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COMMON CYCLES IN METRO HOUSING MARKETS

BY ALI ANARI

Home sales, home prices, listings and other housing market indicators are partly driven by local market conditions (such as local supply and demand forces) and partly by macroeconomic conditions affecting all local markets (such as interest rates, the unemployment rate and national economic cycles). By comparing housing market indicators across local markets, it is possible to identify common trends and cycles among local housing markets; find lead-lag relationships between local housing market indicators; and use information from one local market for forecasting housing market conditions in other markets.

This article reports the findings of a research study at the Real Estate Center at Texas A&M University to discover and analyze common cycles and trends in four Texas metropolitan areas: Austin-Round Rock-San Marcos (Austin), Dallas-Fort Worth-Arlington (Dallas), Houston-Sugar Land-Baytown (Houston) and San Antonio-New Braunfels (San Antonio). These metros represent more than 70 percent of the total home sales in Texas.

W-Shaped Housing Demand Cycle

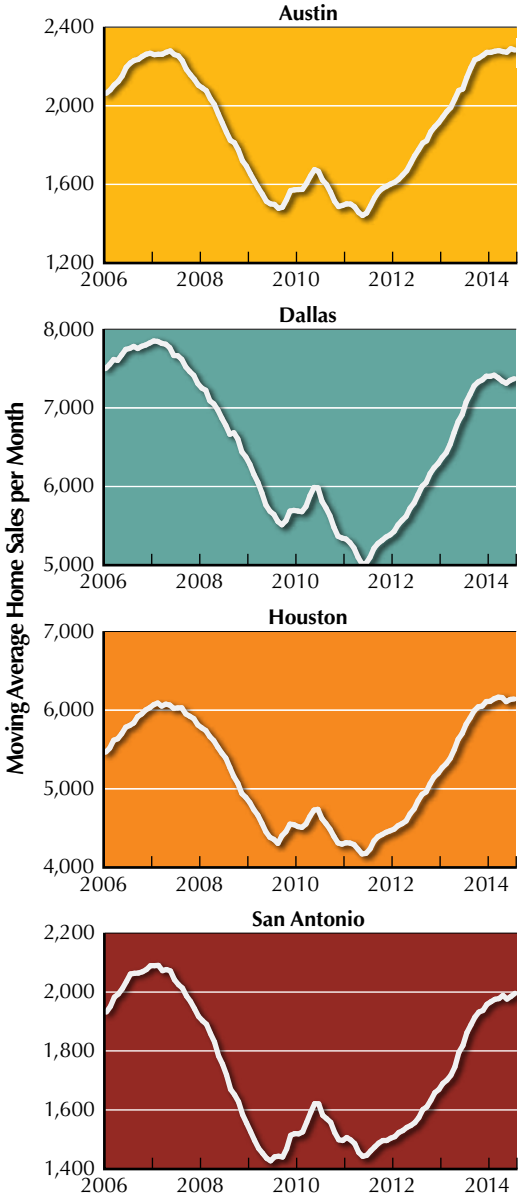
The four Texas metro housing markets experienced a W-shaped common cycle, or a two-trough cycle, from January 2006 to July 2014. This cycle was shaped by the Great Recession (GR) of 2007–09, the U.S. government attempts to help housing markets and the eventual recovery of the economy from the GR (Figure 1). Housing demand in the metros, measured in the moving averages of the number of homes sold, reached its prerecession maximums in early 2007 before sliding into the GR. Dallas housing demand was first to slide in February, followed by Houston and San Antonio in March and, finally, by Austin in May.

The W-shaped housing demand cycles could have been U-shaped cycles but for a number of government initiatives to help housing markets recover from the recession, such as the Housing and Economic Recovery Act of 2008 and the American Recovery and Reinvestment Act of 2009. As Figure 1 shows, the beneficial effects of the government intervention was temporary. The housing markets of the four metros had a recovery in 2010 that turned out to be fragile and short-lived.

The W-shaped cycle provides support for the new classical theory of policy ineffectiveness proposed by Thomas Sargent and Neil Wallace in 1975. According to policy ineffectiveness theory, government cannot systematically manipulate the levels of employment and output, and any positive impact of monetary policy is short-lived.

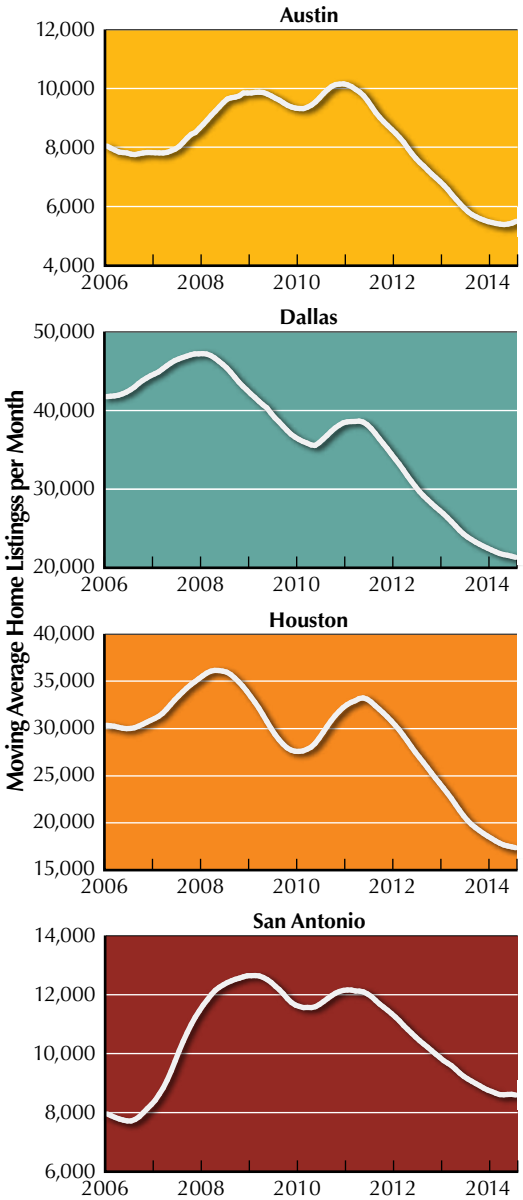
From early 2011, the four metro housing markets embarked on a strong economic recovery that is still ongoing. However, the pace of the recovery has slowed in recent months (Figure 1).

Figure 1. Housing Demand Cycles, 2006–14



Source: Real Estate Center at Texas A&M University

Figure 2. Housing Supply Cycles, 2006–14



Source: Real Estate Center at Texas A&M University

M-Shaped Housing Supply Cycle

On the supply side, the housing markets of the four metros experienced M-shaped common cycles, or two-peak cycles, from January 2006 to July 2014, again due to the GR of 2007–09, the U.S. government attempt to help the housing market and the eventual recovery of the economy from the GR (Figure 2). Housing supplies, which were measured in the moving averages of the number of active listings, embarked on an upward trend in Dallas from early 2006 followed by Houston and San Antonio from late 2006, and Austin from mid-2007.

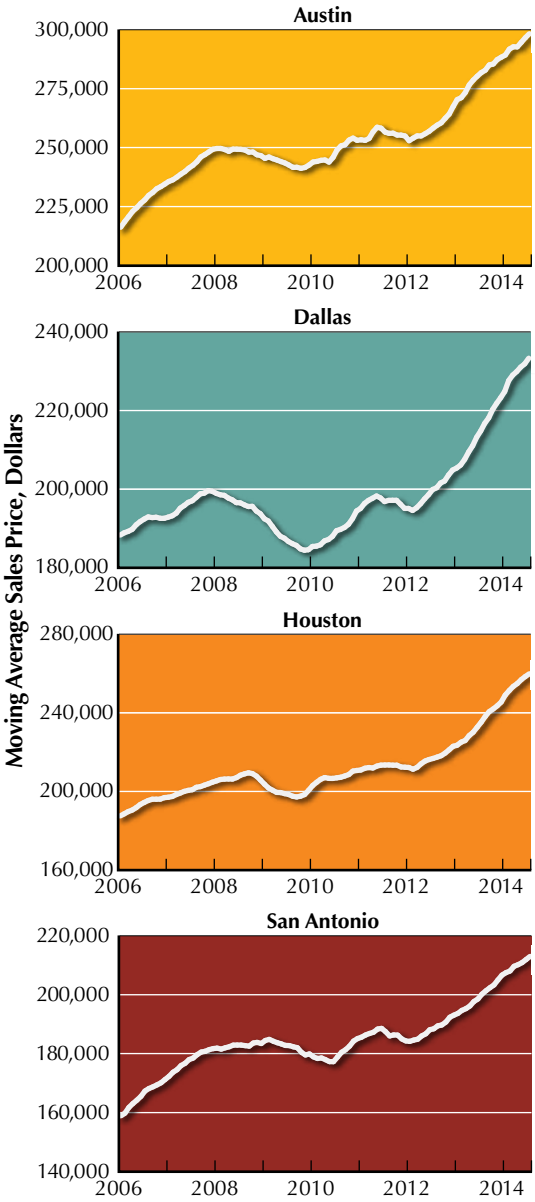
The M-shaped housing supply cycle could have been an upside down U-shaped cycle if not for the U.S. government housing policy initiatives mentioned earlier. However, as in the case of housing demand recovery, the beneficial effects of government initiatives were temporary (Figure 2).

The four metros' housing supplies are currently in a downward trend that began in January 2011 in Austin and San Antonio and in March 2011 in Dallas and Houston.

Home Prices Continue Long-Term Upward Trend

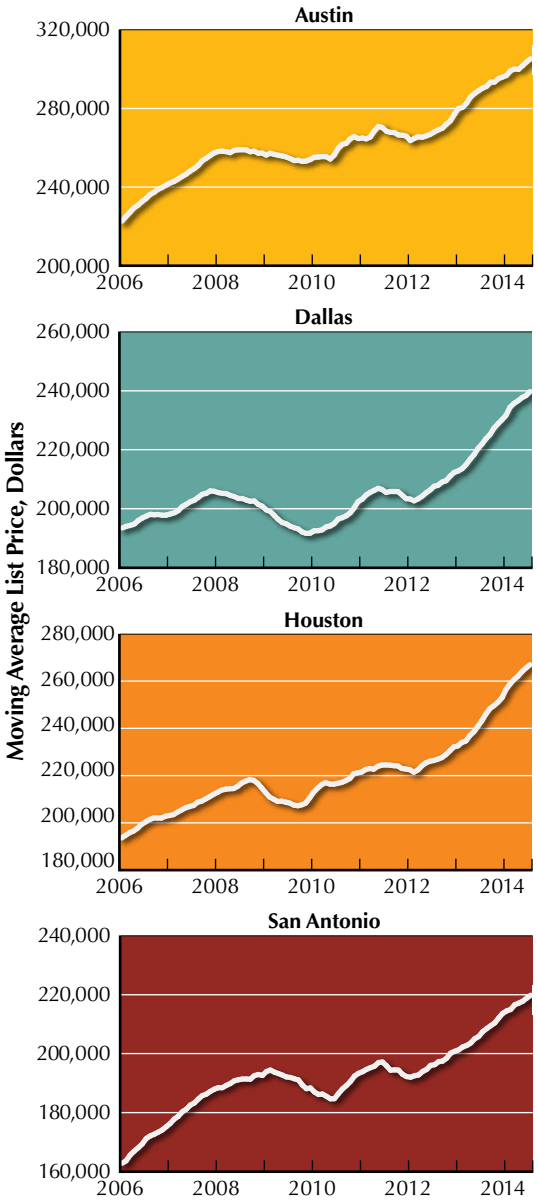
Texas did not experience a home price bubble like some parts of the United States because home builders responded to growing demand by supplying more homes. Consequently, there was not a rapid run-up in home prices before the GR. Home prices in the Texas metros suffered a mild setback during the GR, with a decline of less than 8 percent (see table). Even so, home prices continued their long-term upward trend. Since early 2012, sales prices in metros have been on a steep upward trend, not only recovering lost ground but also posting new highs (Figure 3).

Figure 3. Sales Price Trends, 2006–14



Source: Real Estate Center at Texas A&M University

Figure 4. List Price Trends, 2006–14



Source: Real Estate Center at Texas A&M University

List price moving averages in the four Texas metro housing markets also continued their long-term trends despite mild softening during the GR (Figure 4). Since early 2012, list prices have shown an upward trend but not as steep as sales price trends.

M-Shaped Days-on-Market Cycles

As the economies of the metros fell into the GR, home sellers had to wait longer to strike deals with homebuyers. Waiting time, measured by the moving averages of number of days on the market, increased to more than 80 days (Figure 5). The impacts of the government housing policies were short-lived and the metros experienced M-shaped days-on-market cycles (Figure 5).

M-Shaped Price Concession Cycles

Reducing asking prices to strike deals with homebuyers is common in U.S. housing markets. Home price concession is defined here as the percentage of reduction of list prices (list price minus sales price divided by list price, and multiplied by 100). When they waited longer to strike a deal, home sellers had to reduce asking prices by more than 4 percent in the Texas metros (Figure 6). Metro housing markets posted common M-shaped home price concession cycles in the GR (Figure 6). As in the case of supply and demand cycles, the positive impacts of government housing policies were short-lived, changing upside down U-shaped cycles to M-shaped cycles.

The Culprits

The mortgage interest rate, unemployment rate and government housing policies were the forces driving and shaping the M-shaped and W-shaped housing cycles discussed in this article. The GR was preceded by a period of growing demand for houses fueled mainly by low mortgage interest rates and loose credit standards. Low interest rates ended in 2006 when the Federal Reserve increased the Fed Funds rate to control expected inflation. Although the fear of inflation was exaggerated, all interest rates, including the 30-year conventional mortgage rate, went up and cooled real estate markets (Figure 7).

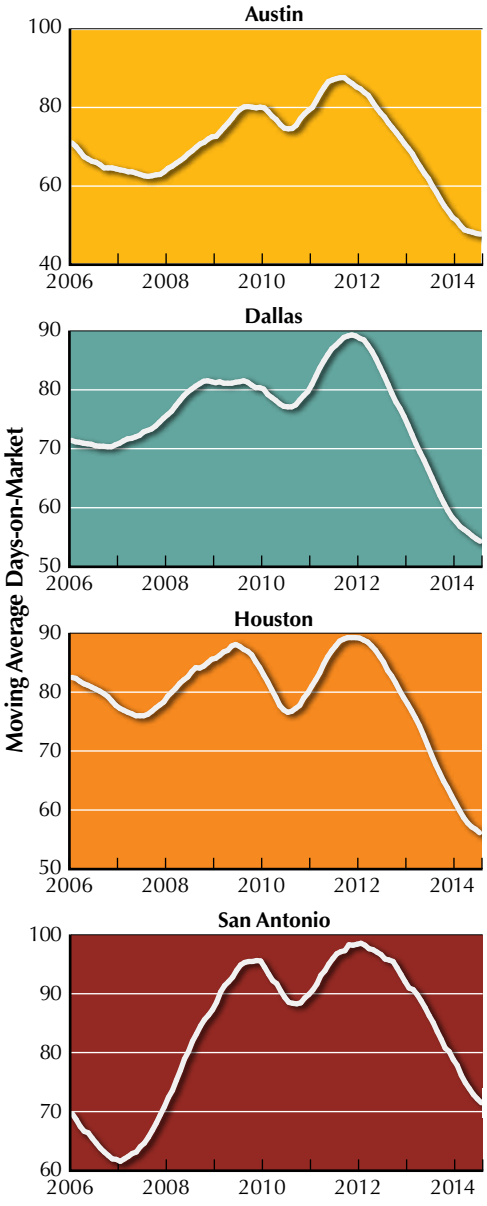
Then Lehman Brothers went bankrupt and the Fed allowed it to be liquidated. But the shock of the Lehman Brothers' bankruptcy

Moving Averages of Homes Sold Prices in Texas Metropolitan Markets During the Great Recession

	Peak Price	Date	Trough Price	Date	Decline Rate, Percent
Austin	$249,685.4	Feb. 2008	$241,254.1	Oct. 2009	3.4
Dallas	199,616.9	Nov. 2007	184,461.0	Nov. 2009	7.6
Houston	209,640.3	Sept. 2008	197,398.4	Sept. 2009	5.8
San Antonio	184,804.1	Feb. 2009	177,251.2	June 2010	4.1

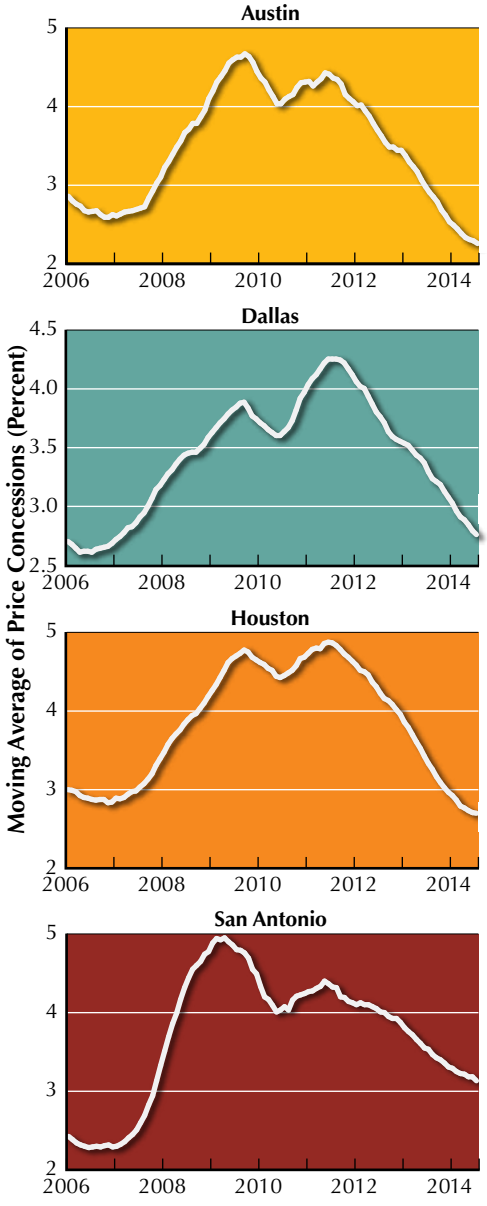
Source: Real Estate Center at Texas A&M University

Figure 5. Days-on-Market Cycles, 2006–14



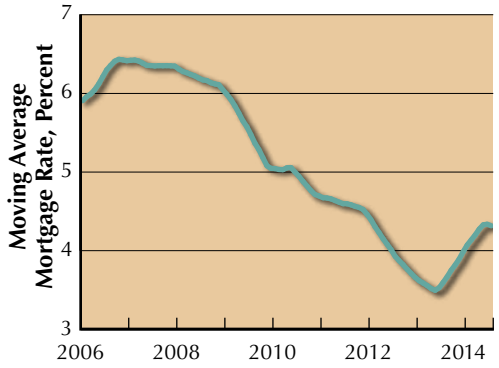
Source: Real Estate Center at Texas A&M University

Figure 6. Home Price Concession Cycles, 2006–14



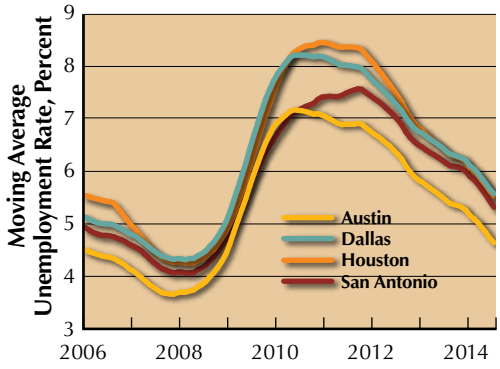
Source: Real Estate Center at Texas A&M University

Figure 7. Mortgage Rate Trend, 2006–14



Source: Real Estate Center at Texas A&M University

Figure 8. Unemployment Rate Trends, 2006–14



Source: Real Estate Center at Texas A&M University

forced many businesses to postpone capital expenditures, throwing the U.S. economy into the GR. While higher interest rates triggered the cooling of housing markets initially, growing unemployment rates in the GR in all metropolitan areas, including Texas' metros (Figure 8), led to increasing foreclosures, decreasing housing demand and a growing inventory of homes for sale. U.S. government attempts to speed the recovery resulted in nothing more than a temporary respite from the down cycle.

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THE TAKEAWAY

A Center study of the housing markets of Texas' four major metros revealed that government intervention during the Great Recession had only temporary beneficial effects. These findings support the theory of policy-ineffectiveness, which maintains that government cannot systematically manipulate employment and output levels, and any positive impact of monetary policy is short-lived.

Data and Method of Analysis

The datasets used consist of homes sold in the four Texas metropolitan areas from January 2006 to July 2014. Each of these time series contains four components: secular trends, seasonal variations, business cycles, and irregular or random changes.

Secular trends are long-run trends owing to changes in population and economic fundamentals. Seasonal variations are fluctuations depending on the months or quarters of the year. Cycles are fluctuations around the secular trends that are not seasonal. Then there are irregular changes or shocks. Seasonal variation is an important component of housing market indicators. All the selected time series exhibit seasonal variations. So, the first step in cycle analysis is to remove seasonality in the data. This is done by computing 12-month moving averages for each time series. This article compares moving averages of the number of homes sold, listings, sales prices, list prices and days-on-market for the metro areas to discover common housing cycles among the local Texas markets.

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The Real Estate Center at Texas A&M University is the nation's largest publicly funded organization devoted to real estate research. The Center was created by the Texas Legislature in 1971 to conduct research on real estate topics to meet the needs of the real estate industry, instructors and the public.

Most of the Center's funding comes from real estate license fees paid by more than 135,000 professionals. A nine-member advisory committee appointed by the governor provides research guidance and approves the budget and plan of work.

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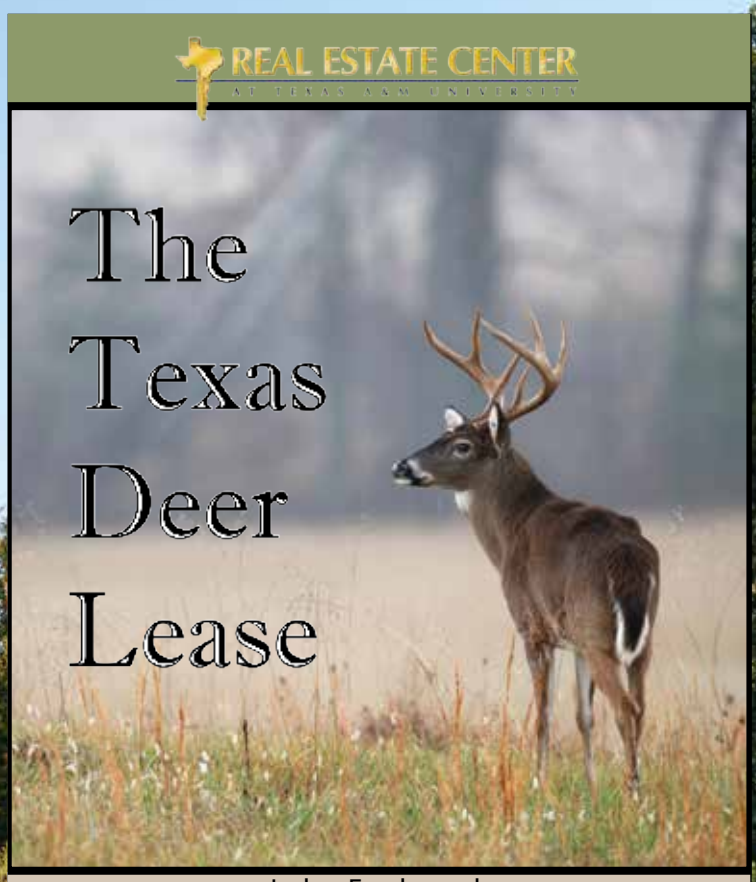

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Senior Lecturer and Attorney at Law

Technical Report 570

It's All About the Big Bucks

Another deer season has come and gone. Lucky hunters have a buck in the freezer. For landowners, the bucks are in the bank. But not everyone is happy. More often than not, their problems have something to do with the deer lease. Make sure your lease doesn't have holes in it.

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