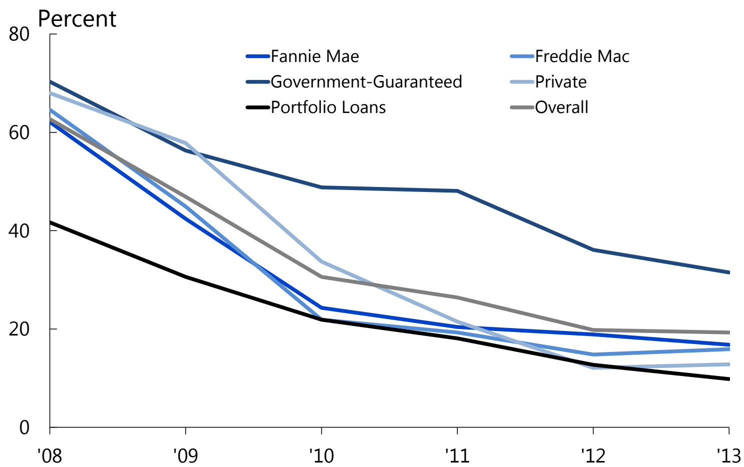
Foreclosure and Delinquency Rates



Source: Mortgage Bankers Association and Haver Analytics

Re-default rates for borrowers who have received a mortgage modification have run significantly lower for mortgages that were modified more recently. Mortgages that were modified in 2013 (24 months ago) had re-default rates that were between 32 and 55 percentage points lower than those modified in 2008.

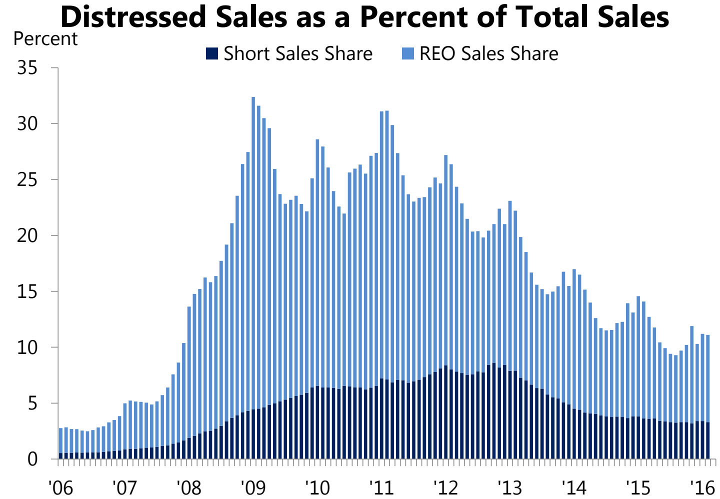
Re-Default Rate 24 Months after Modification



Source: OCC Mortgage Metrics Report for Q1-2015

The share of sales represented by REO sales has trended down over the past 3 years. In February 2016, REO sales stayed around 8 percent of total sales. The share associated with short sales remained relatively constant at around 3 percent in recent months.

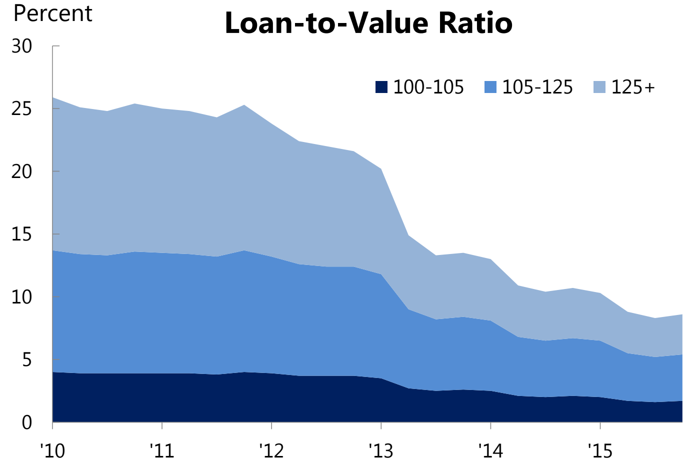
Distressed Sales as a Percent of Total Sales



Source: CoreLogic

Rising home prices have greatly reduced the number of underwater borrowers. The share of mortgage loans with negative equity was 8.6 percent in 2015Q4, down from 10.3 percent in 2015Q1. The number of homes now underwater stands at 4.3 million, a 64 percent drop since the 2011 peak. Mortgages that are very underwater, with negative equity exceeding 25 percent, have declined and are now 37 percent of all underwater mortgages.

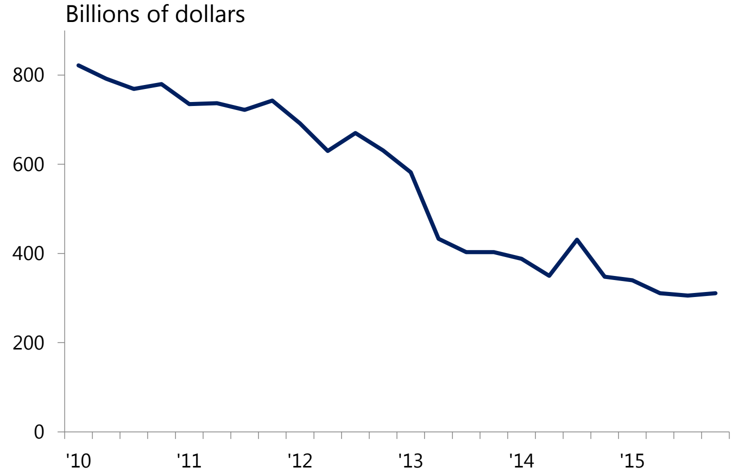
Share of Loans that are Underwater by Loan-to-Value Ratio



Source: CoreLogic Equity Report, 2015 Q4

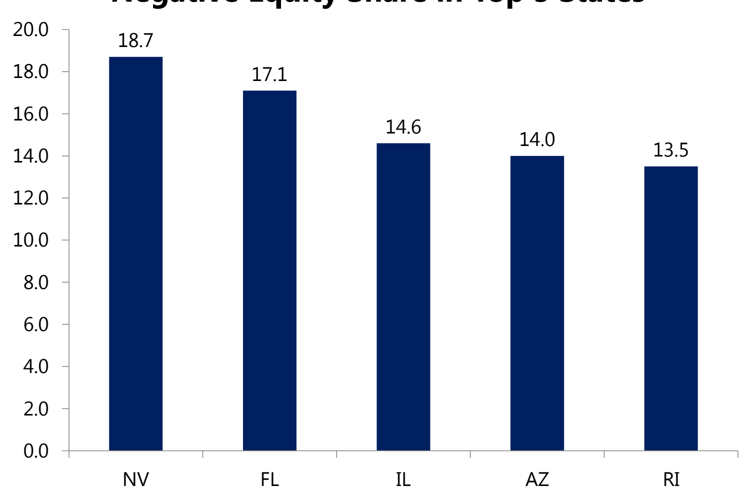
The aggregate amount of negative equity has fallen significantly. Since 2010Q1, aggregate negative equity has fallen from more than $800 billion to around $300 billion in 2015Q4.

Amount of Negative Equity



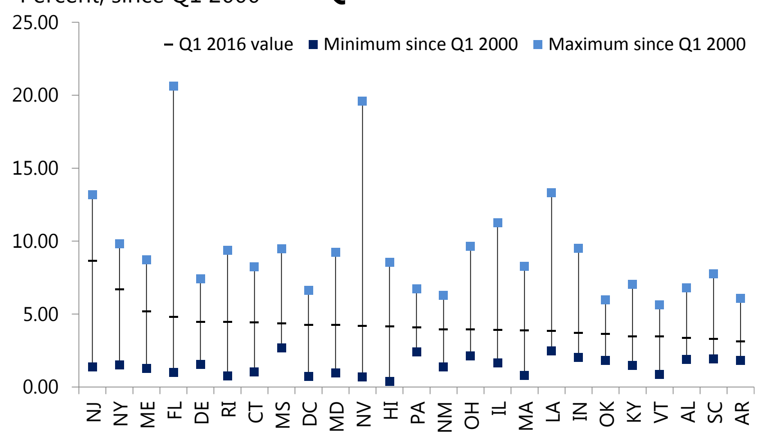
Negative equity rates are still very high in some states. Around 20 percent of mortgaged residential properties in Nevada and Florida still have negative equity. However, these rates have fallen by more than half in these two states since the beginning of 2013.

Negative Equity Share in Top 5 States



Serious delinquencies have fallen across the country but the degree of improvement varies by state. They remain near peak levels in some states, particularly in judicial foreclosure states such as New Jersey and New York. However, serious delinquencies are down more than 75 percent from their peak in Florida, a judicial state that passed a law in June 2013 speeding up the foreclosure process. Serious delinquencies have also fallen markedly in hard-hit areas with flexible foreclosure laws, such as Nevada.

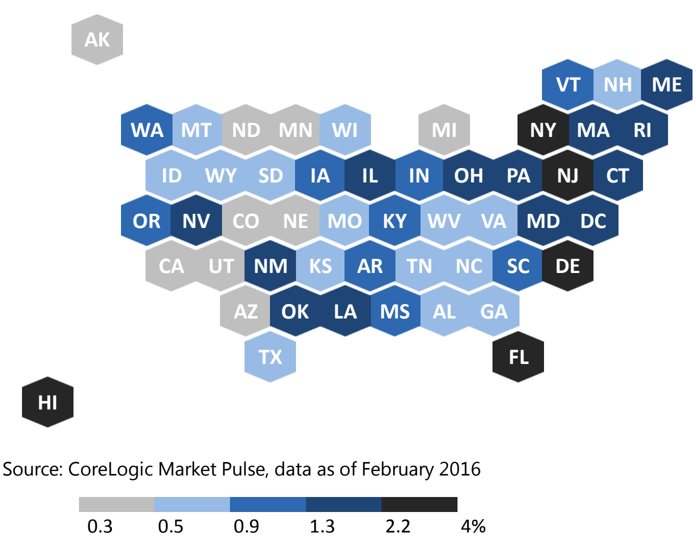
Serious Delinquencies for 25 Highest-Rate States: Q1 2016



Source: Mortgage Bankers Association/Haver

Foreclosure inventories have declined in many states but remain relatively high in others. Judicial foreclosure is an important factor: 15 of 25 states that employ the practice have noticeably elevated rates (two darkest shades). Other states with high inventories, like Nevada, are still struggling economically.

Foreclosure Inventory by State



Source: CoreLogic Market Pulse, data as of February 2016