



U.S. Macroeconomic Outlook and Implications for Residential Real Estate

Zillow Economic Research
March 2018

Macro Outlook

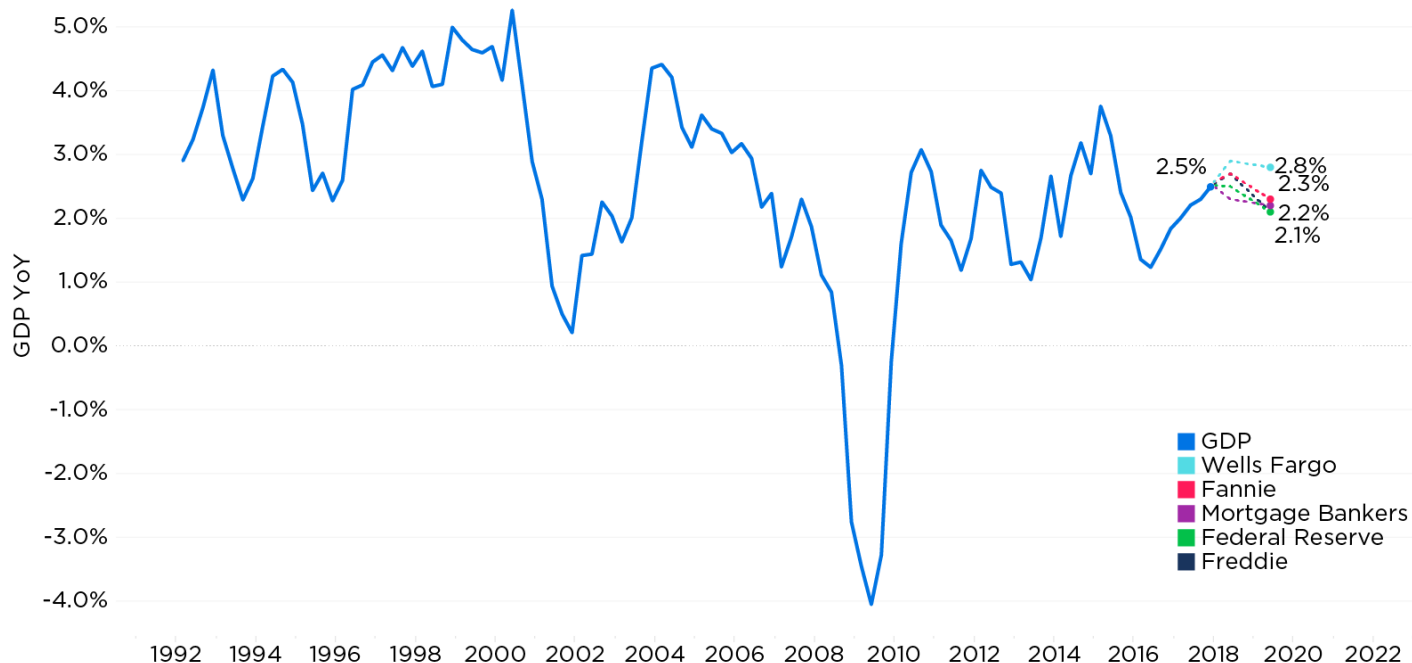
The consensus outlook

- Modest boost to economic growth in 2018 from tax reform followed by gradual slowing in 2019
- Accelerating inflation and rising interest rates, though they are expected to remain below historic levels on the 24-month horizon
- Slowing home value and rent appreciation, and plateauing home sales (flat-to-falling existing home sales offset by modestly rising new home sales)
- Low odds of recession in 2018 and 2019, though odds increase toward late 2019 into 2020
- Upward price pressure from tight supply and rising construction costs in the for-sale market currently outweigh potential headwinds from rising mortgage rates
- Mortgage lending conditions remain tight-to-prudent, but could ease with potential for financial deregulation

Risks to the consensus outlook

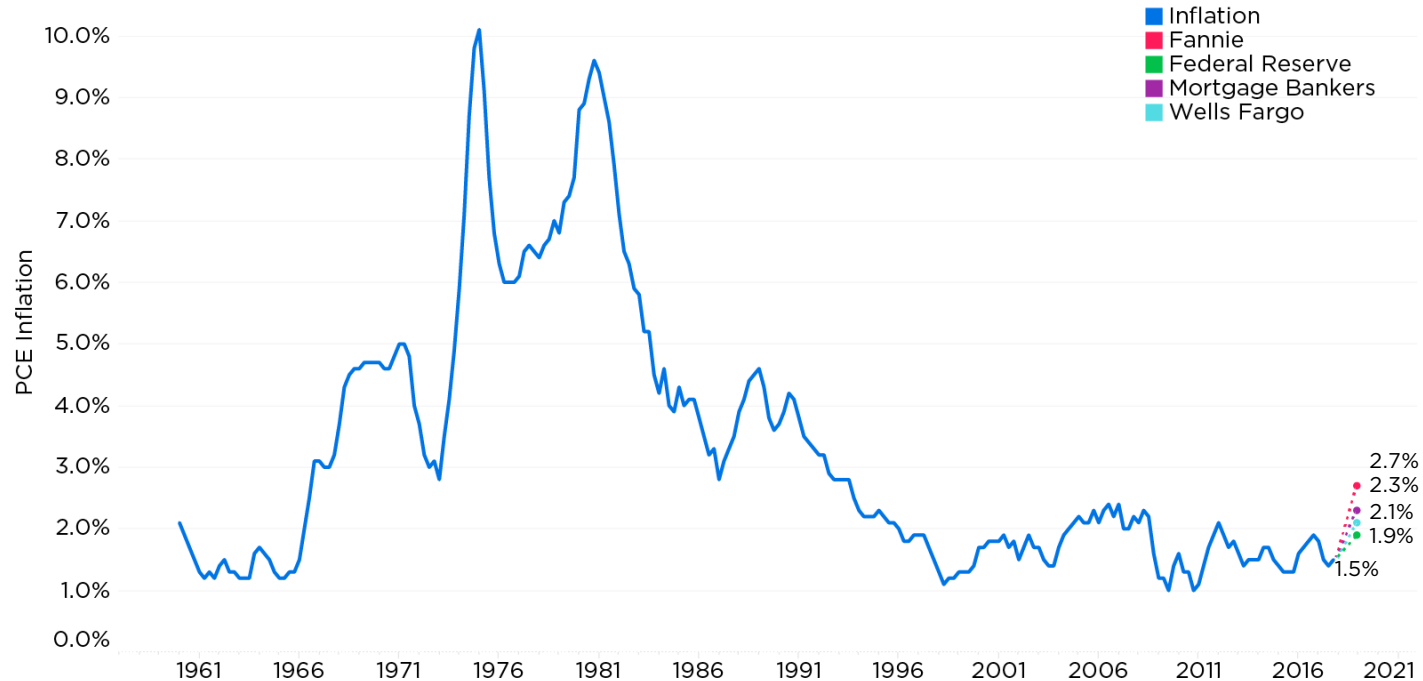
- Poor record of forecasting macroeconomic turning points
 - Paraphrasing Janet Yellen from December 2015: Expansion don't die of old age, they die from underlying imbalances in the economy
 - But imbalances are easier to identify than to time
 - When the next recession does come, will it look more like 1973 or 2001?
- Potential for heightened sensitivity to rising interest rates in some regional markets: Historically only modest sensitivity of buyers to small rate increases, but potential for structural break
 - Could a regional or sector downturn – for example, in California or in export hubs – become national? Lessons from regional experiences of Texas, New England and California in the 1980s/1990s and the Shale Belt in 2014-2016
 - Sensitivity to stock markets: Some markets are more vulnerable than others, but experience of Bay Area in 2001 points to differential impact across market tiers – and a quick recovery
- Political/geopolitical risks (difficult to forecast): Fiscal policy, trade policy, financial regulation

GDP growth forecasts rise in 2018 but fall back in 2019



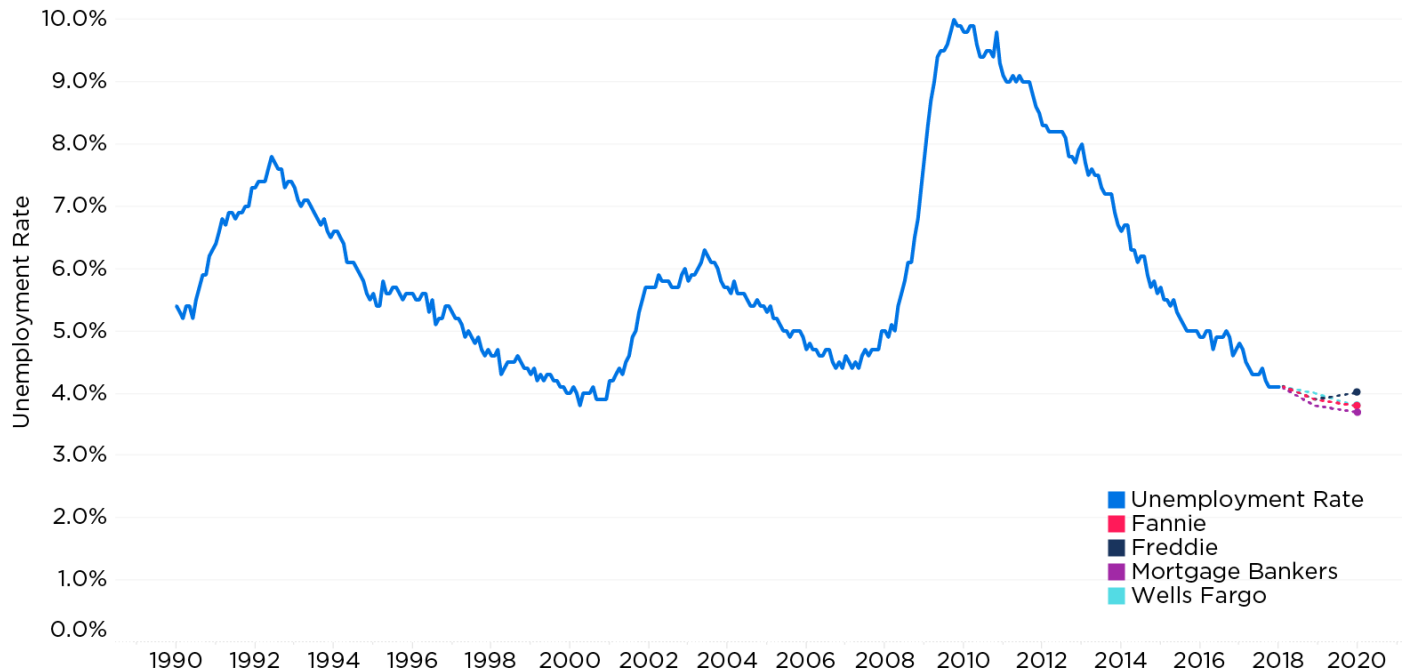
SOURCE: U.S. BUREAU OF ECONOMIC ANALYSIS

Headline inflation (PCE) expected to rise sharply toward the FRB's 2 percent target



SOURCE: U.S. BUREAU OF ECONOMIC ANALYSIS

Continued record low unemployment forecast for 2018, but slightly more uncertainty for 2019

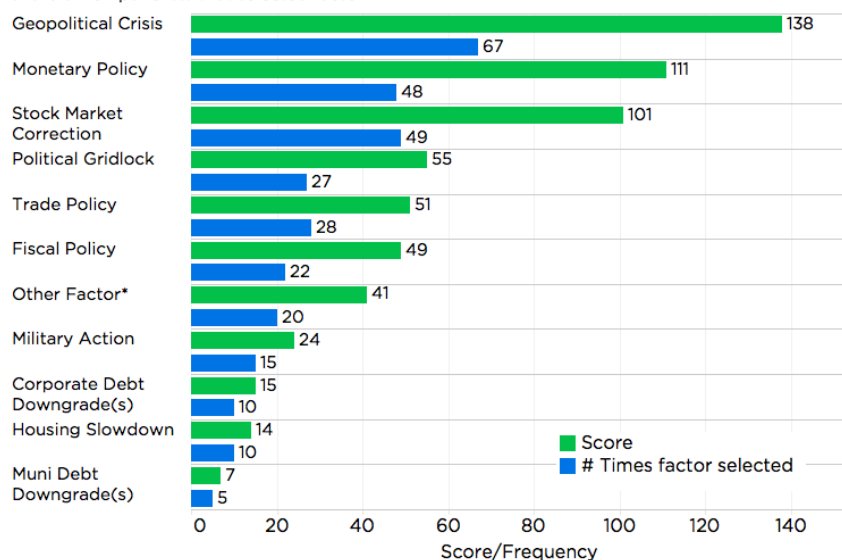


SOURCE: U.S. BUREAU OF ECONOMIC ANALYSIS

Economists surveyed by Zillow* see low odds of a recession in 2018 or 2019, though risks pick up toward late 2019

What factors are most likely to trigger the next recession?

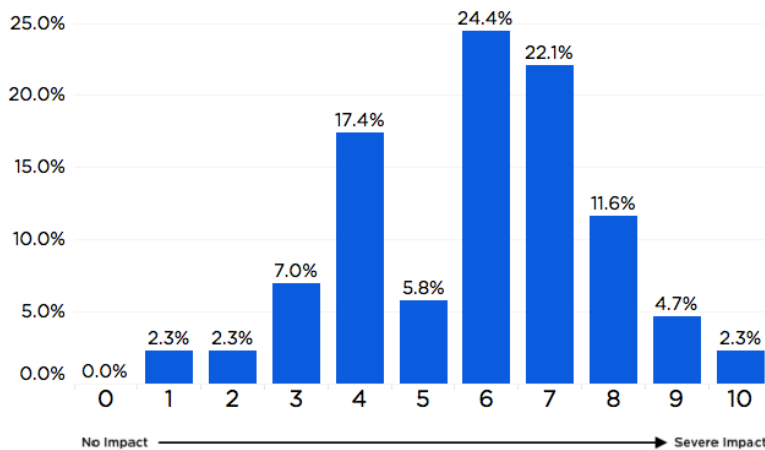
Share of 102 panelists that selected factor



*Scores were computed by weighting the factors selected by each respondent according to their indicated importance ranking.

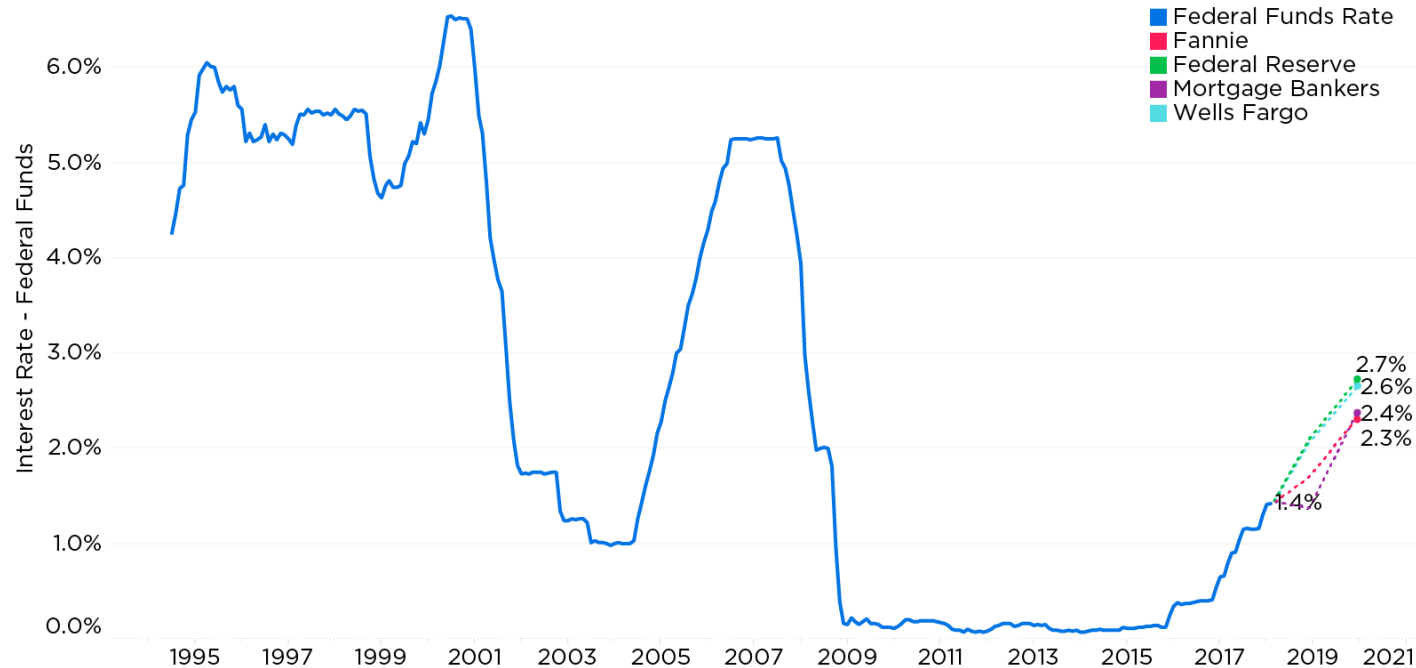
How will the next recession affect the U.S. housing market?

Impact of next recession on U.S. housing, by share of respondents and severity of expected impact



*Survey conducted in August 2017.

Federal Funds Rate (mid point of the target range) forecasts point to steady rate increases over the next 24 months



SOURCE: BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM (US)

Mortgage rates expected to increase in line with short-term lending rates, but remain below historic levels

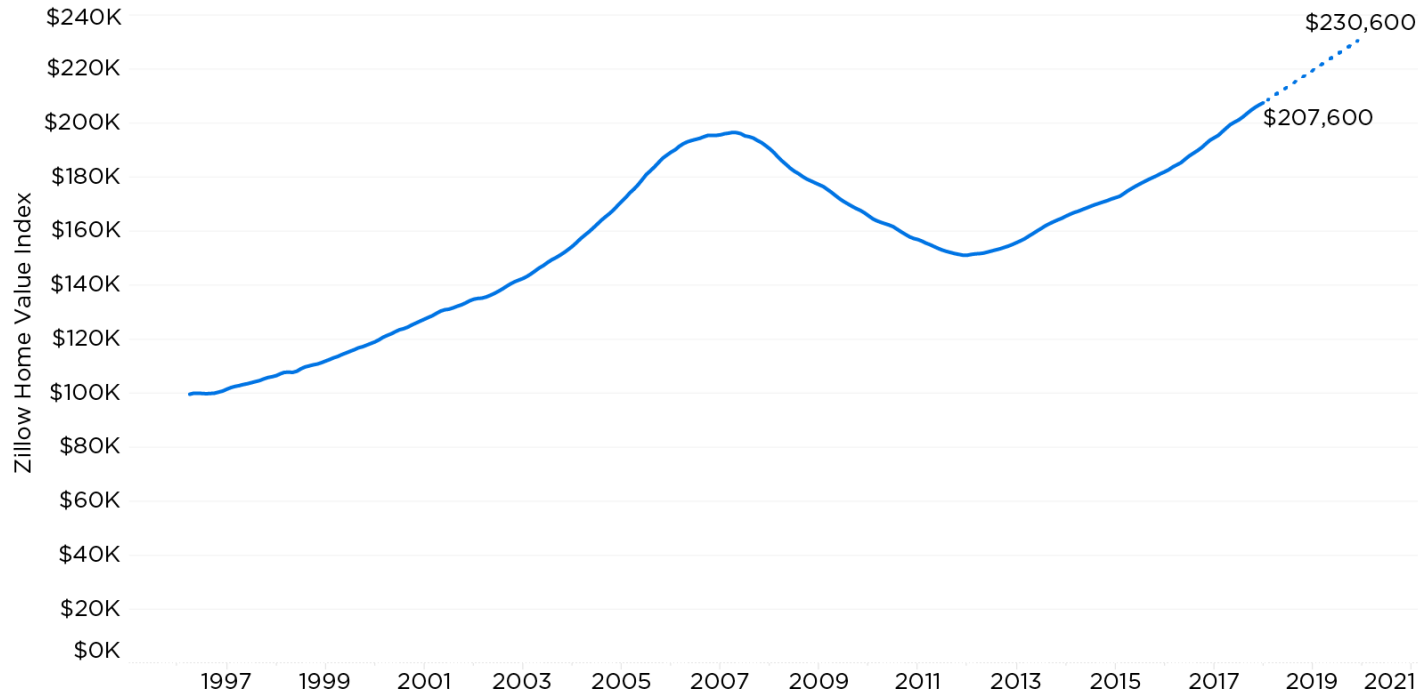


SOURCE: FREDDIE MAC

The terminal Federal Funds Rate and the yield curve

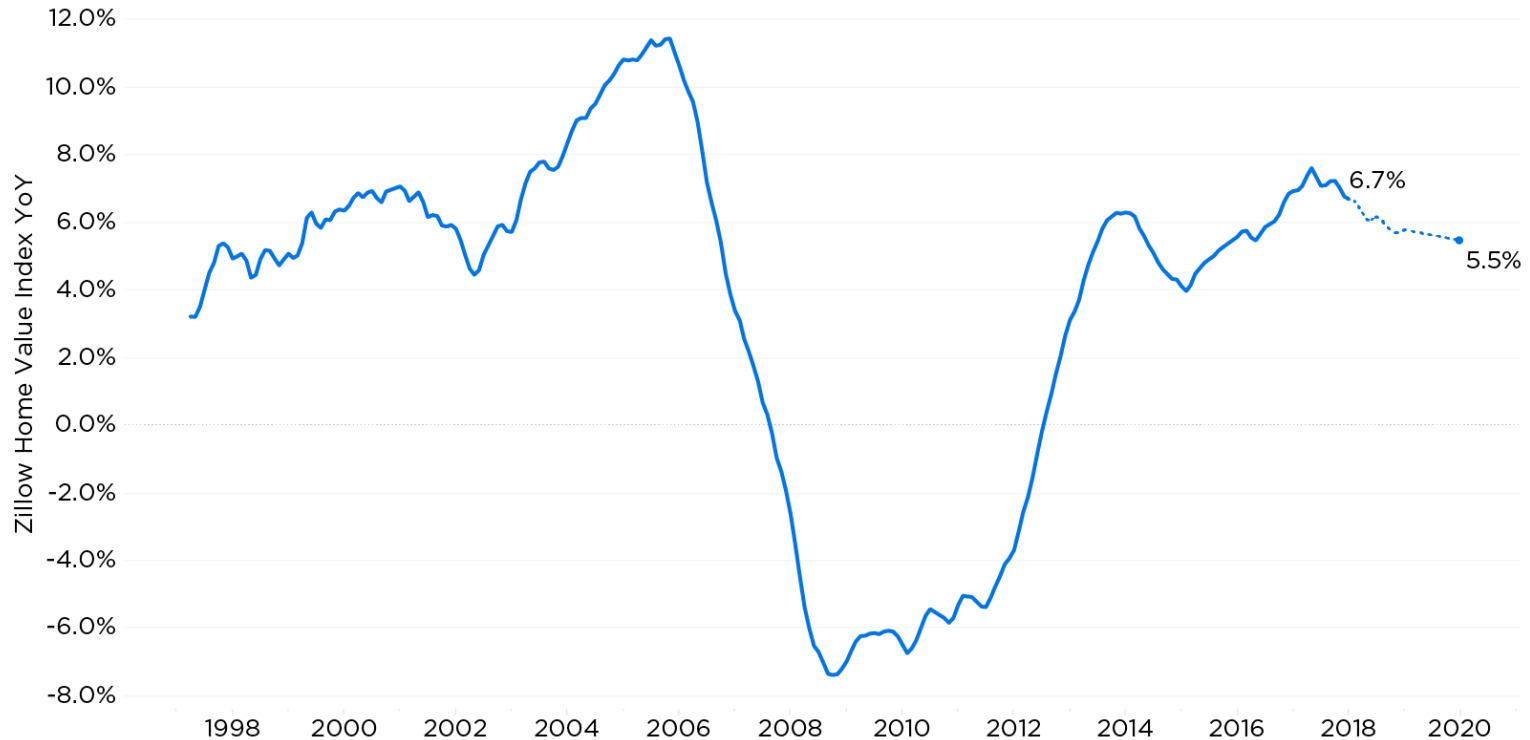
- Estimates of terminal funds rate current around 3.25 percent to 3.5 percent by late 2019 (per Goldman Sachs) – about 200 basis points above current levels
 - In line with peak rates of the mid-2000s and slightly below peak rates of the mid-1990s
 - Some evidence of very modest structural headwinds to potential growth – e.g., demographics, productivity – putting some downward pressure on the terminal Federal Funds Rate at peak
- Yield curve has flattened putting less upward pressure on long-term lending rates than on short-term rates
 - Possible structural shifts in demand for risk-free/low-risk assets as result of post-crisis financial regulation, demographics, global risk environment and legacy QE-era bond buying
 - Expect more upward pressure on long-term lending rates as global risk environment normalizes
 - Zillow forecasts 30-year fixed mortgage rate to hit 5.5 percent to 5.75 percent by end of 2019, still below historic averages, but in line with peak rates of the mid-2000s

ZHVI forecast to extend annual pace of appreciation in the 5% to 6% range over the next 24 months



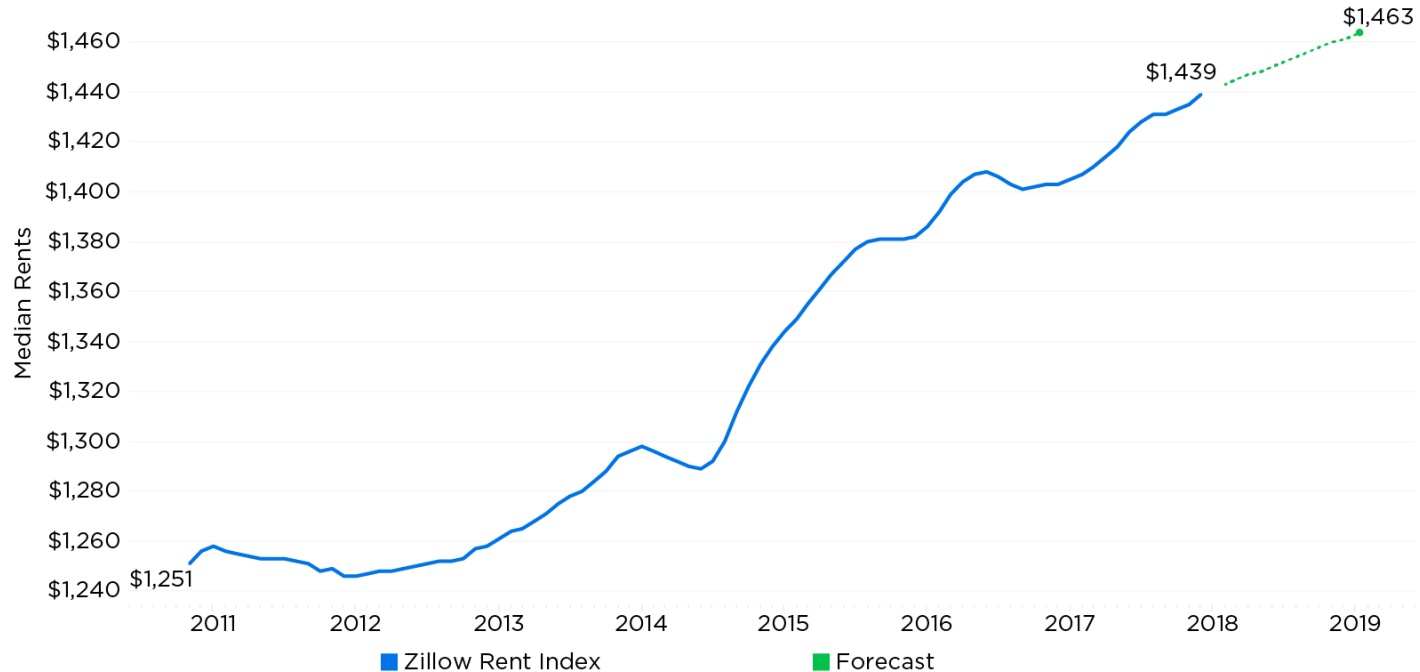
SOURCE: ZILLOW HOME VALUE INDEX AND FORECAST

Home value appreciation expected to slow by ~1 ppt in 2018



SOURCE: ZILLOW HOME VALUE INDEX AND FORECAST

Rent growth slower than during 2015-17 but still steady on the 12-month horizon



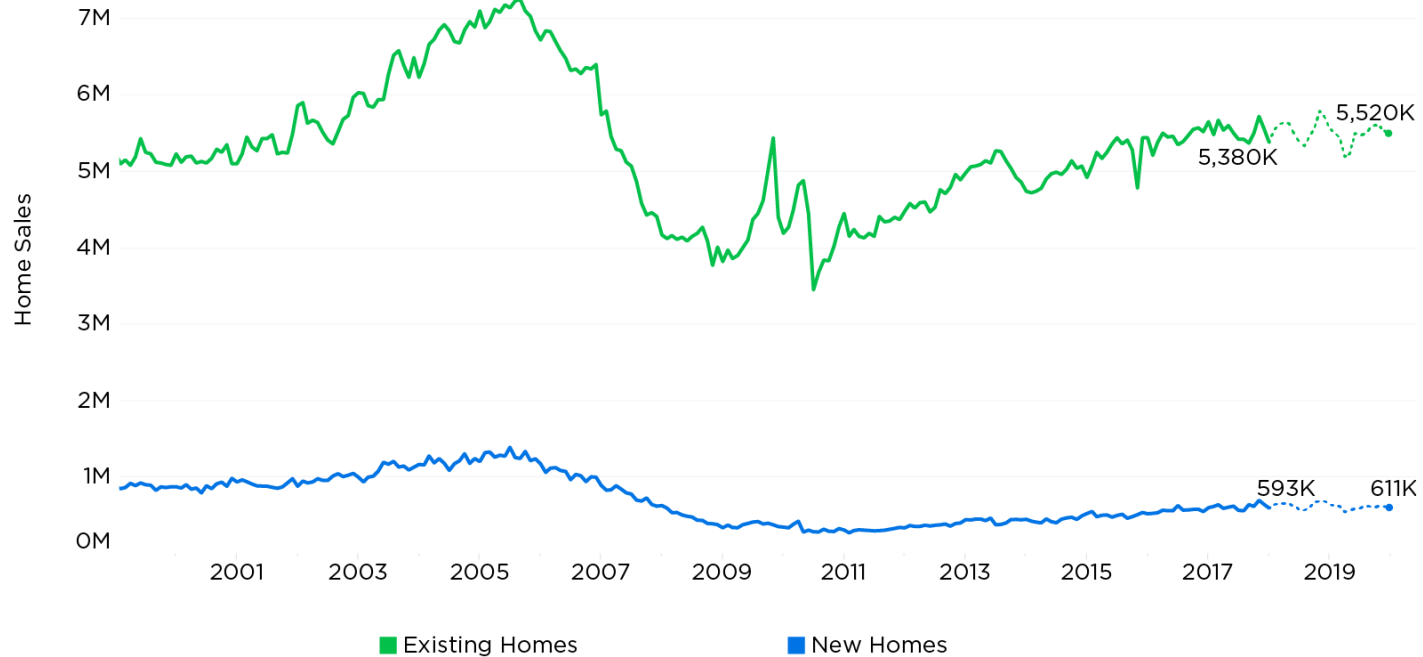
SOURCE: ZILLOW RENT INDEX AND FORECAST

Rent appreciation expected to slow due to greater multifamily supply, strong home buying



SOURCE: ZILLOW RENT INDEX AND FORECAST

Meaningful headwinds to both existing and new home sales



SOURCE: NAR EXISTING HOME SALES: SINGLE-FAMILY & CONDO & CO-OP, U.S. CENSUS BUREAU NEW RESIDENTIAL SALES

