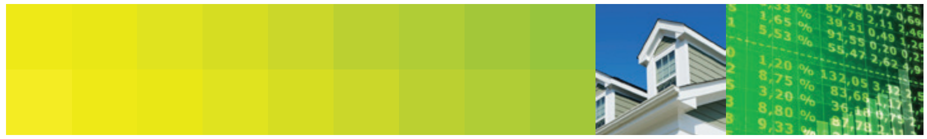


Economic & Housing Research **Outlook**

DECEMBER 2016

After housing's best year in a decade, what's next?

The year is drawing to a close and it is time to take stock of where housing and mortgage markets have been and where they likely are headed.

Though there are a few weeks left, 2016 will by many measures end up being the best year for housing in a decade. Home sales through October are the highest since 2007 and construction as measured by housing starts has reached the fastest pace since 2008. Home prices, not adjusted for inflation, are at record highs erasing the losses experienced during the downturn.[1]

Forecast Snapshot (December 2016)

Summary (annualized)	2016	2017	2018
30-year PMMS (%)	3.7	4.2	4.5
Total home sales (M)	5.97	5.75	6.02
House price growth (%)	5.9	4.7	3.8
Total originations ($B)	2,000	1,505	1,500

The picture is mixed for next year. Economic growth appears to be accelerating in the latter half of 2016 and the labor market remains at full employment, but rising interest rates threaten to slow and possibly turn back housing's momentum. As we indicated last month, we think housing will stall a bit in 2017 as higher rates reduce home sales, curb the pace of growth in housing starts, and slow house price growth.

But the fundamentals favor improvement in housing markets. Population and income growth should support housing demand going forward. We anticipate that, after housing absorbs the shock of higher interest rates over time, it resumes on its upward path, and 2018 ends up being a strong year for housing markets despite forecasted increases in mortgage rates.

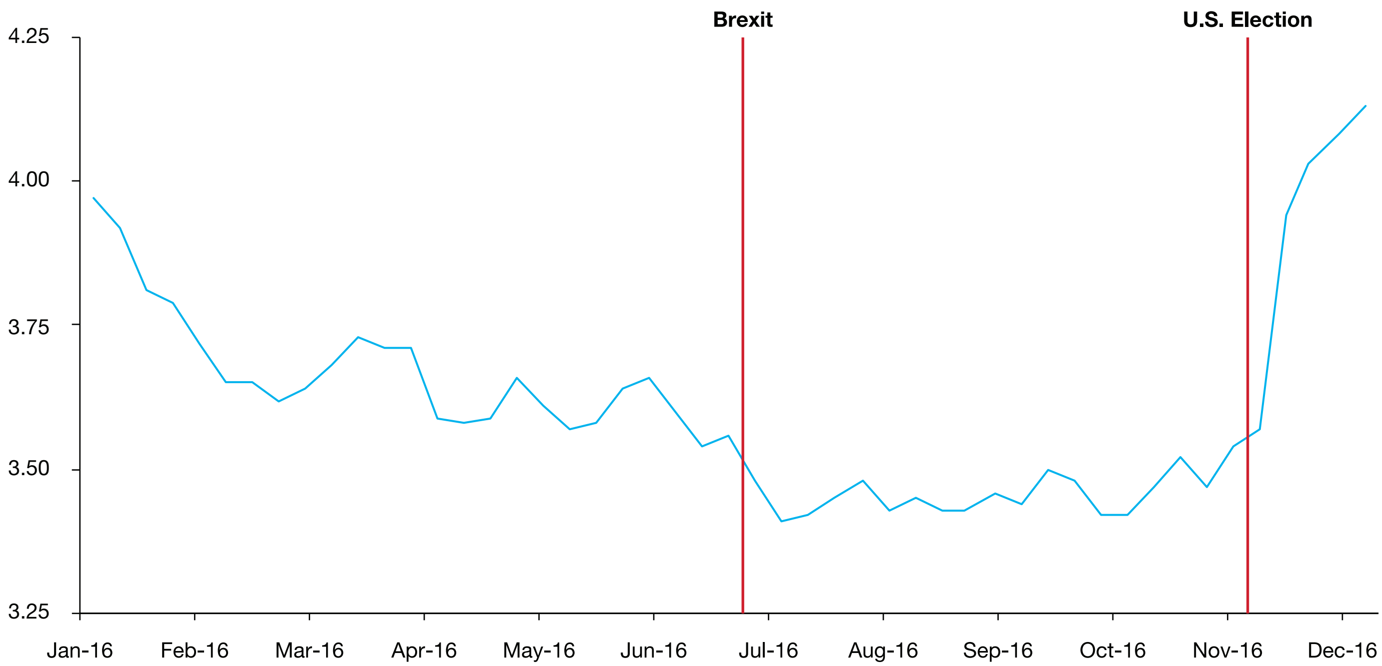
1 Though with significant variation across states. As of September 2016, about 6 percent of homeowners with a mortgage are underwater per CoreLogic.

2016 year in review: Housing's best year in a decade

The biggest economic surprise for 2016 was the decline in interest rates throughout most of the year. In December of 2015, the Federal Reserve Open Market Committee (FOMC) raised the federal funds rate for the first time since 2006 and most analysts expected to see more increases in 2016. However, concerns about overseas economic growth, particularly in Europe, contributed to declines in mortgage rates to start the year and they continued to drift down through early summer. But the late June Brexit vote roiled markets, sending the 10-year Treasury to its lowest-ever yield and pushing 30-year fixed mortgage rates below 3.5 percent. Rates remained low throughout the rest of the summer and into early fall. At the beginning of September, rates drifted upward until they stood at 3.54 percent on the Tuesday before the U.S. election. Interest rates rose substantially following the election, increasing by more than 0.5 percentage points in just a few weeks. Rates rose above where they started the year, and as of early December, they are the highest they've been since October of 2014.

Exhibit 1

30-year mortgage rates (2016)



Source: Freddie Mac Primary Mortgage Market Survey
Brexit June 23,2016 U.S. Election November 8, 2016

The decline in mortgage interest rates early in the year helped to support housing markets. Given the strength in the labor market and pent up demand, we forecasted housing would have performed well even with modestly higher interest rates. The surprising decrease in rates help to spur housing activity to the highest levels we have seen in a decade. Existing home sales through October are the highest level of any year since 2006.

Yet despite low mortgage rates and strong demand, new home construction did not pick up as fast as we had forecasted last year. The lack of available skilled labor appears to be constraining home building activity. For much of 2016 housing starts remained essentially unchanged from the year prior and well below long-run averages. The lack of new home construction is contributing to supply-constrained markets and making it difficult for prospective buyers to find a home.

Tight inventories of housing supply and robust demand buttressed by strengthening labor markets and low mortgage rates have kept the pressure on home values. House prices are rising by about 6 percent on a year-over-year basis and have shown little signs of slowing. Many reports noted that nominal house prices on a nationwide basis recovered to their pre-recession peak sometime in the fall of 2016. While national average nominal prices are back to their pre-recession peak there are two additional factors to consider. First, after adjusting for inflation house prices are still about 20 percent below their real (inflation-adjusted) peak. Second, while national house prices have recovered there's wide variation across geography. Some states, like North Dakota declined very little during the bust and are substantially above their pre-recession peak. Other states, like Nevada have experienced rapid double digit house price growth, but are still more than 10 percent below their pre-recession peak.

Rising home values are helping to improve the equity position of American households. The value of the housing stock has improved substantially since 2011, while mortgage debt outstanding has declined resulting in higher home equity. Total housing equity stood at $13 trillion at the end of the third quarter of 2016, up $7 trillion from its low in the first quarter of 2009. The improved equity position of American households leaves them primed to expand borrowing in coming years.

Not only has mortgage debt outstanding remained low relative to the value of the housing stock, but many households took advantage of near historic low interest rates to refinance in 2016. Over the last year ending in September 2016, Freddie Mac helped nearly 823,000 families refinance, saving them on average $2,400 in interest payments in the first year. Our latest forecast has $1 trillion in single-family mortgage refinance originations in 2016, the highest total since 2012. Borrowers also are starting to take advantage of their increased equity through cash-out refinances. We estimate that borrowers cashed out approximately $42 billion in the first three quarters of 2016, up $10 billion over the same period in 2015.

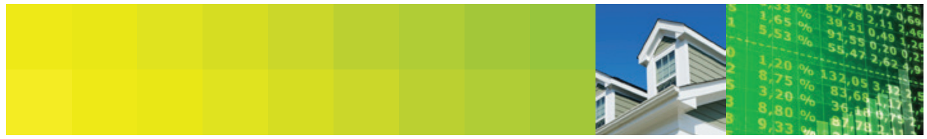
Looking ahead:

In this month's outlook, we extend our forecast to include 2018. Over the next two years, we anticipate that economy will keep growing at a modest pace, inflation will pick up and the labor market will stay at full employment. Interest rates will gradually rise as the Federal Reserve continues on its path of policy normalization. Housing markets will slow a bit in 2017 (see last month's Outlook for more analysis), but they will recover after they absorb the initial shock of higher interest rates.

Mortgage origination activity will slow significantly in 2017 as refinance activity withers. In 2018, mortgage origination activity will increase slightly, but the composition will shift to a purchase-dominated market—unlike any mix we have seen since the 1990s.

Key themes for 2017 and beyond:

- **Homebuyer affordability pinch**. As mortgage rates rise and home price growth remains positive, homebuyer affordability will be a growing challenge in many markets. Though income growth is starting to show signs of picking up, the growth rate in personal income is still well below house price appreciation. And while we forecast house price growth to drop from 5.9 percent in 2016 to 4.7 and 3.8 percent in 2017 and 2018 respectively, income growth probably won't keep pace. This means homebuyer affordability will challenge prospective homebuyers in many markets.
- **Construction picks up, but only gradually**. The good news for prospective homebuyers is construction should pick up, but only gradually. We've estimated that long-run fundamental demand for housing is about 1.7 million units annually in the U.S. and for 2016 we'll end up with about 1.16 million units. And while we forecast construction to increase to 1.26 and 1.36 million units in 2016 and 2017, it's still going to be below long-run demand.
- **Mortgage market shifts to a purchase mix**. Refinance waves swiftly end when mortgage rates rise, and we expect to see that happen now. Mortgage refinance activity will drop to very low levels, and the refinance share of mortgage originations will drop to 28 and 20 percent in 2017 and 2018, respectively. Increased purchases will partially offset this drop, but in 2017 we anticipate about a 25 percent reduction in mortgage originations. The market will stabilize in 2018, with purchase gains nearly offsetting refinance declines that year.



December 2016 Economic & Housing Market Forecast

Forecasted Figures

Historical Data

As of 12/12/2016

Indicator	2016 Q1	2016 Q2	2016 Q3	2016 Q4	2017 Q1	2017 Q2	2017 Q3	2017 Q4	Annual Totals 2016	Annual Totals 2017	Annual Totals 2018
Real GDP (%)	0.8	1.4	3.2	2.1	1.9	1.9	1.9	1.9	1.9	1.9	2.1
Consumer Prices (%) a.	-0.3	2.5	1.6	2.5	1.9	2.1	2.3	2.5	1.6	2.2	2.4
Unemployment Rate (%) b.	4.9	4.9	4.9	4.8	4.8	4.8	4.7	4.7	4.9	4.8	4.6
30-Year Fixed Mtg. Rate (%) b.	3.7	3.6	3.5	3.8	4.2	4.2	4.2	4.2	3.7	4.2	4.5
5/1 Hybrid Treas. Indexed ARM Rate (%) b.	2.9	2.8	2.8	3.1	3.4	3.5	3.5	3.5	2.9	3.5	3.7
10-Year Const. Mat. Treas. Rate (%) b.	1.9	1.8	1.6	2.1	2.6	2.6	2.6	2.6	1.9	2.6	2.8
1-Year Const. Mat. Treas. Rate (%) b.	0.6	0.6	0.6	0.7	0.9	1.0	1.3	1.5	0.6	1.2	1.8
Housing Starts c.	1.15	1.16	1.14	1.20	1.22	1.25	1.27	1.30	1.16	1.26	1.36
Total Home Sales d.	5.83	6.07	5.98	6.00	5.70	5.73	5.75	5.80	5.97	5.75	6.02
FMHPI House Price Appreciation (%) e.	1.6	1.3	1.6	1.2	1.2	1.2	1.1	1.0	5.9	4.7	3.8
1-4 Family Mortgage Originations f.											
- Conventional	$290	$422	$459	$396	$205	$349	$341	$241	$1,567	$1,136	$1,174
- FHA & VA	$95	$113	$131	$94	$95	$101	$89	$84	$433	$369	$326
- Total	$385	$535	$590	$490	$300	$450	$430	$325	$2,000	$1,505	$1,500
Refinancing Share - Originations (%) g.	51	42	47	48	35	31	27	20	47	28	20
Residential Mortgage Debt (%) h.	0.9	2.4	3.7	3.7	3.8	4.0	4.2	4.3	2.7	4.1	4.7

Note: Quarterly and annual forecasts are shown in shaded areas; totals may not add due to rounding; quarterly data expressed as annual rates. Annual forecast data are averages of quarterly values; annual historical data are reported as Q4 over Q4.

a. Calculations based on quarterly average of monthly index levels; index levels based on the seasonally-adjusted, all-urban consumer price index.

b. Quarterly average of monthly unemployment rates (seasonally-adjusted); Quarterly average of monthly interest rates (not seasonally-adjusted).

c. Millions of housing units; quarterly averages of monthly, seasonally-adjusted levels (reported at an annual rate).

d. Millions of housing units; total sales are the sum of new and existing single-family homes; quarterly averages of monthly, seasonally-adjusted levels (reported at an annual rate).

e. Quarterly growth rate of Freddie Mac's House Price Index; seasonally-adjusted; annual rates for yearly data.

f. Billions of dollars (not seasonally-adjusted); conventional for 2014 are Freddie Mac estimates.

g. Home Mortgage Disclosure Act for all single-family mortgages (not seasonally-adjusted); annual share is dollar-weighted average of quarterly shares (2014 estimated).

h. Federal Reserve Board; growth rate of residential mortgage debt, the sum of single-family and multifamily mortgages (not seasonally-adjusted, annual rate).

Prepared by the Economic & Housing Research group

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