

AFTER THE BOOM

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Will Oil Decline Lead to a House Price Bust?

John V. Duca | Annual Report 2015

The correlation between house prices and oil booms raises concerns because oil prices have fallen nearly as much from their 2014 peak (about 66 percent) as they did during the mid-1980s oil collapse (70 percent). That 1980s collapse preceded a long housing bust.

Texas house prices barely rose before the 2008-09 financial crisis even as housing markets boomed elsewhere in the U.S. But after the crisis, prices increased faster in Texas than the nation amid rapid expansion of shale oil production.

How vulnerable are Texas house prices this time? Two gauges provide insight—the ratio of house prices to apartment rents, and home affordability in terms of income and monthly house payments.

OIL-INTENSIVE TEXAS CITIES SOMEWHAT VULNERABLE

A high price-to-rent ratio suggests that house prices are expensive relative to the alternative cost of renting, and that future prices are likely to grow slowly or possibly fall. The ratio of house prices to rents is a relative cost measure akin to a

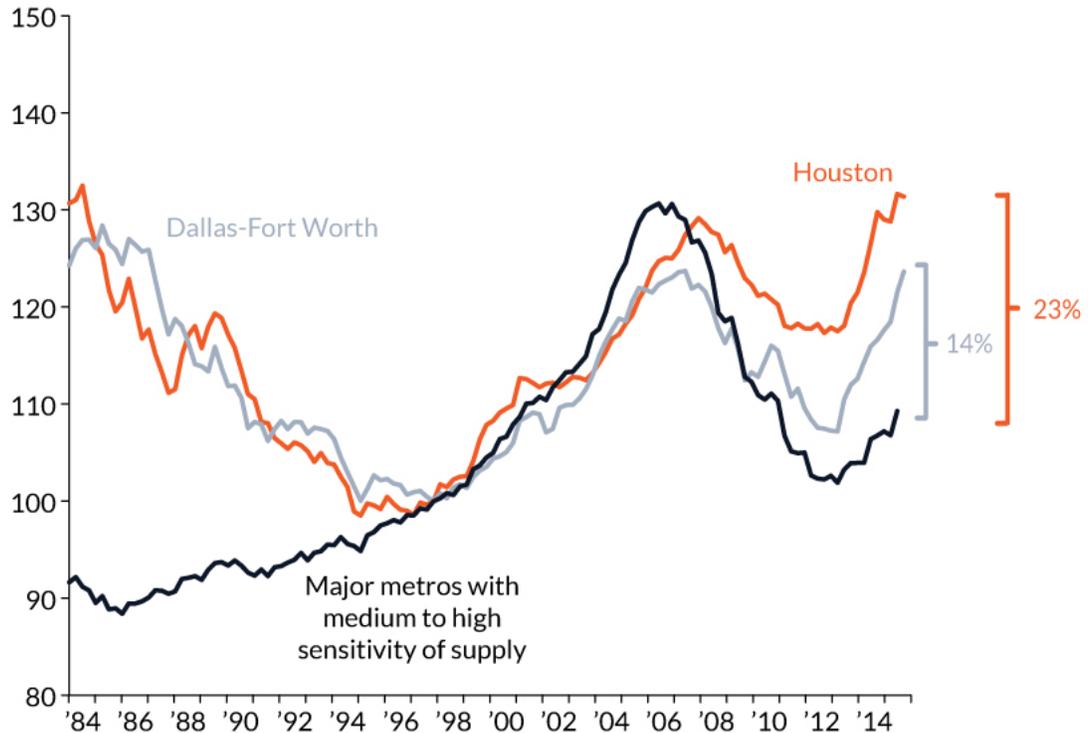
stock's price-to-earnings ratio. The price-to-rent ratio tends to be higher when inflation-adjusted interest rates—including mortgage interest rates—are low and boost the demand for relatively inexpensive owner-occupied housing.

In the short run, the price-to-rent ratio tends to swing less with demand in areas where the housing supply is very responsive to prices, reflecting regulations and geography that keep construction costs low. Housing supplies in Texas cities, for example, have historically been less constrained than in northeastern U.S. cities. Thus, local house prices are best compared to those of cities with similar supply characteristics.¹ Even then, industry fortunes can affect individual cities differently.

In Dallas and Houston, price-to-rent ratios were elevated during the energy boom of the late 1970s and early 1980s, fell during the oil bust of the late 1980s and early 1990s and aligned with comparable cities from the 1990s through 2009 (*Chart 1*). Since then, the ratio has risen about 14 percent in Dallas and 23 percent in Houston.

Chart 1: House Price Valuations in Houston, Dallas Elevated Relative to Comparable Cities

Price-to-rent ratio, 1997:Q4 = 100



SOURCES: Bureau of Labor Statistics; Federal Housing Finance Administration; "The Long-Awaited Housing Recovery," by John V. Duca, Federal Reserve Bank of Dallas 2013 Annual Report, 2014; "The Geographic Determinants of Housing Supply," by Albert Saiz, *Quarterly Journal of Economics*, vol. 125, no. 3, 2010, pp. 1,253-96; author's calculations.

Because house prices are slow to fall following modest overvaluations, Dallas could experience sluggish growth in house prices relative to rents. Houston is more exposed to energy and could see house prices decline moderately and then flatten, leading to a fall in prices relative to rents, which are likely to rise.²

Another valuation gauge is the National Association of Home Builders/Wells Fargo Housing Opportunity Index (HOI), which tracks the share of homes sold that a median-income household can afford. Affordability is defined as mortgage payments no greater than 28 percent of income, assuming a 10 percent down payment with conforming mortgage interest rates.

Typically, HOI data imply that consumers can more easily afford housing in Texas than elsewhere in the nation. However, third quarter 2015 figures indicate this is no longer the case for three large Texas cities. The share of homes sold that a median-income family could afford was 54 percent in Dallas, 59 percent in Austin

and 60 percent in Houston. That compares with 62 percent in San Antonio and the nation. Furthermore, HOI readings for the three cities are below averages seen during more normal housing market conditions in 1993–2000, with the averages down 9 percentage points in Dallas, 5 percentage points in Austin and 8 percentage points in Houston.

Nevertheless, the downside risk to Texas house prices may be less than these measures suggest. Before the bust of the late 1980s to early 1990s, homebuilders created a significant supply overhang fueled by excessive local lending. During the recent oil boom, the housing supply response was much more restrained, limiting overbuilding and inventories of unsold homes that could later depress house prices.

Indicators suggest that Texas cities less exposed to energy, such as Dallas, could see below-normal price growth in coming years before returning to more usual levels, while areas more exposed to energy, such as Houston, face a somewhat greater risk of modest house price declines.

NOTES

1. We use a classification of cities based on Albert Saiz's estimates for large U.S. cities and available CPI rent data. Sources include "The Geographic Determinants of Housing Supply," by Saiz, *Quarterly Journal of Economics*, vol. 125, no. 3, 2010, pp. 1253–96, and "The Long-Awaited Housing Recovery," by John V. Duca, Federal Reserve Bank of Dallas 2013 Annual Report, Federal Reserve Bank of Dallas, 2014.
2. See "Texas Metros' Rapid Growth Likely to Slow Following Energy Price Drop," by Amy Jordan, Federal Reserve Bank of Dallas *Southwest Economy*, First Quarter, 2015.