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

Realtor® University
Outlook for Home Prices and Residential Construction

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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?

How we Hunt for Bubbles

Three characteristics of a bubble
Spotting a bubble

Are we in a bubble

Leverage
Capacity
Credit

How it plays out

Three Scenarios

For more, read the article: http://www.freddiemac.com/research/insight/20171109_next_house_price_bubble.html
U.S. national price-to-income trends

National Median House Price-to-Median Household Income Ratio

Outlier threshold: 4.1
Historical median: 3.5

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

Median House Price-to-Median Income Ratio
Chicago-Naperville-Elgin, IL-IN-WI Metropolitan Statistical Area

3.6

Sources: National Association of Realtors; Census Bureau; Moody’s Analytics; Freddie Mac Economic and Housing Research Calculations.

Median House Price-to-Median Income Ratio
Philadelphia-Camden-Wilmington, PA-NJ-DE-MD Metropolitan Statistical Area

3.3

Sources: National Association of Realtors; Census Bureau; Moody’s Analytics; Freddie Mac Economic and Housing Research Calculations.

Median House Price-to-Median Income Ratio
Cincinnati, OH-KY-IN Metropolitan Statistical Area

2.6

Sources: National Association of Realtors; Census Bureau; Moody’s Analytics; Freddie Mac Economic and Housing Research.

Median House Price-to-Median Income Ratio
Oklahoma City, OK Metropolitan Statistical Area

2.7

Sources: National Association of Realtors; Census Bureau; Moody’s Analytics; Freddie Mac Economic and Housing Research.
~1/3 of top 50 metros have elevated PTI Ratio

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

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
Bubbles pop

Nevada House Price Index

Index, Dec 2000 = 100 (NSA)

Down 60% from Mar 2006 to Dec 2011

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*

- **Second home demand**
- **Replacement of existing housing stock**
- **Household growth**

Net effect: 0.5 million fewer households per year

Housing completions
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
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

Total U.S. Housing Starts

*millions, SAAR*

- **Quarterly Housing Starts**
- **12-quarter moving average of Housing Starts**

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

**Homeownership Rate**
*Total (%)*

**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
*Index, Dec 2000 = 100 (NSA)*

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
Demand/Supply imbalance triggers a bubble

Nevada House Price Index

Index, Dec 2000 = 100 (NSA)

Up 12.9% from Mar 2017 to Mar 2018

Source: Freddie Mac House Price Index