Outlook for the U.S. Economy and Residential Real Estate

Federal Reserve Bank of Atlanta
Real Estate Finance Conference

Frank Nothaft, CoreLogic SVP & Chief Economist
December 10, 2015
U.S. Housing Market Forecast for 2016

If U.S. has 2-3% economic growth, we will likely see:

1. Mortgage rates up 0.5%
2. Household formations exceed 1.25 million
3. Rental market remains ‘tight’: vacancy low, rents rise
4. Owner market: sales up 4-5%, home prices up 4-5%
5. Originations: Less single-family, more multifamily
U.S. Macroeconomic Backdrop is Positive

Gross Domestic Product YOY Percent Change

Unemployment Rate

Consumer Price Index YOY Percent Change

Consumer Confidence Index


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New Orleans Jobless Rate Near 10-Year Average

Unemployment Rate for New Orleans-Metairie Metro Area


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Federal Funds Expected to Rise

Federal Funds Target (interest rate, in percent)

Source: Federal Open Market Committee Meeting on September 17, 2015. In the plot each circle indicates the value (rounded to the nearest 1/8 percentage point) of an individual FOMC participant’s judgment of the appropriate level of the target federal funds rate at the end of the specified calendar year or over the longer run.
Long-term Rates Expected To Rise

Interest Rate on 30-Year Fixed-Rate Mortgages and 10-Year Constant Maturity Treasury (percent)

30-Year FRM
10-Year Treasury

Dec. 2016:
30-Year FRM: 4.5%
10-Year Treasury: 2.7%

Large Demographic Tailwind Has Arrived

Number of People in 2014 (Millions)

Source: U.S. Census Bureau, Population as of July 1, 2014
Household Formation Accelerated in 2015

Annual Household Growth (Net Change, in Millions)

<table>
<thead>
<tr>
<th>Year</th>
<th>Growth (Millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>2.0</td>
</tr>
<tr>
<td>2006</td>
<td>1.3</td>
</tr>
<tr>
<td>2007</td>
<td>0.5</td>
</tr>
<tr>
<td>2008</td>
<td>0.5</td>
</tr>
<tr>
<td>2009</td>
<td>0.6</td>
</tr>
<tr>
<td>2010</td>
<td>0.5</td>
</tr>
<tr>
<td>2011</td>
<td>0.6</td>
</tr>
<tr>
<td>2012</td>
<td>0.9</td>
</tr>
<tr>
<td>2013</td>
<td>0.7</td>
</tr>
<tr>
<td>2014</td>
<td>0.7</td>
</tr>
<tr>
<td>2015</td>
<td>1.6</td>
</tr>
</tbody>
</table>

Source: U.S. Census Bureau, Housing Vacancy Survey, net change in number of households, January-to-September compared with same period in prior year.
Components of the U.S. Rental Stock

- Multifamily 42%
- One-family 35%
- 2- to 4-family 18%
- Manufactured Housing 5%

Source: U.S. Census Bureau, 2014 American Community Survey, Table S2504
Survey question for Market Tightness Index:
How are apartment market conditions in the local markets that you watch? “Tight” markets are those with low vacancies and high rent increases. Conditions obviously vary greatly from place to place, but on balance, apartment market conditions in your markets today are: 1) Tighter than three months ago 2) Looser than three months ago 3) About unchanged from three months ago 4) Don't know or not applicable.

Source: National Multifamily Housing Council (Last Update: Survey conducted October 13-20, 2015)
New Rental Construction in 2015 Is Highest Since 1986

Multifamily Housing Starts (Thousands of Units, Annualized)

Multifamily Starts

Starts For Rent

Note: Gray bars indicate recessions.
Sources: Census Bureau and National Bureau of Economic Research
New Apartment Absorption in 2014-2015 Was Fastest of the Past Decade

Absorption Rate (Percent)

- Apartments Rented within 6 months after completion (completions through 2014:Q4)
- Apartments Rented within 3 months after completion (completions through 2015:Q2)

Source: Census Bureau (Survey of Market Absorption)
Source: U.S. Census Bureau, 50 largest metropolitan rental markets; size of bubble represents the size of the single-family rental detached stock.
Vacancy Rates Are Lowest on Single-Family Homes

Rental Vacancy Rate (2015 Second Quarter)

- One-family Detached 3-Bedroom: 0%
- One-family Attached 2-Bedroom: 3%
- 5- to 9-Unit Apartments: 6%
- 10-or-more Apartments: 7%

Source: CoreLogic RentalTrends (average April-June 2015), U.S. Census Bureau, Housing Vacancy Survey (2015Q2)
Single-family Rent Growth Strong, Especially in West

Rent Growth for 3-Bedroom Detached Houses, August 2014 to August 2015

<table>
<thead>
<tr>
<th>City</th>
<th>Rent Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chicago</td>
<td>-3%</td>
</tr>
<tr>
<td>New Orleans</td>
<td>-3%</td>
</tr>
<tr>
<td>Dallas</td>
<td>0%</td>
</tr>
<tr>
<td>Detroit</td>
<td>3%</td>
</tr>
<tr>
<td>Atlanta</td>
<td>6%</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>9%</td>
</tr>
<tr>
<td>Miami</td>
<td>12%</td>
</tr>
<tr>
<td>New York</td>
<td>12%</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>6%</td>
</tr>
<tr>
<td>Phoenix</td>
<td>12%</td>
</tr>
<tr>
<td>San Francisco</td>
<td>12%</td>
</tr>
<tr>
<td>Seattle</td>
<td>0%</td>
</tr>
<tr>
<td>Washington DC</td>
<td>0%</td>
</tr>
</tbody>
</table>

Rent:
- Chicago: 1667
- New Orleans: 1455
- Dallas: 1401
- Detroit: 1074
- Atlanta: 1086
- Los Angeles: 2468
- Miami: 1824
- New York: 2266
- Philadelphia: 1240
- Phoenix: 1339
- San Francisco: 4123
- Seattle: 2083
- Washington DC: 1809

Source: CoreLogic Rental Trends, metropolitan area median rent August 2015
Cap Rates Currently 5.5% to 6.0%, U.S. Average

Source: CoreLogic Rental Trends (mean cap rate)
Median Cap Rates of 3-Bedroom Detached Houses

- New Orleans: 7%
- Atlanta: 7%
- Dallas: 6%
- Miami: 6%
- Phoenix: 5%
- Chicago: 5%
- Washington DC: 4%
- Los Angeles: 4%
- New York: 3%
- San Francisco: 3%
Home Sales: Up 5% in 2015, Best since 2007

Non-Distressed Resale up every year since 2011

Home Sales (millions)

Source: CoreLogic REAS MarketTrends through August 2015, projected after.

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U.S. Home Prices Projected to Rise 5% in 2016

Projected to reach prior peak by Q1 2017 (but still 17% below 2006 peak in real $)

CoreLogic Home Price Index™ (January 2000 = 100)

Source: CoreLogic Home Price Index including distressed sales, January 2000 = 100 (December 1, 2015 release) and CoreLogic REAS HPI Forecasts

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For-Sale Home Inventory Has Been Very Low Since 2012

Homes-For-Sale Inventory as a Percent of Households

Sources: National Association of Realtors, U.S. Census Bureau (New Residential Sales and Housing Vacancy Survey).
Note: Existing home inventory excludes Condo & Co-op Inventory before 1999.
### Months’ Supply, Days on Market, Home-Price Growth

<table>
<thead>
<tr>
<th>Metro Area</th>
<th>Days On Market</th>
<th>Home Price Gain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Denver</td>
<td>12</td>
<td>11.8%</td>
</tr>
<tr>
<td>Dallas</td>
<td>32</td>
<td>8.6%</td>
</tr>
<tr>
<td>Seattle</td>
<td>54</td>
<td>9.9%</td>
</tr>
<tr>
<td>San Jose</td>
<td>13</td>
<td>13.2%</td>
</tr>
<tr>
<td>Los Angeles</td>
<td>29</td>
<td>5.4%</td>
</tr>
<tr>
<td>Orlando</td>
<td>83</td>
<td>6.0%</td>
</tr>
<tr>
<td>Jacksonville</td>
<td>48</td>
<td>4.8%</td>
</tr>
<tr>
<td>Baton Rouge</td>
<td>89</td>
<td>1.5%</td>
</tr>
<tr>
<td>Cleveland</td>
<td>91</td>
<td>3.9%</td>
</tr>
<tr>
<td>Chicago</td>
<td>47</td>
<td>2.2%</td>
</tr>
<tr>
<td>Philadelphia</td>
<td>98</td>
<td>2.7%</td>
</tr>
<tr>
<td>Miami</td>
<td>61</td>
<td>7.8%</td>
</tr>
</tbody>
</table>

Source: CoreLogic Home Price Index (percent change, September 2014 to September 2015) and CoreLogic Listing data for September 2015 (median Days on Market for sold properties).
New Orleans Distressed Sales Continue to Decline

<table>
<thead>
<tr>
<th>Year</th>
<th>Short Sales</th>
<th>REO Sales</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>1.8</td>
<td>0.9</td>
</tr>
<tr>
<td>2010</td>
<td>2.3</td>
<td>1.0</td>
</tr>
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<td>1.0</td>
</tr>
</tbody>
</table>

Source: CoreLogic National Foreclosure Report and MarketTrends. Data for 12 months ending August of each year.
New Orleans Prices Are Close to ‘Fundamentals’

Deviation of Prices from Fundamental Value (percent)

Source: CoreLogic HPI and HPI Long-term Fundamental Value (through October 2015).
Underwriting Remains Cautious

Housing Credit Index™ for Purchase (2000Q1=100)

HCI™ Factors
- Credit Score
- Loan-to-Value
- Debt-to-Income
- Broker Share
- Documentation (Full/Low/No)
- Adjustable-Rate Mortgage

Source: CoreLogic TrueStandings, 2015Q2 based on partial data; 2000Q1 = 100.
Bars represent 2001 and 2008-2009 recessions.

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Underwriting Remains Cautious

Source: CoreLogic TrueStandings, April 2015 purchase-money originations compared with 2000 and 2001
New Orleans Serious Delinquencies Back to 2008 Level

Percent of Loans 90+ Days Delinquent or in Foreclosure

Katrina: 25% peak

Source: CoreLogic Servicing
Mortgage Lending Recovery: Multifamily First, Nonresidential Next, SF Last

Annual Growth in Mortgage Debt Outstanding, by Property Type

Source: Federal Reserve Board, second-quarter-to-second quarter growth rate

Single-family Mortgage Originations (Billions of U.S. dollars)

Source: History is from CoreLogic Public Records, Forecast is an average of the latest projections released by Mortgage Bankers Association, Fannie Mae, Freddie Mac and Zelman & Associates.
Multifamily Mortgage Originations Projected Up

Multifamily Mortgage Originations (Billions of Dollars)

U.S. Housing Market Forecast

- Market in 2016 will have five features:
  - Higher interest rates (short ↑ 1%, long ↑ ½%)
  - Strong household formations (>1¼ million)
  - Home prices up (4% to 5%)
  - Rental robust: vacancy low, rents up
  - Loan manufacture remains high quality

- Home sales: 2016 expected to be best since 2007
  - Distressed sales drop nationally, high in select metros

- Originations: More SF Purchase, less Refi; More MF
  - SF # least since 1997; $ similar to 2014
Where to find more information

Look for regular updates to our housing forecast, commentary and data at


Twitter: @CoreLogicEcon  @DrFrankNothaft