U.S. Economic and Housing Market Outlook
Can Housing Handle Higher Mortgage Rates?

Len Kiefer, Deputy Chief Economist
May 2015
Can Housing Handle Higher Mortgage Rates?

Can the ongoing housing recovery handle higher mortgage rates? We saw housing stumble in 2013 when rates rose sharply in May and June of that year, increasing by a full percentage point over those two months. Home sales slowed significantly in response and are only now returning to similar levels. Rising rates will reduce homebuyer affordability; making homeownership in high cost markets that much further out of reach. Rising rates and continued house price appreciation will squeeze affordability even in today’s low cost markets. Housing looks strong enough to weather moderately rising rates, but we need real income growth to support homebuyer demand.

Forecast Summary

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real GDP Growth (%)</td>
<td>2.3</td>
<td>2.7</td>
</tr>
<tr>
<td>30-Year Fixed Mtg. Rate (%)</td>
<td>4.0</td>
<td>4.9</td>
</tr>
<tr>
<td>FMHPI House Price Appreciation (%)</td>
<td>4.5</td>
<td>3.5</td>
</tr>
<tr>
<td>1-4 Family Mortgage Originations ($ Billions)</td>
<td>$1,350</td>
<td>$1,275</td>
</tr>
</tbody>
</table>

Economic growth in the first quarter of 2015 is looking weak. The Bureau of Economic Analysis’s initial estimate of Real GDP growth came in at 0.2 percent on an annualized basis, but tracking reports indicate that the final estimate will ultimately dip below zero. Second quarter data is looking better, but there’s no doubt that economic growth has slowed from the second half of last year. Yet despite the lack of great news here in the U.S., improved outlooks for European economies have driven interest rates in the U.S. up recently.

Following a selloff in German bond markets, interest rates have risen sharply over the past few weeks close to the levels we saw in early March. In March, rates crested above 2.2 percent for the 10-year Treasury and then drifted back below 2 percent for about a month. Rates might well ease up again over the next few weeks, but are likely headed higher by year’s end.
The State of Housing and Mortgage Markets Today
The Multi-Indicator Market Index (MiMi) tracks the stability of housing markets.

The Multi-Indicator Market Index (MiMi) provides monthly insights into the stability of the housing market:

- **Measures** markets – national, state & top 50 metros

- **Compares** and ranks markets

- **Explains** local trends

- **Provides** market history

### Four Indicators of a Stable Housing Market

#### Purchase Applications
- Solid home sales that match demographics

#### Current on Mortgage
- Few defaults
- Less foreclosures

#### Payment-to-Income
- Mortgage payments in-line with income

#### Employment
- Low unemployment
- More jobs
- Rising salaries and wages

MiMi is the average of the four indicators:
The Multi-Indicator Market Index (MiMi) tracks the stability of housing markets

**Housing markets improving as we head into spring homebuying season**

After a slight stumble last month, nearly 60 percent of all markets are improving. Also, of the top 100 metro areas, over 60 are showing purchase applications up from the same time last year with over 20 of those metro areas showing double-digit percentage increases.

### Top Ranked States

<table>
<thead>
<tr>
<th>State</th>
<th>Current Rank</th>
<th>This Month</th>
<th>Monthly Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Dakota</td>
<td>1</td>
<td>95.7</td>
<td>▼0.21%</td>
</tr>
<tr>
<td>District of Columbia</td>
<td>2</td>
<td>94.8</td>
<td>▲0.11%</td>
</tr>
<tr>
<td>Hawaii</td>
<td>3</td>
<td>90.7</td>
<td>▲0.33%</td>
</tr>
<tr>
<td>Montana</td>
<td>4</td>
<td>89.2</td>
<td>▲0.11%</td>
</tr>
<tr>
<td>Wyoming</td>
<td>5</td>
<td>85.7</td>
<td>▲0.12%</td>
</tr>
</tbody>
</table>

### Most Improved States

<table>
<thead>
<tr>
<th>State</th>
<th>Current Rank</th>
<th>This Month</th>
<th>Monthly Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oregon</td>
<td>17</td>
<td>79.5</td>
<td>▲2.19%</td>
</tr>
<tr>
<td>Michigan</td>
<td>37</td>
<td>71.3</td>
<td>▲1.71%</td>
</tr>
<tr>
<td>Florida</td>
<td>46</td>
<td>66.9</td>
<td>▲1.52%</td>
</tr>
<tr>
<td>California</td>
<td>10</td>
<td>82.3</td>
<td>▲1.35%</td>
</tr>
<tr>
<td>Kentucky</td>
<td>27</td>
<td>76.4</td>
<td>▲1.10%</td>
</tr>
</tbody>
</table>

Visit MiMi: [http://www.freddiemac.com/mimi/](http://www.freddiemac.com/mimi/)
Purchase applications remain weak, but are trending up over the first 4 months of 2015.

**Total Market Purchase Applications Index (SA)**

*Source: MBA*

*Dotted Line Weekly Index, Solid Line 4-week Moving Average*

Purchase Apps are trending up over the first 4 months of 2015.
U.S. house prices up 25% from bottom

U.S. Property Value Index
(Dec 2000 = 100)

Source: Freddie Mac House Price Index (Seasonally-Adjusted), get the data and view interactive graphs of the FMHPI at:
http://www.freddiemac.com/finance/house_price_index.html

Home values are generally back at 2005 levels (not inflation-adjusted)
House prices rose in most states between March 2014 – March 2015

United States 5%

1 The Freddie Mac House Price Index for the U.S. is a value-weighted average of the state indexes where the value weights are based on Freddie Mac's single-family credit guaranteed portfolio. Percent changes were rounded to nearest one tenth of a percentage point.

Source: Freddie Mac, get the data and view interactive graphs of the FMHPI at: http://www.freddiemac.com/finance/house_price_index.html
House prices rose in most metros between March 2014 – March 2015

United States 5%

Source: Freddie Mac, get the data and view interactive graphs of the FMHPI at: http://www.freddiemac.com/finance/house_price_index.html
Mortgage rates rose to the highest level since the week of March 12…

Rates heading higher in early May 2015, still around levels of year-end 2014
Rates are rising recently, but down from 2013Q4 levels and near historic lows
Seriously delinquent rates declining

Single-Family Seriously Delinquent Rate

Percentage Points

0 4 8 12 16 20 24 28 32

2Q07 4Q07 2Q08 4Q08 2Q09 4Q09 2Q10 4Q10 2Q11 4Q11 2Q12 4Q12 2Q13 4Q13 2Q14 4Q14

All Loans  Freddie Mac  Subprime  Fannie Mae  Prime

17.68% 4.52% 2.60% 1.89% 1.88%

Though delinquency rates are down, they are still well above historical averages

Sources: Mortgage Bankers Association, Freddie Mac, Fannie Mae
The jobs picture is improving: Unemployment rate is falling

U.S. Unemployment Rate
Percent ,SA
Source: Bureau of Labor Statistics, NBER

From 1948 through 2014 U.S. Unemployment Rate averaged 5.8 percent
Deep structural problems? Long-term unemployment still elevated

Unemployed: Of total unemployed – Unemployed 27 Weeks & over;
Percent; SA
Source: Bureau of Labor Statistics, NBER

Though falling, long-term unemployment share higher than any prior peak
Deep structural problems? Labor force participation has declined

Labor Force Participation
Percent SA
Source: Bureau of Labor Statistics

Labor force participation has been declining for over a decade
Job prospects improving for millennials

Employment-to-Population Ratio (Ages 25-34)

Better job prospects are drawing more into the labor market

Percentage Points
Source: BLS

Apr 2008 to Apr 2015

76.8
Housing has gone from oversupply to undersupply, especially in rental

**Surplus/Shortage of Vacant Homes (Numbers in Millions)**

- **For-Rent Inventory (Millions)**
- **For-Sale Inventory (Millions)**

Source: Freddie Mac calculations using U.S. Census Bureau data. Negative values reflect shortage or undersupply relative to the historical benchmark. The over/undersupply of vacant housing was estimated based on the average vacancy rate from 1994Q1 to 2003Q4.
The latest NAHB/Wells Fargo Housing Market Index (HMI) for May 2015 is 54, which is above 50, indicating that more builders perceive conditions as good rather than bad. The HMI has been above 50 since July of 2014. One-unit housing construction rebounded in April 2015 to 733,000 starts, up 16.7% from March and up 14.7% from last year.
Did you know that borrowers who refinanced in the first quarter of 2015 will save on net over $1.4 billion in interest over the first 12 months of their new loan?

Freddie Mac’s Quarterly Refinance Report compiles statistics on the percent of Freddie Mac-owned loans that were refinanced and resulted in new mortgages at least five percent higher in amount than the original mortgages, the median age of the refinanced loan, the median amount of appreciation on the property since the previous loan was originated. The report also provides cash-out volume estimates such as: total cash-out dollars as a percentage of aggregate refinanced originations UPB; total home equity cashed out; total volume of 2nd mortgages/HELOC consolidation.

Read the full report: http://www.freddiemac.com/finance/refinance_report.html
Forecast Overview

May 2015

See interactive charts and analysis at:

http://www.freddiemac.com/finance/ehforecast.html
Key Trends in Housing Markets
May 2015 Forecast

Key Trends in 2015

» Economy improves
  – GDP growth at 2.3%
  – Unemployment continues to fall (6.2% to 5.4%)
» Fed Funds “Lifts-off” around midyear, interest rates rise (30yr FRM at 4.3% in Q4)
» Total SF Originations Increase 8% ($1,250 to $1,350 Billion)
» House Price Growth at 4.5% annual rate

Key Trends in 2016

» Solid economic growth
  – GDP growth 2.7%,
  – UR decreases from 5.4% to 5.1%
» Interest rates normalize: 30yr FRM Increase to 4.9%
» Total SF Originations Decrease 6% ($1,350 to $1,275 Billion)
» House Price Growth at 3.5% annual rate

Forecasts from: Freddie Mac May 2015 Economic Outlook
Economic growth should be strong

Real GDP Growth

Percentage Points

Source: Freddie Mac, Bureau of Economic Analysis

Forecasts from: Freddie Mac May 2015 Economic Outlook

Economy set back by weak first quarter, remainder of 2015 posts solid growth
Strong economic growth should help to bring down the unemployment rate

Unemployment Rate
Percentage Points
Source: Freddie Mac, Bureau of Labor Statistics (BLS)

Unemployment rate trends lower, with rising participation and solid job gains

Forecasts from: Freddie Mac May 2015 Economic Outlook
Expect rates to gradually rise

Interest Rates, Annual Averages
Percentage Points
Source: Freddie Mac, Federal Reserve

Forecasts from: Freddie Mac May 2015 Economic Outlook

Rates tread water until midyear, when anticipation of Fed Liftoff drives them up
Mortgage activity will level off and composition will shift to purchase

1-4 Family Mortgage Originations
Billions of Dollars
Source: Freddie Mac, FFIEC

Forecasts from: Freddie Mac May 2015 Economic Outlook

Originations running strong in 2015H1, slow as interest rates rise
Home price gains will moderate, but remain positive

House Price Appreciation
Annual Percent Change
Source: Freddie Mac House Price Index

Low levels of inventory and improving labor market drive house price gains

Forecasts from: Freddie Mac May 2015 Economic Outlook
Housing construction should increase

Total Housing Starts

Millions of Units

Source: Freddie Mac, Census/HUD

Forecasts from: Freddie Mac May 2015 Economic Outlook

Pace of construction well below long-run average, particularly for single-family units
The best year for home sales since 2007

Total Home Sales
Millions of Units
Source: Freddie Mac, NAR, Census/HUD

Low mortgage rates in 2015H1 should help support homes sales this year

Forecasts from: Freddie Mac May 2015 Economic Outlook
Heading into May, Momentum Builds for Home Sales

Spring Home Sales Tracker

Last month, we indicated that April would be a make or break month for home sales. Meaning that if, as we project, we are going to have the best year in homes sales since 2007, we need them to surpass 2013.

So, how are we doing? After lagging behind a bit last month, we are now running well ahead of 2013's pace by about 17,000 home sales, non-seasonally adjusted.

All in all, things look good and we are well on track to have the best year in home sales since 2007.

Click to see the full analysis and interactive chart.

Source: National Association of Realtors, Census/HUD
History doesn’t repeat but sometimes it rhymes

Comparing spring 2013 to spring 2015
Rate increases in spring 2013 are looking a lot like rate increases in 2015.

Leading up to the Taper Talk in June 2013, 30-year fixed rate mortgage rates were already on an upswing. From the end of April through the end of June 2013 mortgage rates increased by a full percentage point, slowing housing activity significantly.
Rate increases in May and June of 2013 dampened housing market activity and led to an immediate slowdown in mortgage applications. Purchase applications peaked (on a SA basis) in early May of 2013 and has not yet reached that level. Recently in early May of 2015 purchase applications appear to be leveling off in reaction to recent rate increases.
Home sales in 2013 peaked in July of that year, but declined sharply in response to rising interest rates.

Sales data for the first three months of 2015 are running ahead of 2013 levels. Will rising rates slow home sales in 2015? Possibly, but it remains to be seen if rising rates can be offset by income gains.

**Total Home Sales 2013 vs 2015**

Source: NAR, Census/HUD; Total Home Sales (1000s, Seasonally-Adjusted Annual Rate)
Homebuyer Affordability

How will rising rates affect homebuyer affordability across the country?
Low rates keep homebuyer affordability strong in much of the country

Thirty U.S. metros were not affordable as of the first quarter, that’s down from 37 in the fourth quarter of last year and down from 36 from the same time last year. Of the markets tracked, 133 remained affordable. Of the three affordability components, nationally, house prices rose 1.6%, incomes rose a measly 0.7%, while mortgage rates declined from an average of 3.97% to 3.73% for a 30-year fixed-rate mortgage based on our survey from the previous quarter.

See interactive chart at:
http://www.freddiemac.com/finance/ehforecast.html
Rising mortgage rates will rapidly erode homebuyer affordability

How do mortgage rates affect affordability?
Percent of income going to monthly principal and interest payments for a household earning $50k with a 30-year fixed rate loan of $200k.

For a household earning $50,000 looking to finance a home purchase with a $200,000 30-year fixed rate loan, that purchase is affordable (monthly P&I payments <= 25% of gross monthly income) up to a 4.74 percent mortgage rate.
How does homebuyer affordability look if rates rise to 5%, with incomes/prices flat?

Rising rates can substantially reduce homebuyer affordability. If rates rose to 5 percent on a 30-year fixed rate mortgage with no change in incomes and house prices, only 108 of 163 metro areas would be affordable (vs 133 with 3.7% mortgage rate).

Large parts of the country remain affordable even with much higher interest rates.

Use our interactive affordability map to see how affordability varies under your own scenario:

http://www.freddiemac.com/finance/ehforecast.html
Will wage and income gains help offset rising rates?

While interest rates are projected to rise and house prices have been rising, we have not yet seen any appreciable real income gains. The latest data on wages and income are encouraging. For example, the Employment Cost Index for the first quarter of 2015 was up 2.7% on a seasonally adjusted year-over-year basis, possibly signaling that labor market slack has been reduced enough to lead to modest real income gains.
Opinions, estimates, forecasts and other views contained in this document are those of Freddie Mac’s Office of the Chief Economist, do not necessarily represent the views of Freddie Mac or its management, should not be construed as indicating Freddie Mac’s business prospects or expected results, and are subject to change without notice. Although the Office of the Chief Economist attempts to provide reliable, useful information, it does not guarantee that the information is accurate, current or suitable for any particular purpose.

Information from this document may be used with proper attribution. Alteration of this document is prohibited. © 2015 by Freddie Mac.