

# The “B” Word: Can We Spot The Next House Price Bubble?

Realtor® University

Outlook for Home Prices and Residential Construction

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Len Kiefer, Economic & Housing Research

May 2018

# A **Better** Freddie Mac

...and a **better** housing finance system

## **For families**

...innovating to improve the liquidity, stability and affordability of mortgage markets

## **For customers**

...competing to earn their business

## **For taxpayers**

...reducing their exposure to mortgage risks

# The “B” Word: Can we spot the next house price bubble?



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## How we Hunt for Bubbles

*Three characteristics of a bubble*  
*Spotting a bubble*

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## Are we in a bubble

*Leverage*  
*Capacity*  
*Credit*

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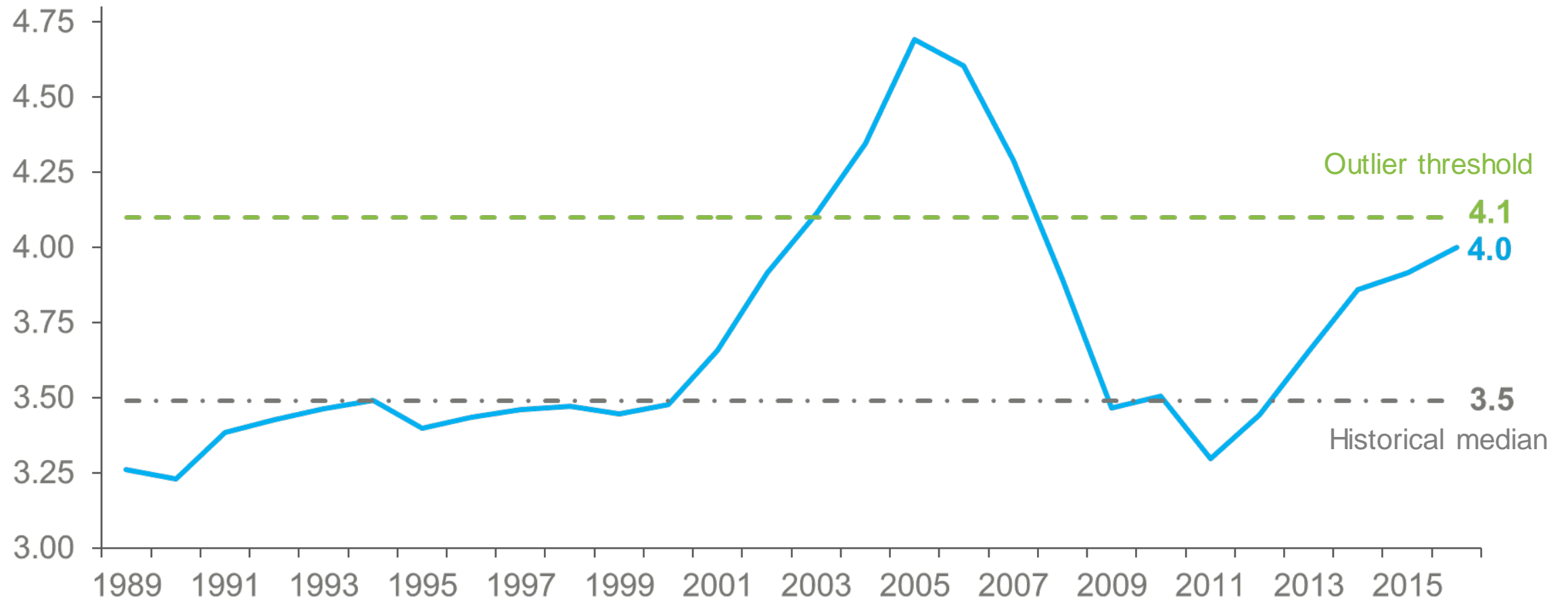
## How it plays out

*Three Scenarios*

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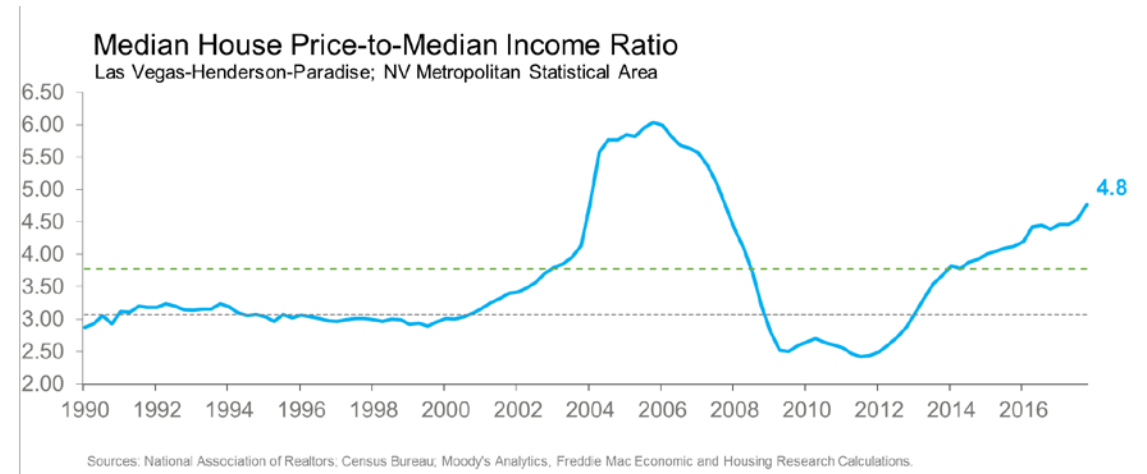
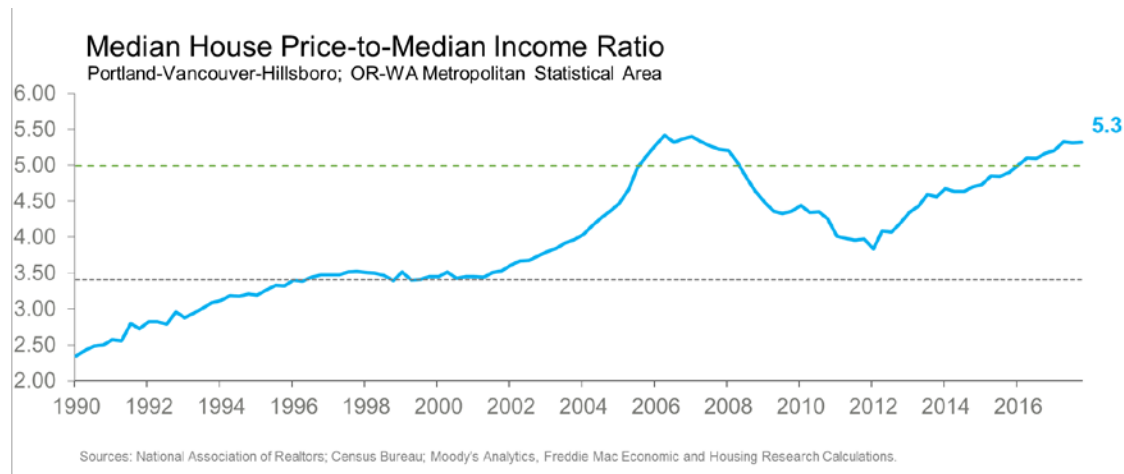
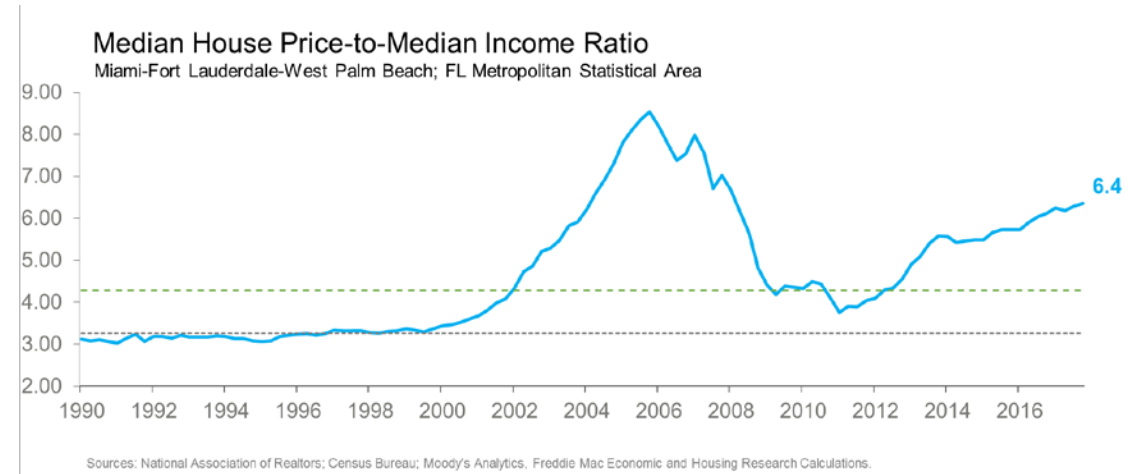
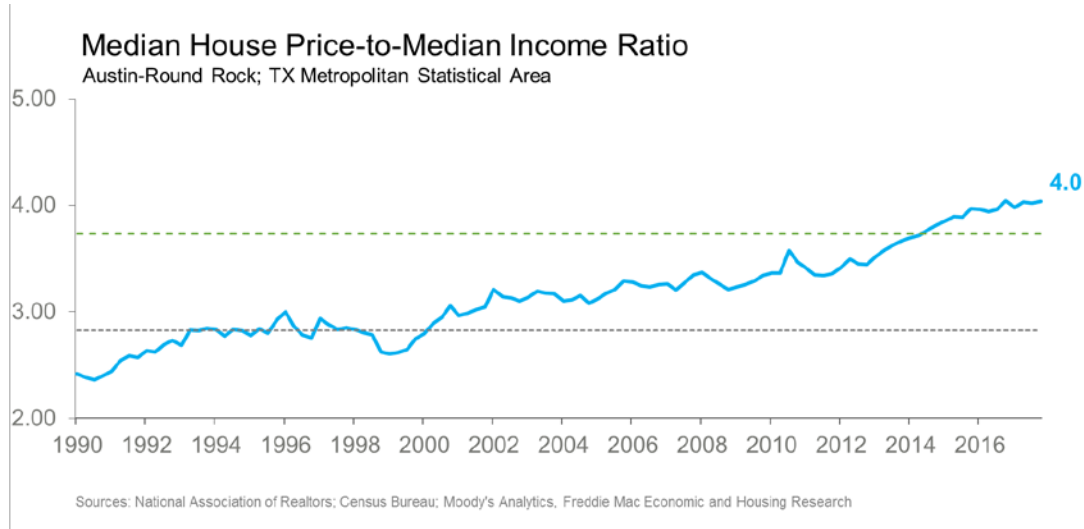
For more, read the article: [http://www.freddiemac.com/research/insight/20171109\\_next\\_house\\_price\\_bubble.html](http://www.freddiemac.com/research/insight/20171109_next_house_price_bubble.html)

## National Median House Price-to-Median Household Income Ratio

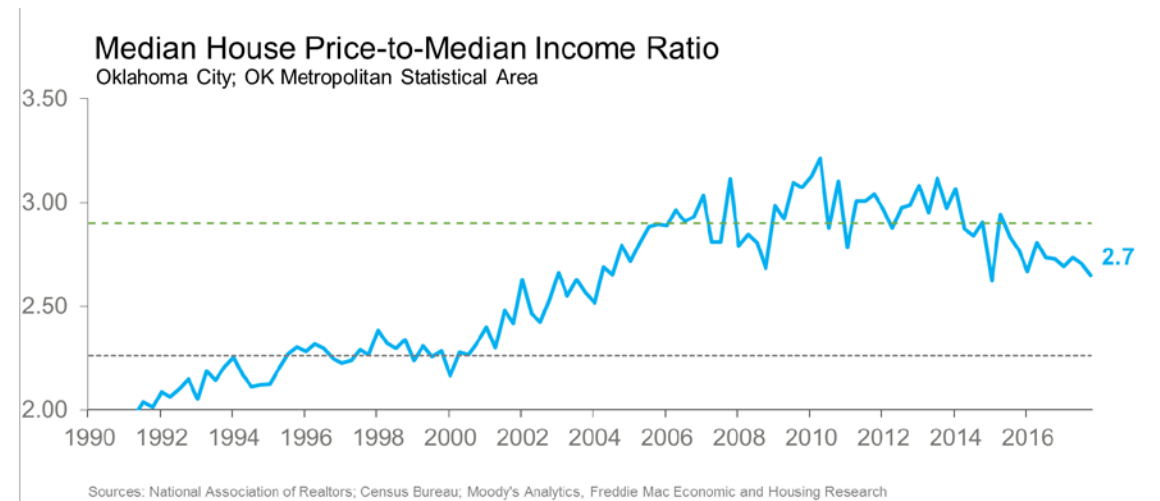
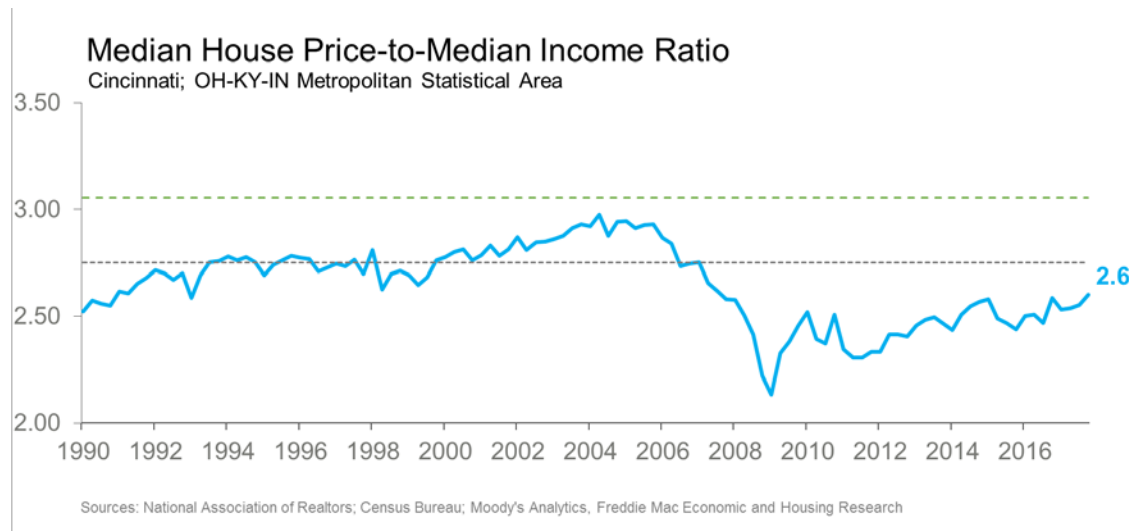
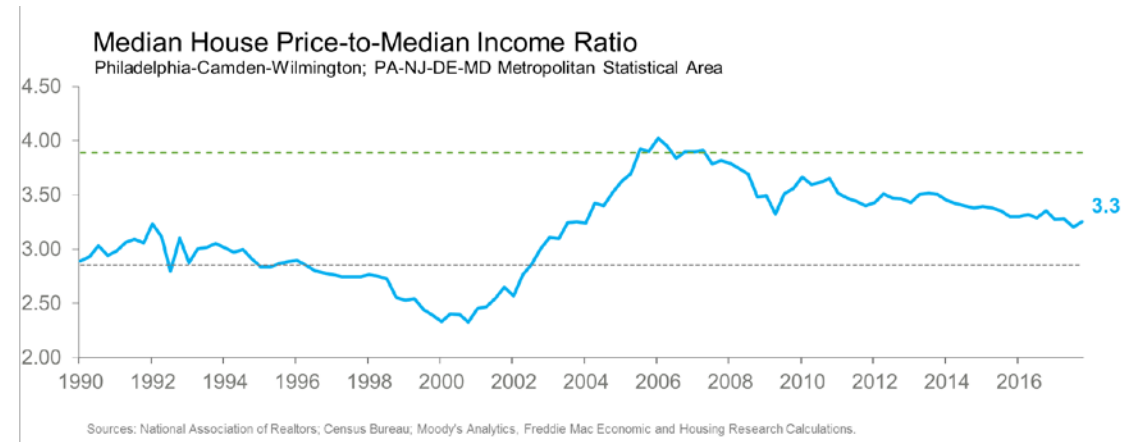
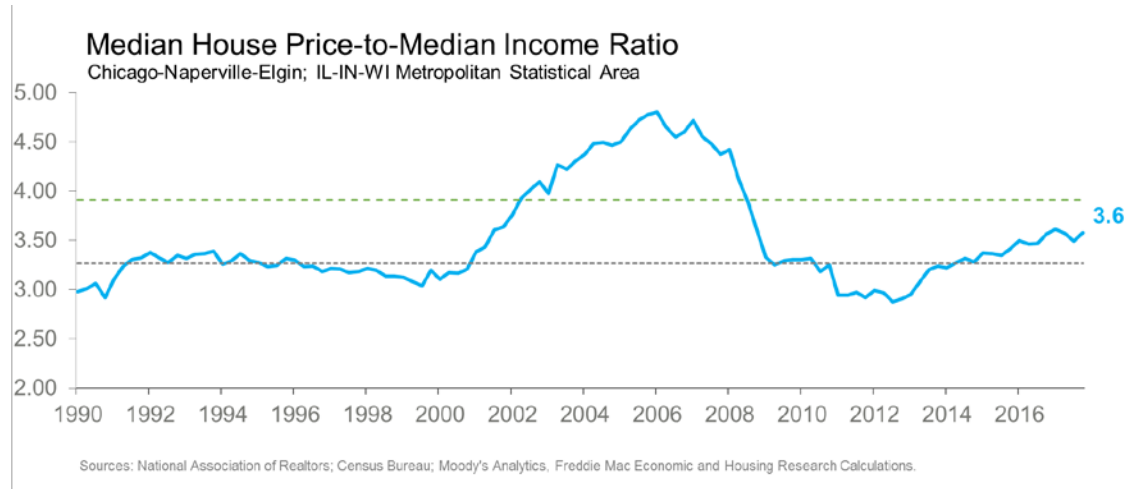


Sources: National Association of Realtors, U.S. Census Bureau, Moody's Analytics, annual data, last value 2016

# Many markets have elevated price-to-income ratios...

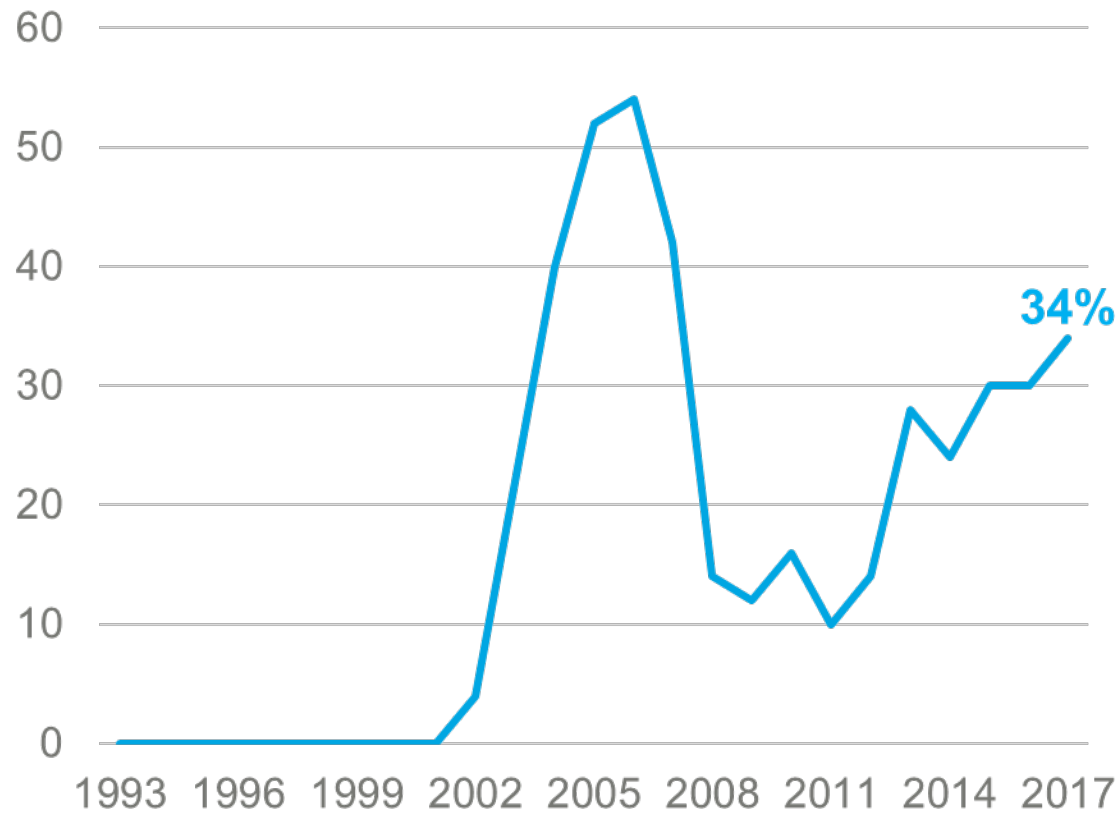


# ...but not everywhere



# ~1/3 of top 50 metros have elevated PTI Ratio

## Share of Metros with Elevated Price-to-Income Ratio (Percent of top 50 metro areas)



Note: 2017 data is as of the second quarter of the year.  
Sources: National Association of Realtors; Census Bureau; Moody's Analytics.

### Metros with high PTI ratios

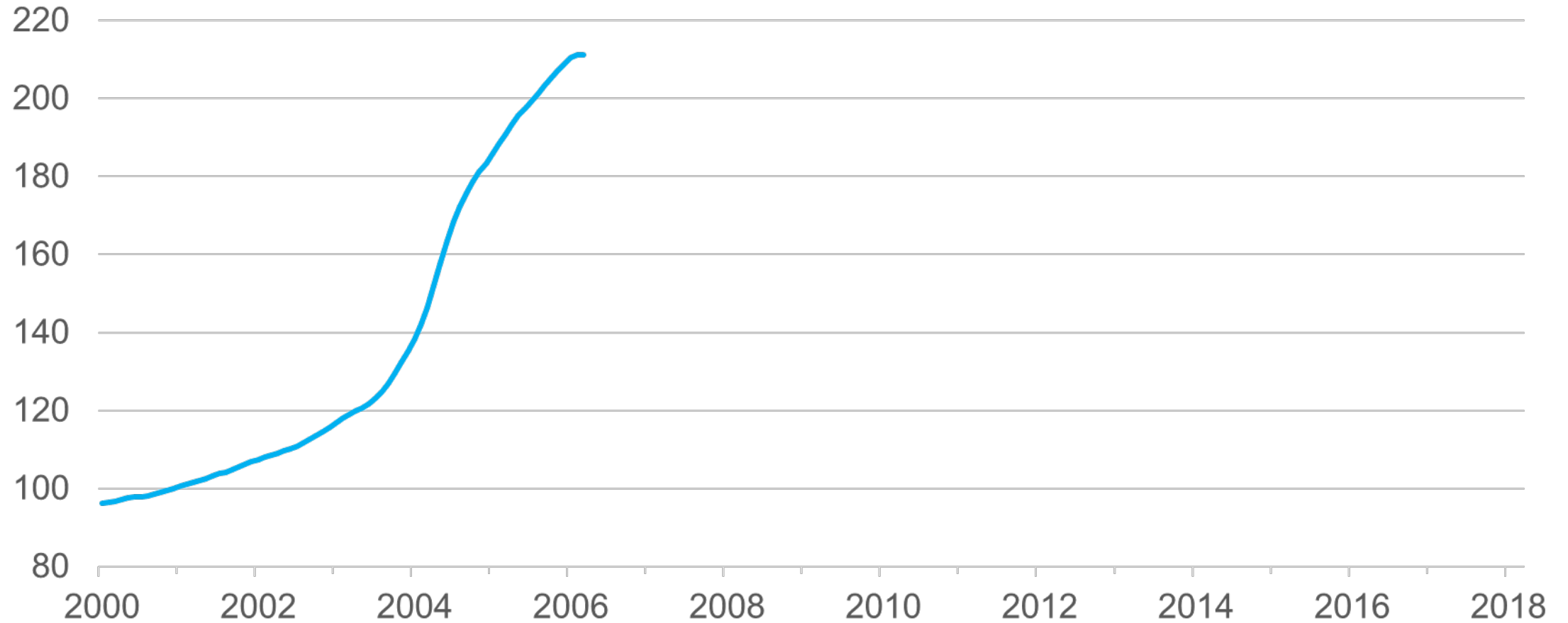


Note: Data compiled by Economic & Housing Research, as of Q2 2017  
Source: National Association of Realtors; U.S. Census Bureau; Moody's Analytics

# Bubbles pop

## Nevada House Price Index

Index, Dec 2000 = 100 (NSA)

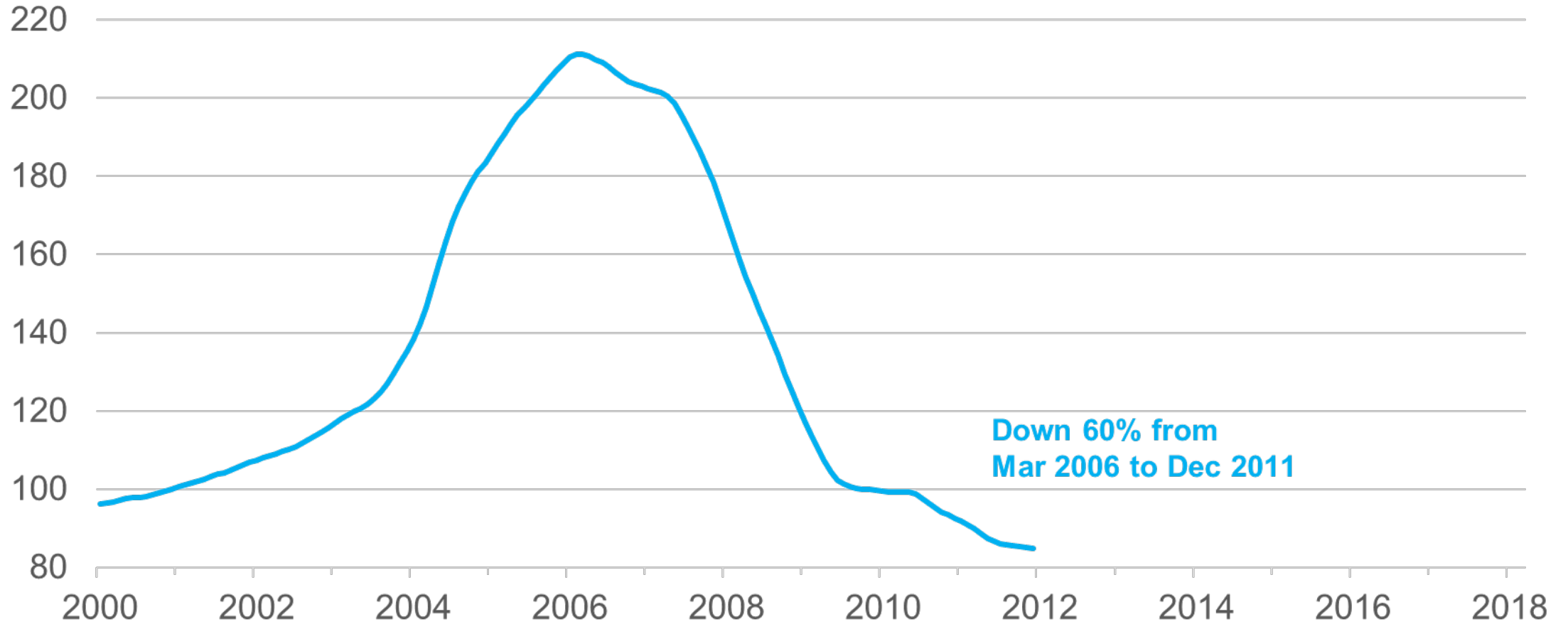


Source: Freddie Mac House Price Index



## Nevada House Price Index

Index, Dec 2000 = 100 (NSA)

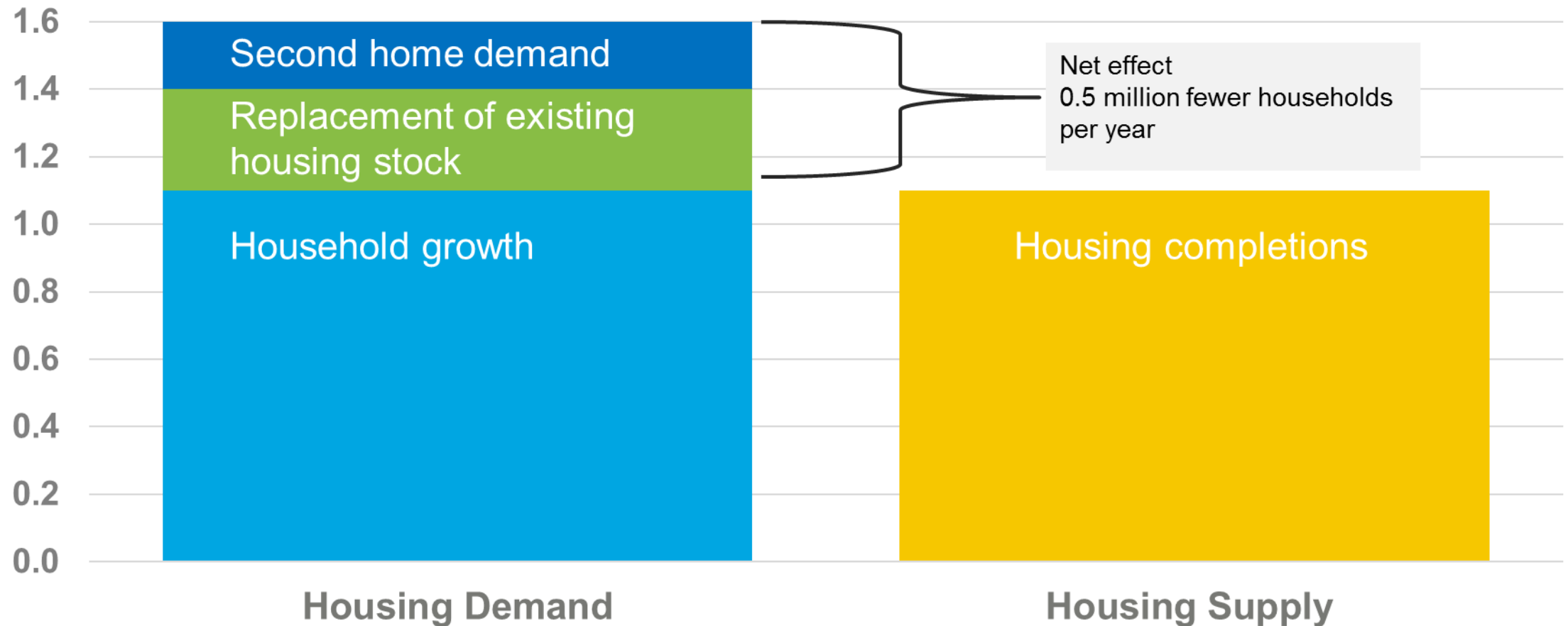


Source: Freddie Mac House Price Index

# Supply not keeping up with demand: Long-run housing demand and supply

## Long-run housing demand and supply

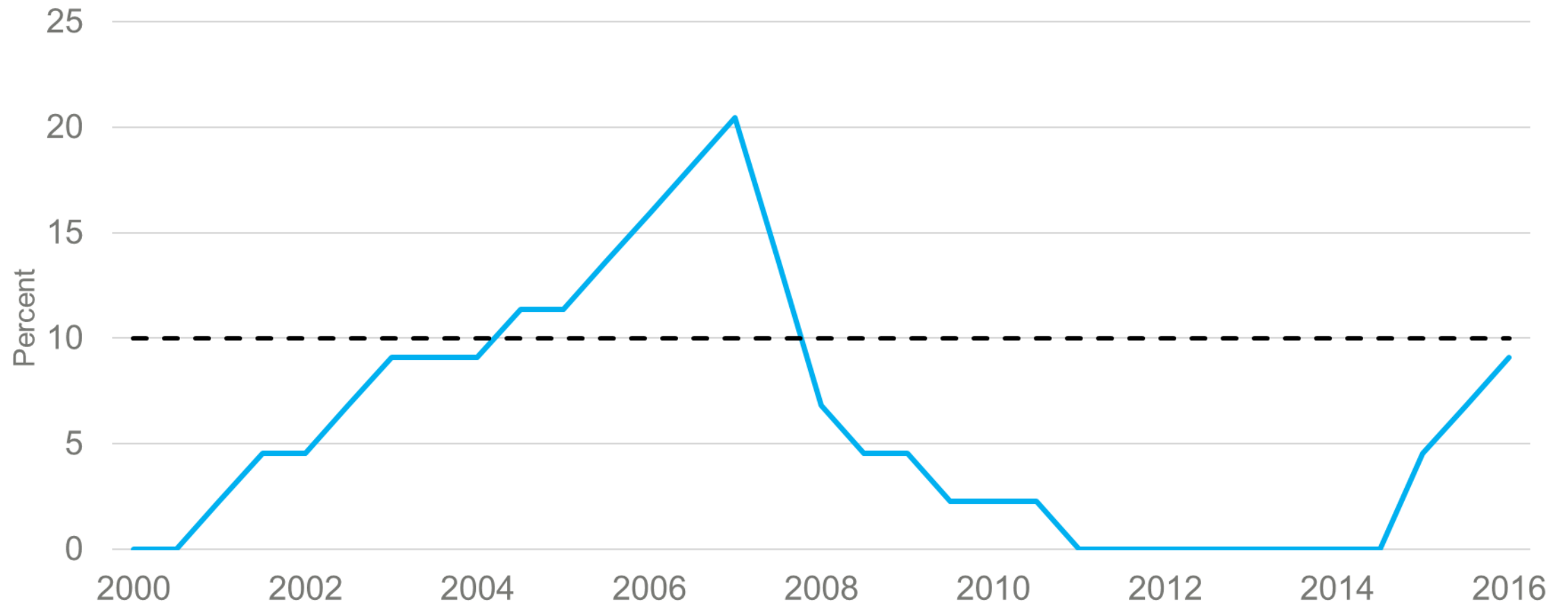
*Millions of Units*



# MSAs with real price per square foot above \$150



## Share of Elastic MSAs with Real Price Per Square Foot Above Threshold

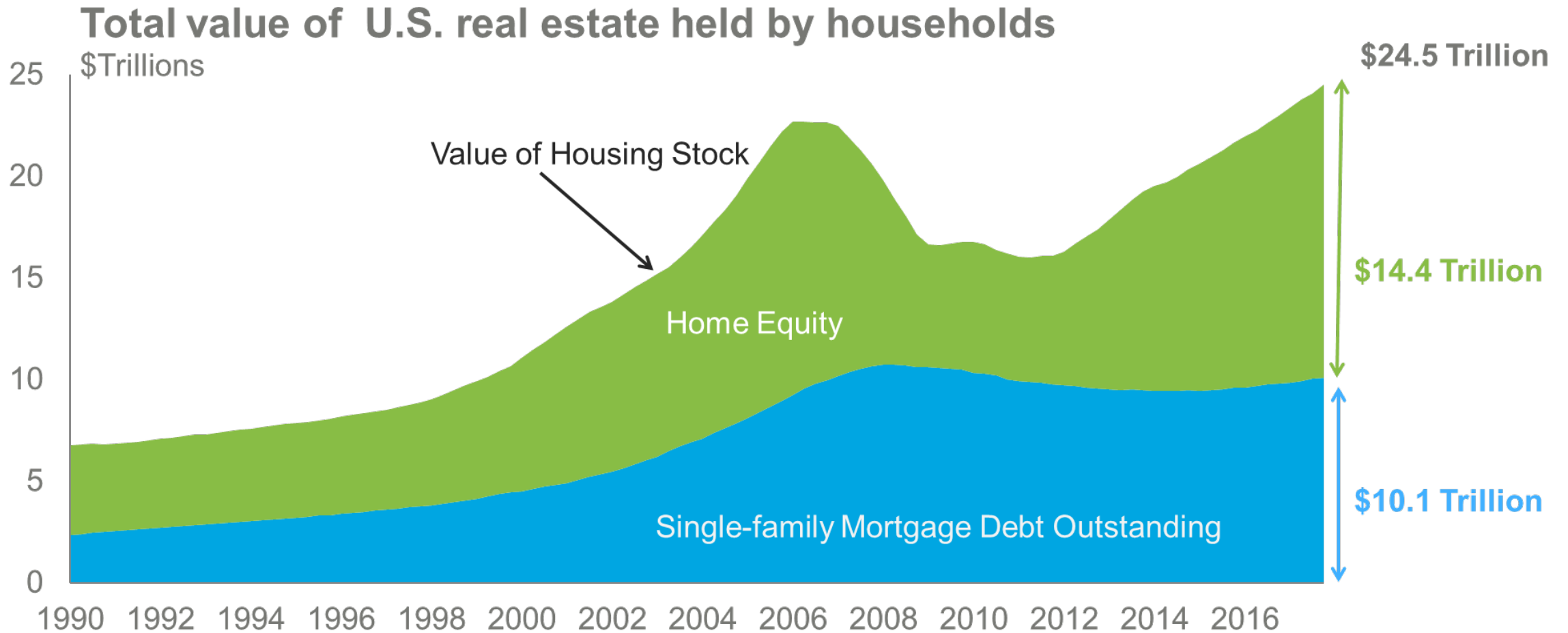


Note: Includes semi-annual data. Source: Zillow, Saiz 2010

# To B or not to B?

Are we in a house price bubble?

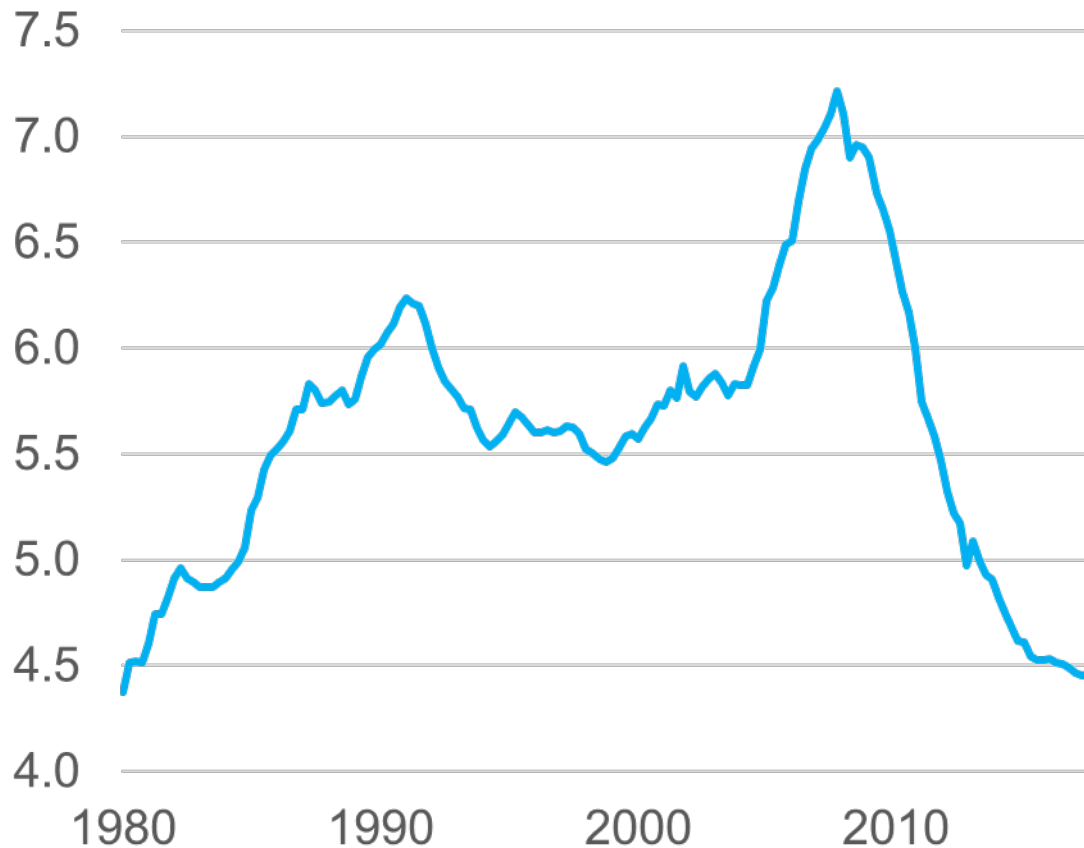
# Rising home prices help build equity



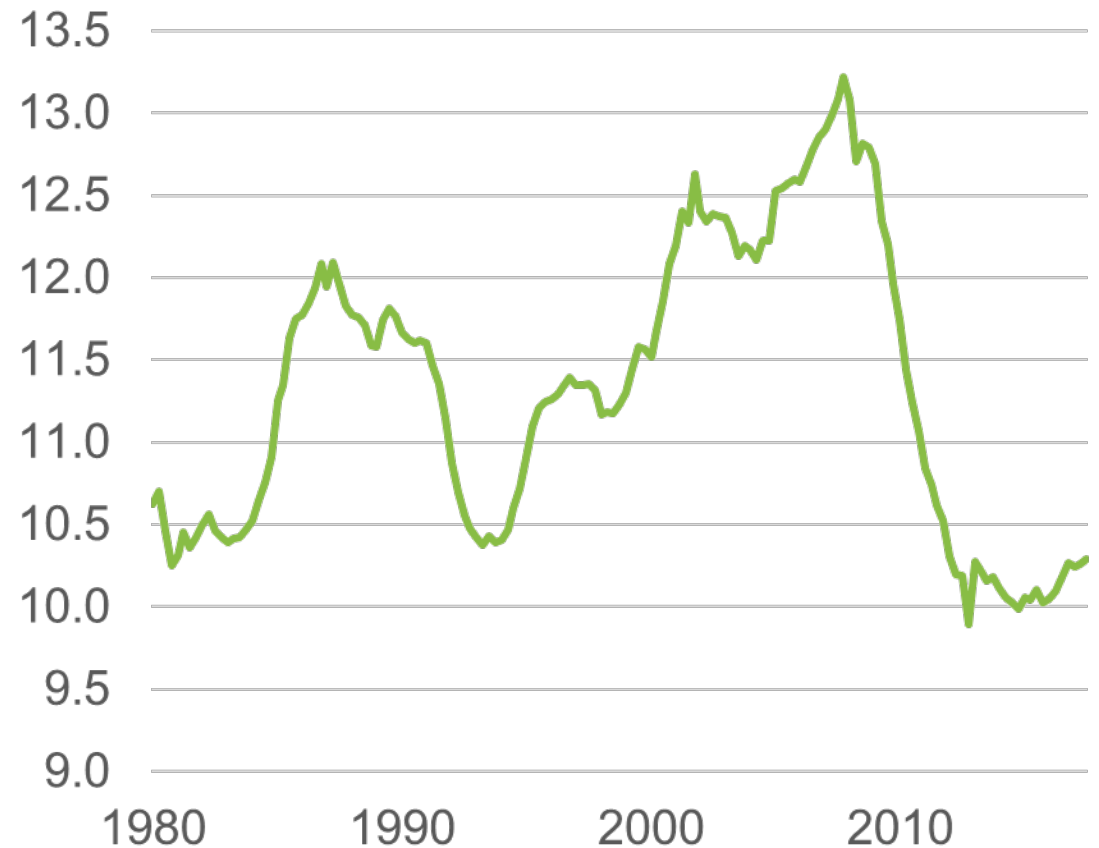
Note: Value of U.S. housing stock includes homes with and without underlying mortgages. U.S. home equity is the difference between the value of the U.S. housing stock and the amount of U.S. single-family mortgage debt outstanding. Source: Federal Reserve Board's Flow of Funds Accounts, Table B. 101. Data as of December 31, 2017.

# Households have capacity

**Mortgage Debt Service Payments** as a Percent of Disposable Personal Income, Percent, Quarterly, Seasonally Adjusted



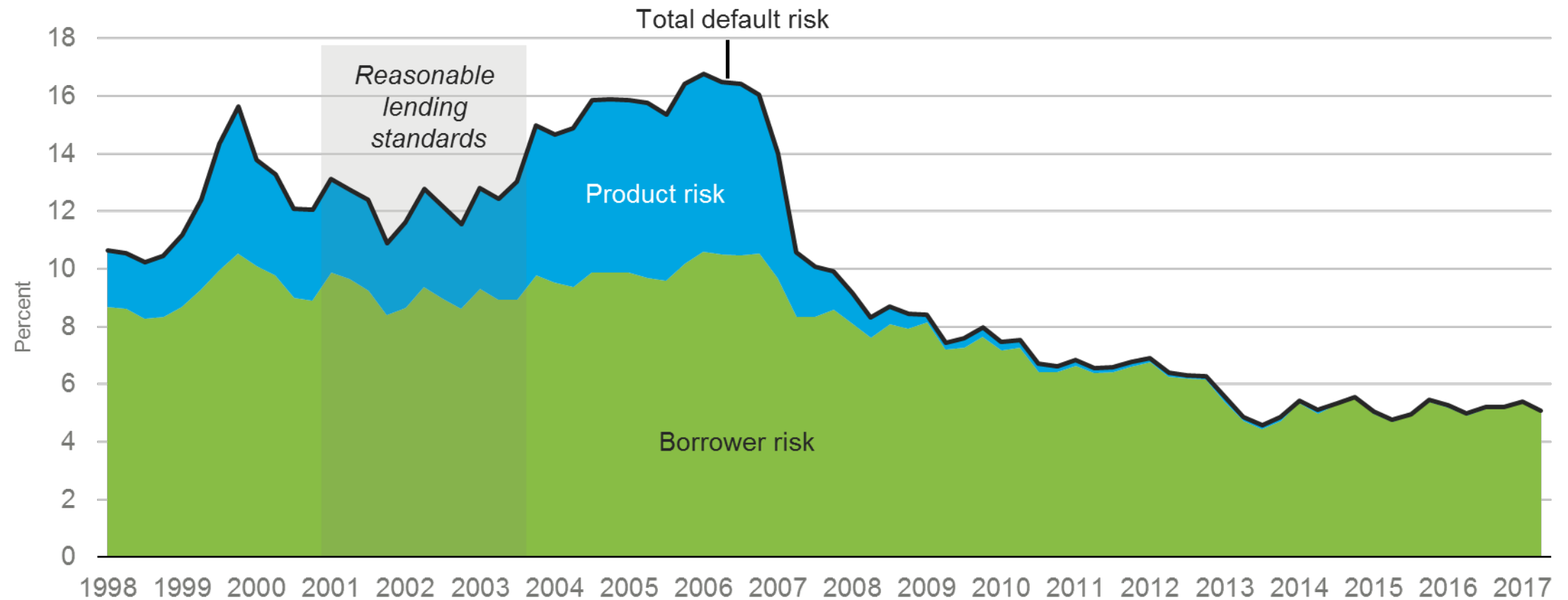
**Household Debt Service Payments** as a Percent of Disposable Personal Income, Percent, Quarterly, Seasonally Adjusted



Source: Board of Governors of the Federal Reserve System (US), Mortgage Debt Service Payments as a Percent of Disposable Personal Income

# Credit: Housing Credit Availability Index (HCAI)

## Default Risk Taken by the Mortgage Market, 1998Q1–2017Q2



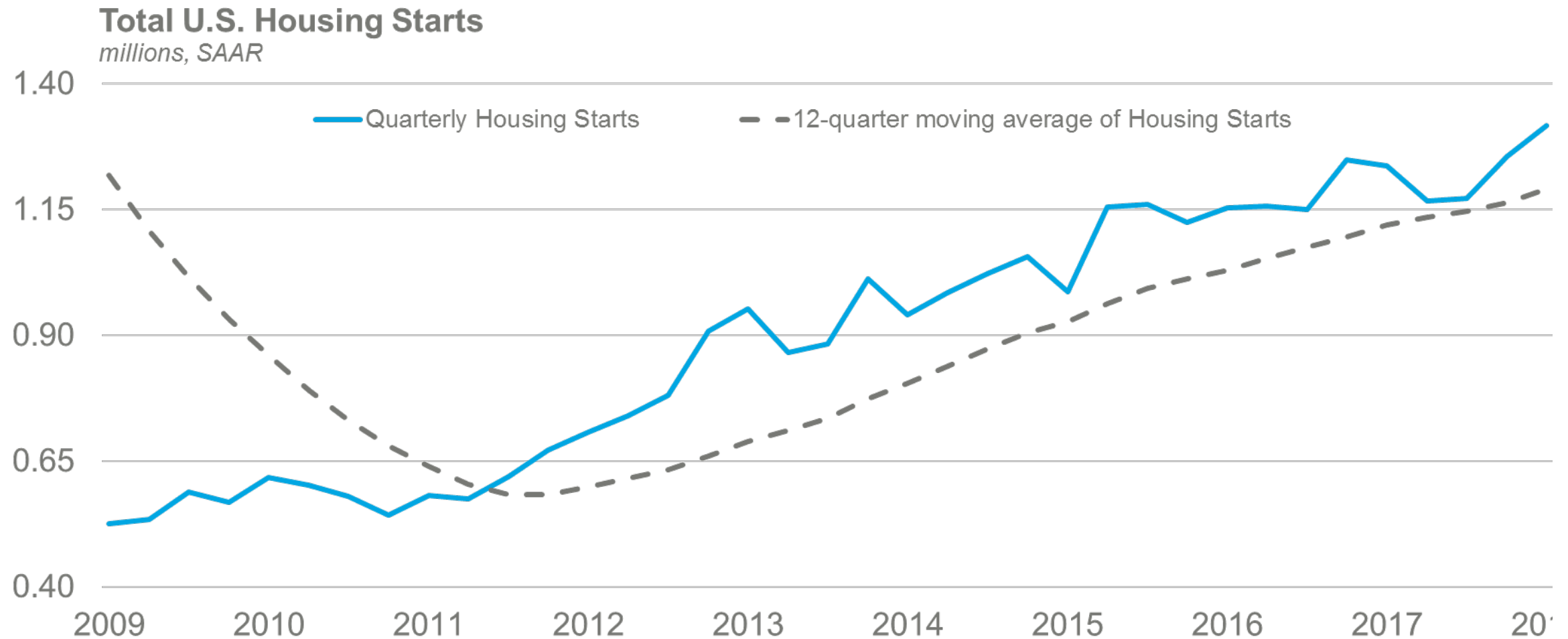
Note: Reasonable lending standards per the Urban Institute.  
Sources: eMBS, CoreLogic, HMDA, IMF, and Urban Institute.

# How it all plays out

1. Soft Landing
2. Homeownership down
3. Demand/Supply imbalance triggers a bubble



# Housing supply grinds higher, house price growth moderates



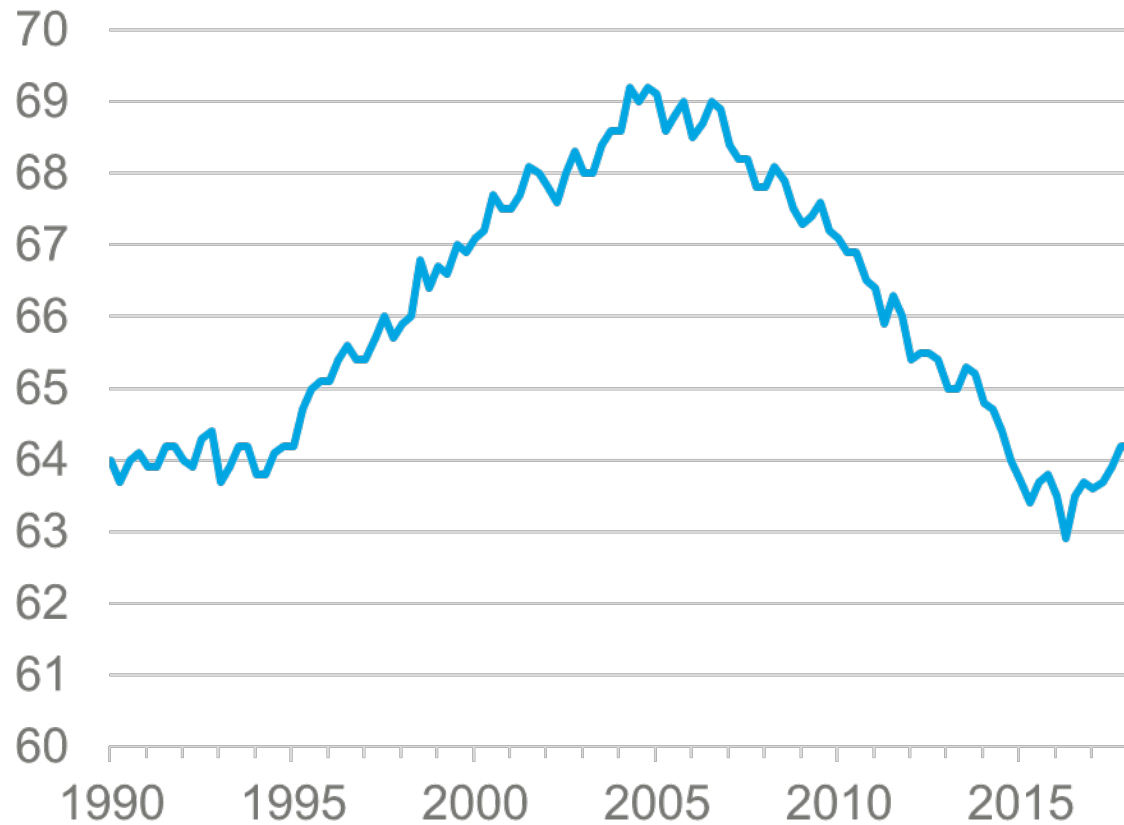
Source: US Census Bureau/ Department of Housing and Urban Development

# Homeownership down



## Homeownership Rate

Total (%)



Source: US Census Bureau/ Department of Housing and Urban Development

## Homeownership Rate

Householder Less than 35 Years Old (%)

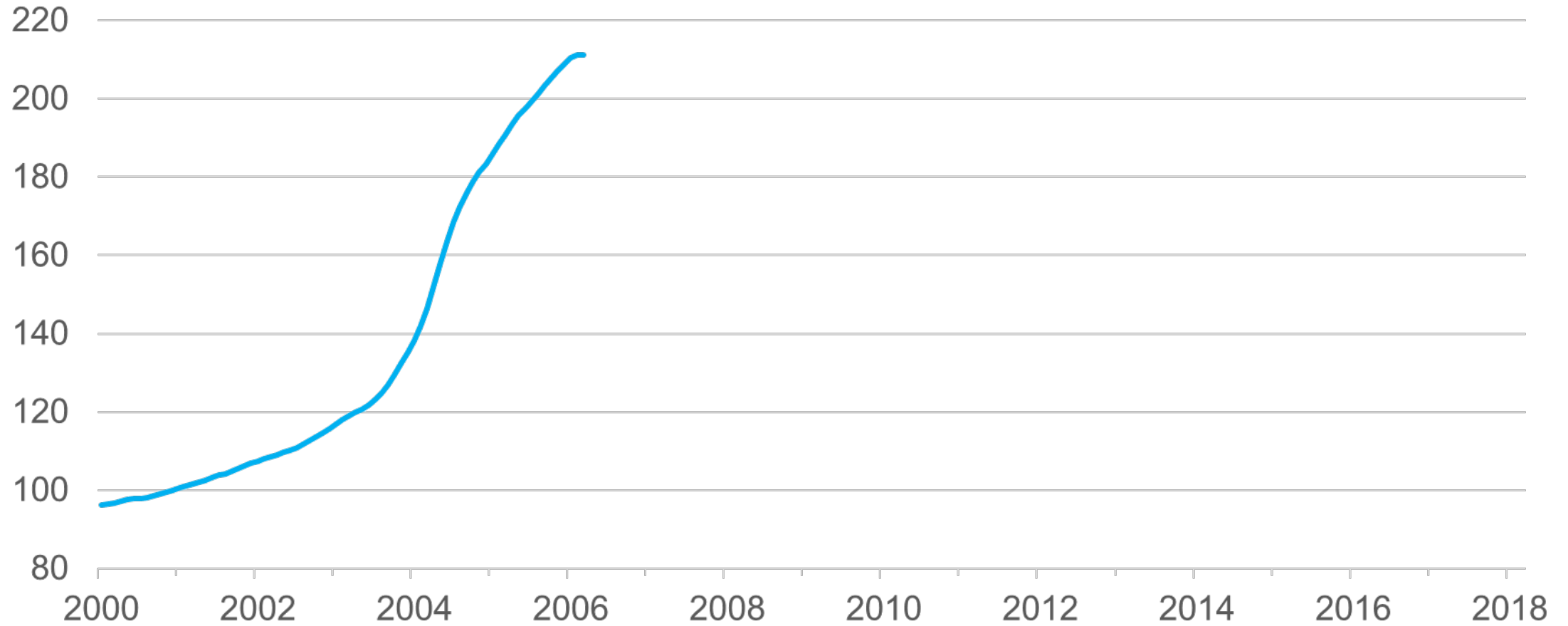


Source: US Census Bureau/ Department of Housing and Urban Development

# Demand/Supply imbalance triggers a bubble

## Nevada House Price Index

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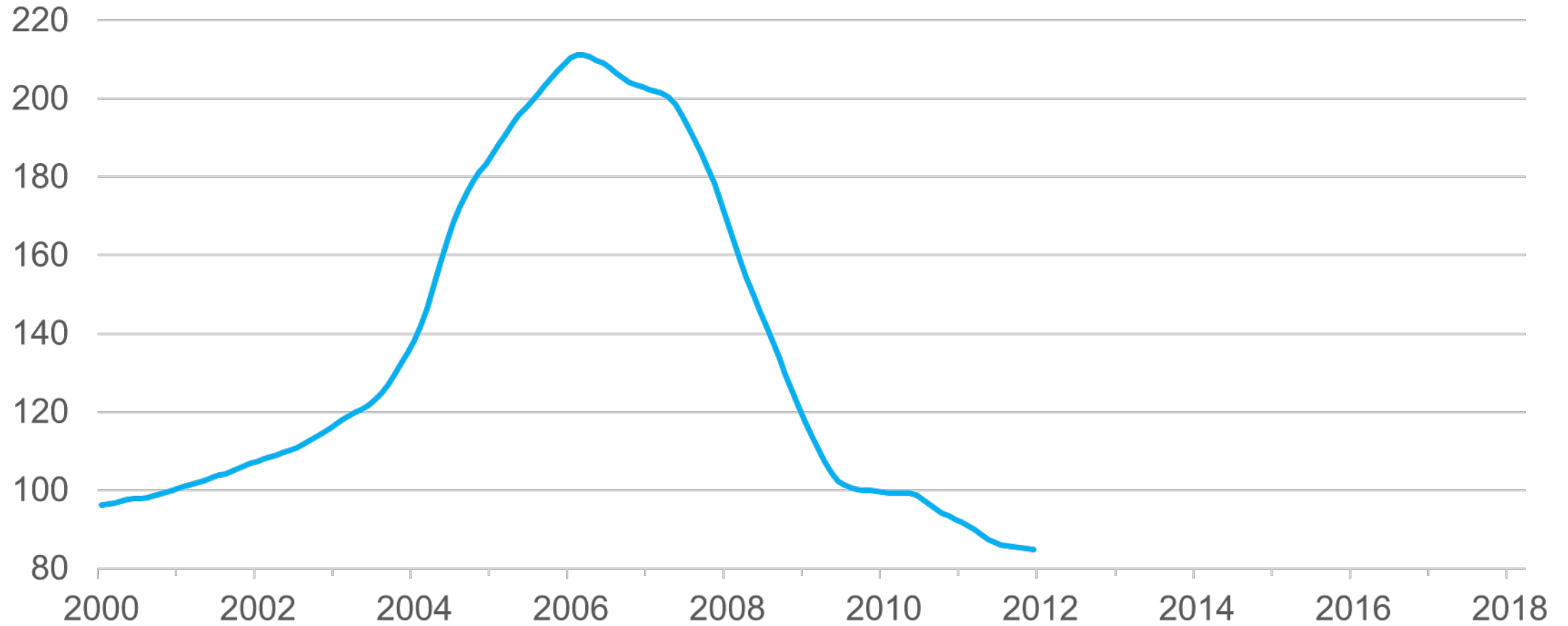


Source: Freddie Mac House Price Index

# Demand/Supply imbalance triggers a bubble

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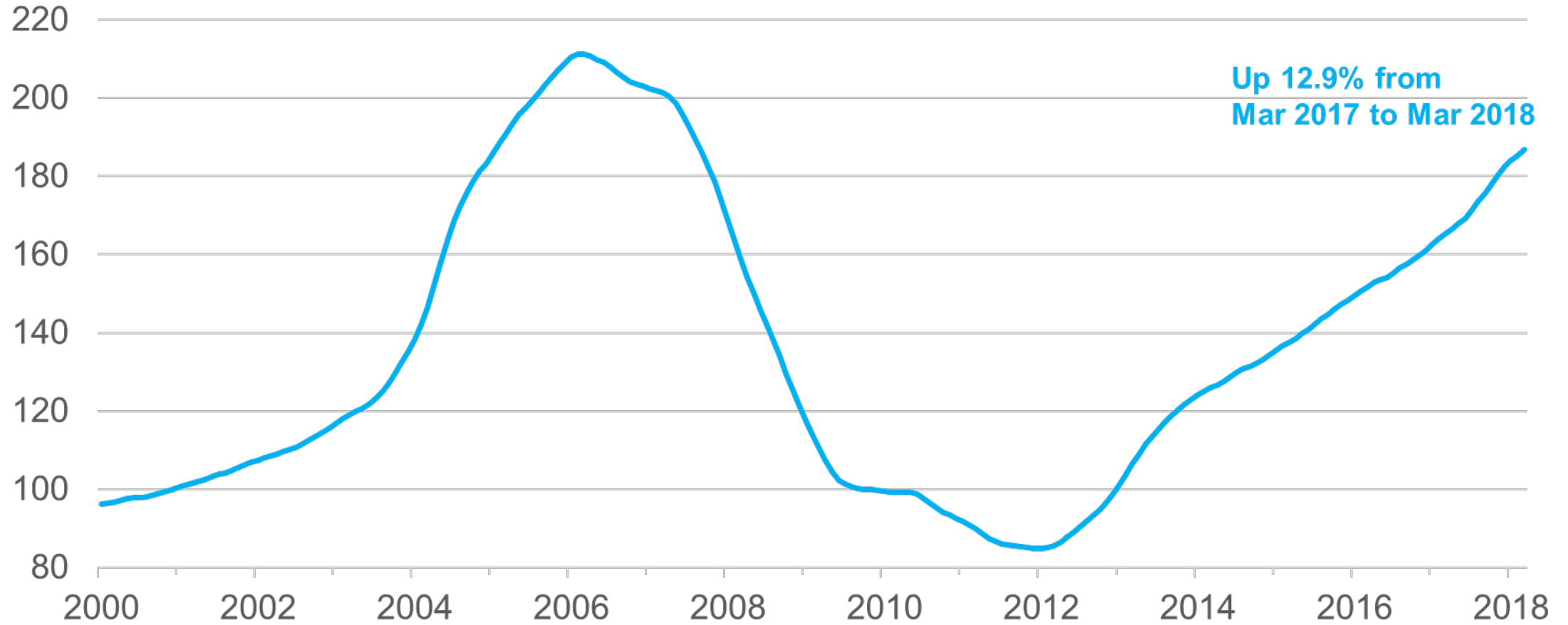


Source: Freddie Mac House Price Index

# Demand/Supply imbalance triggers a bubble

## Nevada House Price Index

Index, Dec 2000 = 100 (NSA)



Source: Freddie Mac House Price Index

# For More Information



**Economic and Housing Research:** <http://www.freddiemac.com/research/>

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