

Is Something Wrong with Texas Home Prices?

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August 7, 2017

Publication 2174

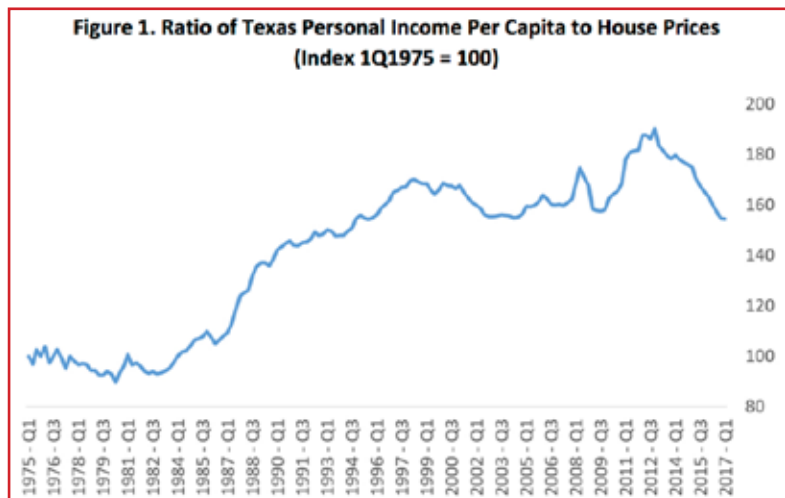


Since 2012 Texas housing prices have been rising faster than incomes (Figure 1). Rapid home price increases affect the stability of the fundamental relationship between income, demand and supply, and home prices. Home price increases should be based on fundamentals.

price index. This is the same methodology used by Case-Shiller in 2003 and now applied to Texas and the major MSAs (Austin, Dallas-Fort Worth, Houston, and San Antonio). This methodology was one of the first to point out the formation of a housing bubble in the U.S. housing market.

A number of factors influence price movements in housing markets. On the supply side, building permits, housing starts, construction costs, land costs, and other factors affect changes in home prices. On the demand side, prices are affected by demographics, income growth, employment growth, interest rates, and locational characteristics such as schools, work centers, and transportation.

The Federal Housing Finance Agency (FHFA) house price index is estimated based on housing market fundamentals; it then is compared to the reported FHFA



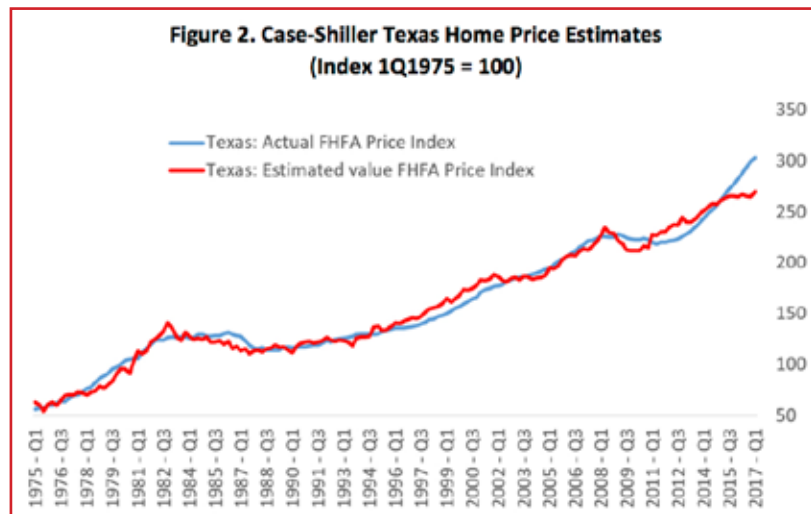
Source: Federal Housing Finance Agency (FHFA), U.S. Bureau of Economic Analysis, and author's calculations

Comparing the computed values to actual prices might show if there is a misalignment in prices. If actual prices are higher/lower than the estimated price, then prices are growing at a higher/lower rate than what is explained by fundamentals, and possible issues in the housing market may be indicated. In the long run, overvalued/undervalued home prices should revert toward fundamentals, eliminating any differences between them.

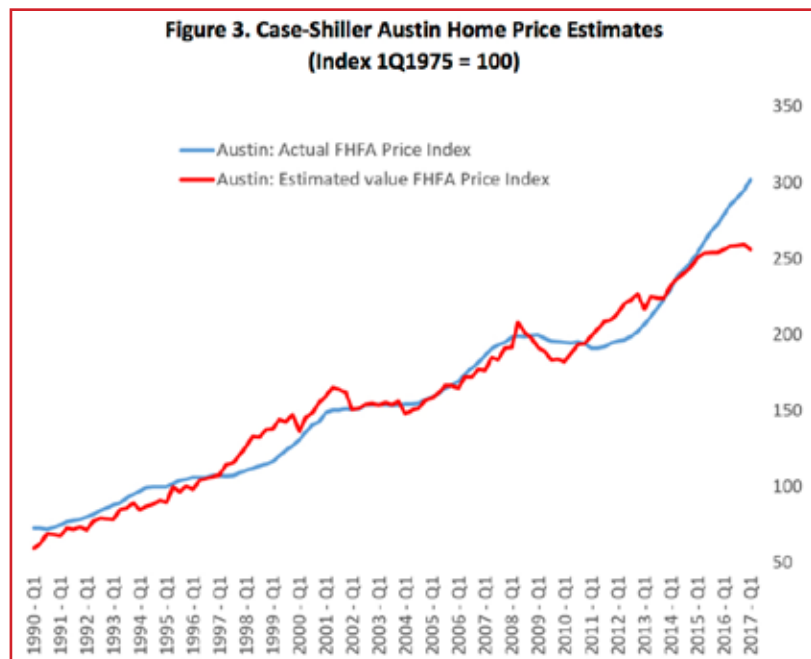
To estimate prices, the following demand and supply variables were used: change in population and employment, mortgage rate, unemployment rate, income per capita, and housing starts. Because no housing start data is available at the MSA level, housing permit data was used to calculate the number of housing starts in the four major Texas MSAs. First, percentages of housing

permits by each MSA were estimated as a percentage of state total housing permits, and that percentage was applied to the state's number of housing starts. In a similar manner, GDP and population values were estimated quarterly as a percentage of annual MSA values with respect to state values.

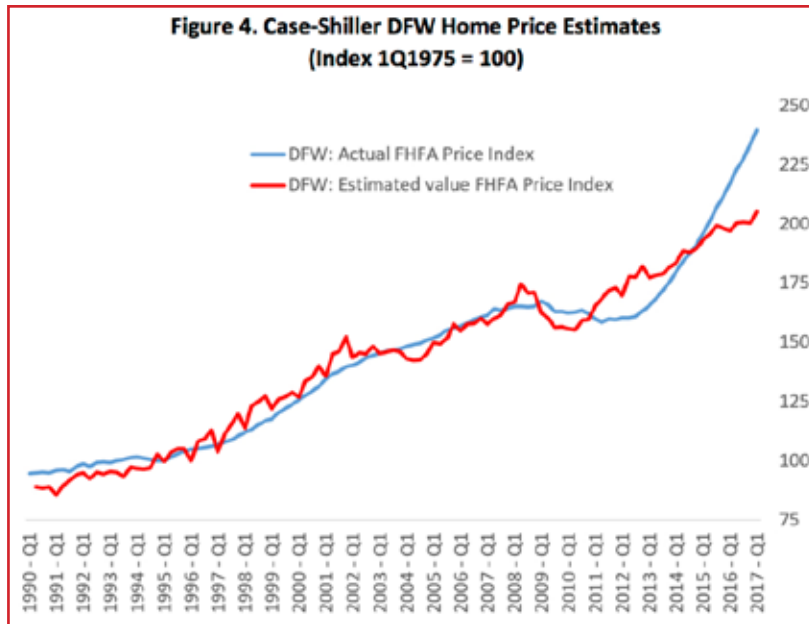
Comparing the FHFA price index for Texas to the estimated value, there seems to have been a misalignment since 1Q2015. This suggests that recent price changes cannot be explained by supply and demand fundamentals alone (Figure 2). The same misalignment is observed in Austin since 2Q2014, in Houston since 4Q2014, in DFW since 1Q2014, and in San Antonio since 2Q2015 (Figures 3–6). This points toward a possible overvaluation of home prices at the state and MSA level.



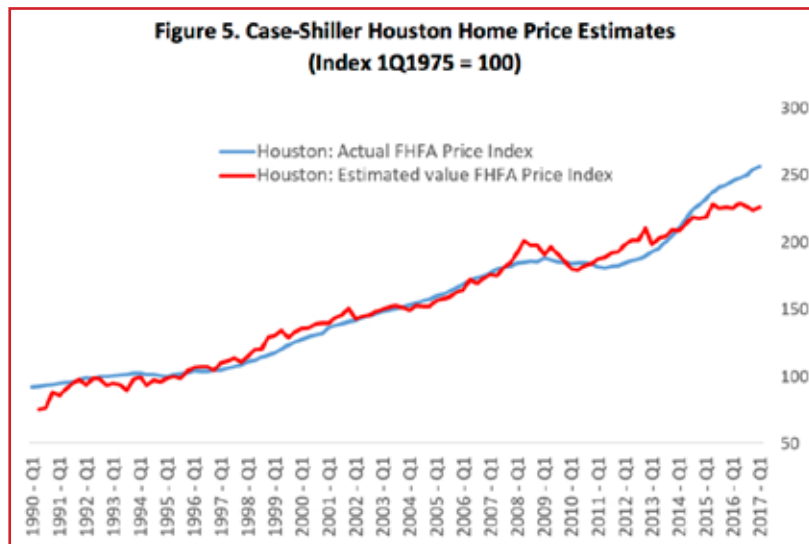
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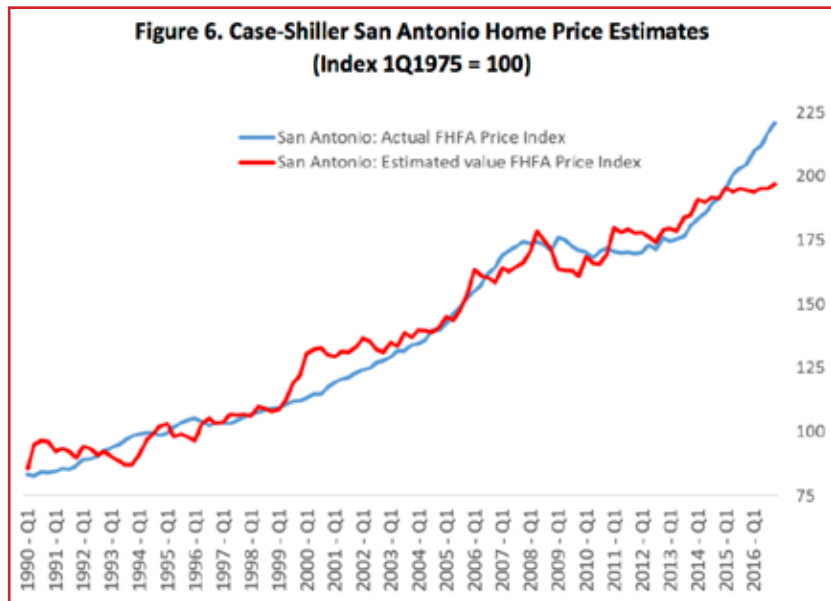
Making the comparison between FHFA actual and calculated index prices for the U.S., the estimates confirm the Case-Shiller results from 1Q2004 to 2Q2011 leading to the housing boom and subsequent bust (Figure 7). After the second half of 2011, estimated prices have been below actual prices, indicating U.S. housing prices could possibly be undervalued.

Even though housing starts represent supply fundamentals, it could be they are not capturing the supply constraints faced by homebuilders. In the aftermath of the 2008–09 Great Recession, housing supply has been held back by the lack of developed land, putting upward pressures on land costs for homebuilders. Other constraints include high costs of labor and materials, reduced profit

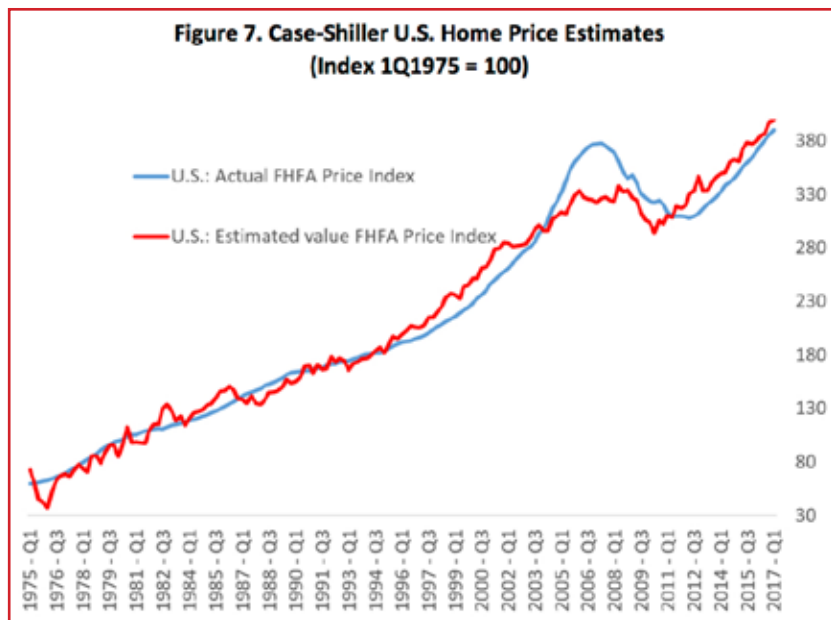
margins, and an incentive to construct homes priced more than \$300,000. The months of inventory for housing less than \$250,000 is at historical lows in Texas and its major MSAs (Figure 8).

Identifying home price misalignments between actual and balanced prices is not easy. Even more difficult is determining with certainty the formation of housing bubbles. There is no sure way of knowing what prices “should be,” even when considering supply and demand determinants, since they change over time.

No one single methodology offers complete confidence in its predictive power to determine if house prices are overvalued or undervalued or even if a price bubble is



Source: Federal Housing Finance Agency (FHFA), U.S. Bureau of Economic Analysis, and author's calculations



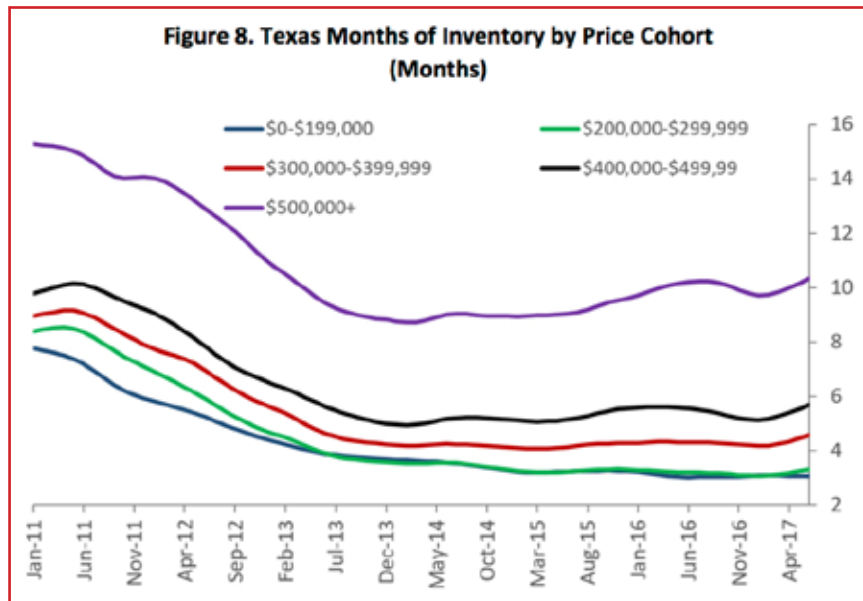
Source: Federal Housing Finance Agency (FHFA), U.S. Bureau of Economic Analysis, and author's calculations

forming. That is why various methodologies can be used to complement each other, but each methodology has pros and cons.

The methodology introduced by Martinez-Garcia, Grossman, and Torres in a Real Estate Center (RECenter) 2016 article provides evidence regarding Texas' 25 record episodes of "explosive behavior" in house prices, that is, a misalignment in current actual prices from their fundamentals-based computed prices. The College Station-Bryan MSA, for example, had a period of explosive behavior beginning in 2Q2016 that continued into 2017 (see map).

Recent price movements in Dallas, Fort Worth, San Antonio, and San Angelo also warrant careful attention, but Texas shows no current signals of overheating. These regions should be tracked for possible misalignments with economic fundamentals of demand and supply, since Dallas-Fort Worth and San Antonio coincide with the Case-Shiller methodology findings. The findings also coincide with methodologies for the College Station-Bryan MSA and should also be monitored.

During the U.S. housing bubble, homebuyers were motivated to invest by strong expectations about future price changes. Homebuyers generally perceived little



Source: Real Estate Center at Texas A&M University

risk of a possible fall in housing prices. Emotional and casual word-of-mouth factors played important roles in their home-purchasing decision. All these conditions that were present during the run-up of the U.S. housing boom are difficult to measure and based on the feedback and comments of housing market participants, seem not to be present currently in the Texas housing market or in the major Texas MSAs. At the same time, the market did not face a significant supply constraint causing sale inventory levels to fall to historical low levels.

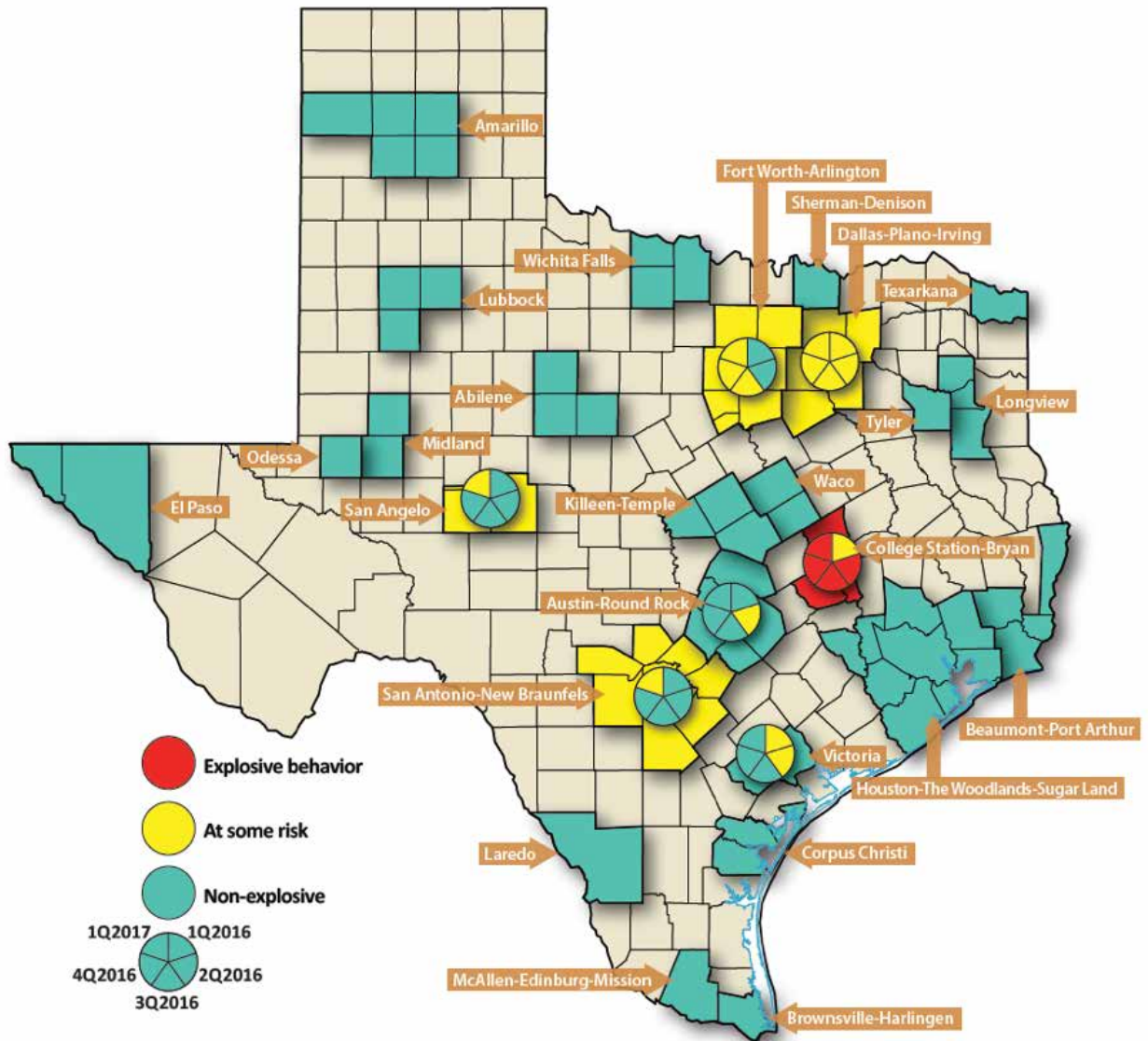
The major contributor to the current possible misalignment in home prices appears to be a significant supply constraint in the Texas housing market. This is something that RECenter will continue to monitor and analyze. ➡

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References

- Case, Karl E. and Shiller, Robert E. “Is There a Bubble in the Housing Market?,” *Brookings Papers on Economic Activity*, 2, 2003, pp. 299–362.
- Grossman, Valerie; Martinez-Garcia, Enrique; Torres, Luis. “Curb Your Enthusiasm: Keeping an Eye on Exuberant Home Prices,” Real Estate Center at Texas A&M University, *Tierra Grande* magazine, July 2016.

MSAs Exhibiting Explosive Behavior 1Q2016 to 1Q2017



Note: Red, above 95 percent critical value. Amber, 80-95 percent critical value. Green, below 80 percent critical value. Pie charts indicate the share spent within each range over the past five quarters (from 1Q2016 to 1Q2017). For more information, see "Curb Your Enthusiasm: Keeping an Eye on Exuberant Home Prices," by Luis B. Torres, Enrique Martínez-García, and Valerie Grossman in *Tierra Grande* magazine, July 2016.
Source: Freddie Mac, Bureau of Labor Statistics, Real Estate Center at Texas A&M University, and Federal Reserve Bank of Dallas

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