A Reprint from *Tierra Grande*

bubble watch 2008

by ali anari

A July 2005 *Tierra Grande* article concluded that the risk of a price bubble in the Texas residential market was low. This assertion has held true, as the average price of homes sold in Texas rose 6.1 percent in 2005 and 5.6 percent in 2006. The latest 2007 estimates of average home price appreciation show a 4.5 percent increase.

The median price of homes sold in Texas rose 5.1 percent in 2005 and 4.6 percent in 2006. Estimated median home price appreciation for 2007 shows a 3 percent increase.

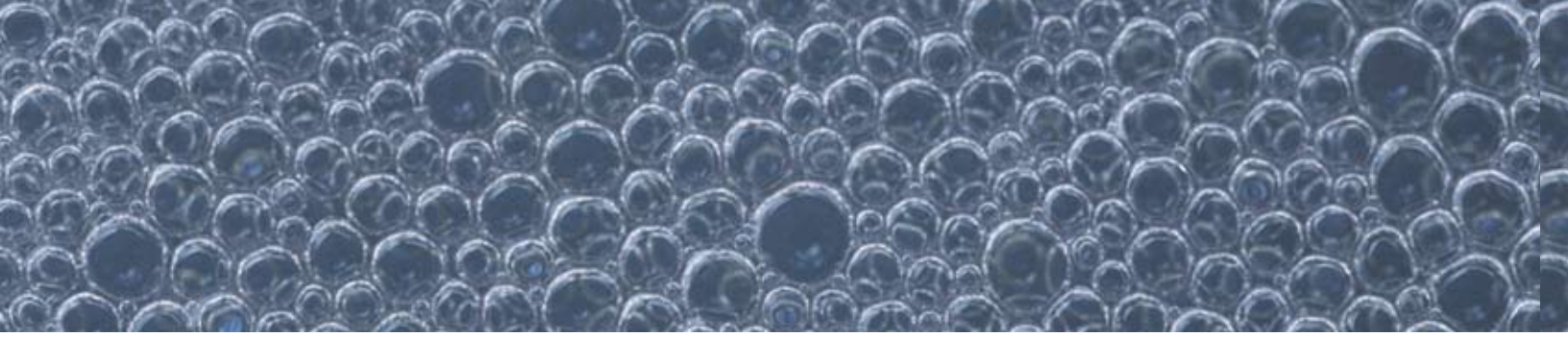
After a five-year boom fueled by low mortgage rates and a growing national economy, what went up in the U.S. real estate markets from 2001 to 2005 reversed directions in 2006. Once again the Real Estate Center is being asked, "will there be a house price bubble in Texas?"

The initial response is that real estate markets are local and regional markets, while national economic trends are averages of local and regional economic indicators. Consequently, what is said about national averages may not hold for local and regional economies.

The risk of a housing price bubble in Texas is still low. Here is why.

Asset Prices and Fundamentals

Prices of real estate properties, like other asset prices, are equal to the sum of the present values of future streams of earnings to be derived from the assets. House prices are equal



to the sum of the discounted values of future net rents. Net rents are rents after deductions of housing costs (taxes and maintenance costs). This fundamental relationship between house prices and net rents may be disturbed in the short run by supply and demand imbalances, but values of houses over their useful lives are determined by net rents.

The relationship between house prices and rents resembles the relationship between stock prices and dividends (or earnings), but there is an important difference. While stock prices and earnings are not influenced by the family incomes of stockholders, house prices and rents are influenced by the family incomes of owners and renters of dwelling units. Competition among buyers and renters of residential units to buy or rent "better" residential units makes regional family income an important determinant of regional home prices and rents.

The stock market analogy suggests that price/earnings (P/E) ratios for stock in stock markets contain the same information as the ratio of home prices to rents in residential markets. P/E ratio in stock markets is the ratio of expected future earnings to current earnings. Higher P/E ratios imply higher expected future earnings compared with current earnings.

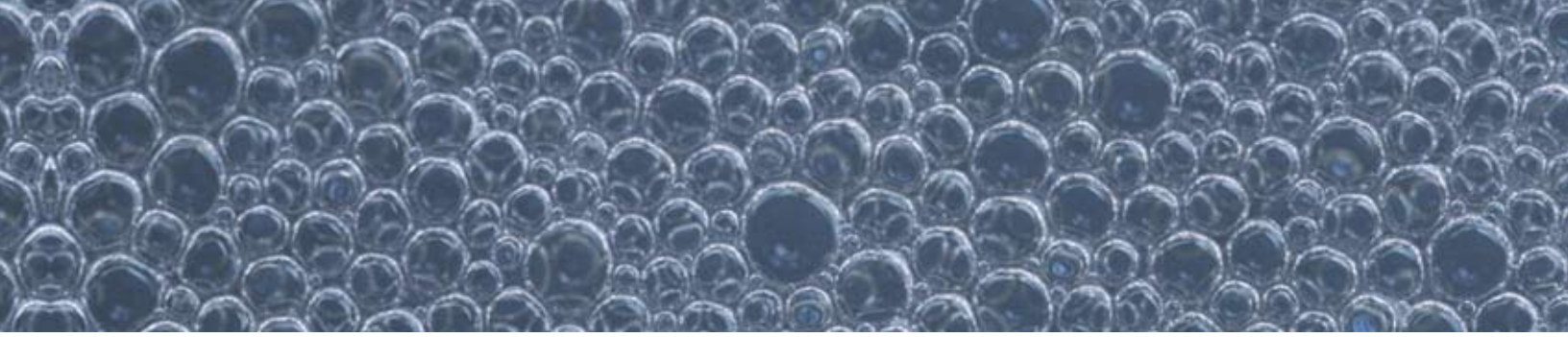
If these expectations prove to be wrong, the market will "correct" stock prices, and the prices will fall, resulting in more appropriate P/E ratios. The severity of the correction depends on how high the P/E ratios have been.

To know whether house prices in an area have risen to levels not likely to be sustained by fundamentals, look at house price/rent (P/R) ratios for houses in the area and compare them with a "normal" P/R ratio for residential markets. But what is a normal P/R ratio in the U.S. residential markets?

Table 1. Home Price/Rent Ratios
United States, Texas and Texas Metros

	2006			2005		
Region	**House Price**	**Annual Rent**	**Price/Rent Ratio**	**House Price**	**Annual Rent**	**Price/Rent Ratio**
United States	**$185,200**	**$7,632**	**24.3**	**$167,500**	**$7,368**	**22.7**
Texas	**114,000**	**6,768**	**16.8**	**106,000**	**6,540**	**16.2**
Abilene	70,100	5,532	12.7	64,500	5,244	12.3
Amarillo	95,800	6,108	15.7	92,700	5,544	16.7
Austin–Round Rock	164,100	8,100	20.3	161,000	7,608	21.2
Beaumont–Port Arthur	77,700	5,256	14.8	73,900	4,980	14.8
Brownsville-Harlingen	65,200	4,584	14.2	62,100	4,488	13.8
College Station–Bryan	112,000	6,276	17.8	105,200	6,372	16.5
Corpus Christi	92,200	6,288	14.7	83,500	6,324	13.2
Dallas–Fort Worth–Arlington	141,100	7,536	18.7	133,900	7,368	18.2
El Paso	88,000	5,472	16.1	78,600	5,220	15.1
Houston–Baytown–Sugar Land	129,800	7,236	17.9	123,400	6,960	17.7
Killeen–Temple–Fort Hood	97,900	6,588	14.9	93,800	6,480	14.5
Laredo	94,100	5,364	17.5	87,200	5,268	16.6
Longview	89,500	5,460	16.4	87,400	5,304	16.5
Lubbock	93,800	6,228	15.1	84,600	6,396	13.2
McAllen-Edinburg-Mission	66,500	4,644	14.3	61,200	4,704	13.0
Midland	87,800	5,400	16.3	85,200	4,980	17.1
Odessa	54,000	4,908	11.0	53,100	4,656	11.4
San Angelo	80,000	5,736	13.9	80,300	5,376	14.9
San Antonio	105,600	6,852	15.4	97,200	6,528	14.9
Sherman-Denison	86,400	5,880	14.7	90,600	5,736	15.8
Tyler	106,100	6,252	17.0	99,000	6,072	16.3
Victoria	85,700	5,364	16.0	72,800	5,424	13.4
Waco	92,200	5,748	16.0	89,200	5,628	15.8
Wichita Falls	79,800	5,496	14.5	74,000	5,520	13.4

Sources: U.S. Census Bureau and Real Estate Center at Texas A&M University



Here again, the stock market analogy may help. The normal P/E ratio in the stock market is the market P/E ratio — that is, the average of P/E ratios for all stocks traded in the market over a long period. The normal P/R ratio for the U.S. housing markets is the average (or median) house price for the United States divided by average (or median) annual rent for the United States.

The argument for this method of computation of P/R ratio is that local and regional house prices and rents in the United States are mean-reverting variables because of the free flow of resources and people. Regional and local rents and home prices may deviate from the national averages in the short run, but they revert to national averages in the long run.

When P/R ratios for residential markets are computed, it is assumed that the impact of family incomes on house prices is of the same magnitude as the impact of family incomes on rents. This assumption is reasonable because in the long run, higher incomes drive both house prices and rents.

Table 2. Median Sales Price of Existing Apartments-Condos-Co-ops Third Quarter 2007

Region	Price	Ratio to U.S. Price
United States	$226,900	1.00
Austin–Round Rock	171,700	0.76
Dallas–Fort Worth–Arlington	134,900	0.60
Houston–Baytown–Sugar Land	124,100	0.55

Sources: National Association of Realtors and Real Estate Center at Texas A&M University

What Do P/R Ratios Tell Us?

House price/rent ratios are computed by dividing the regional house prices by regional rents in 2005 and 2006 (Table 1). The normal P/R ratio in 2005 — the P/R ratio for the United States in 2005 — was 22.7. The P/R ratio for Texas was 16.2, only 71 percent of the national average.

Among the state's metropolitan areas, Austin–Round Rock had the highest P/R ratio (21.2) in 2005, followed by Dallas–Fort Worth–Arlington (18.2), Houston–Baytown–Sugar Land (17.7) and Midland (17.1). Odessa experienced the lowest P/R ratio (11.4) in 2005, followed by Abilene (12.3), McAllen-Edinburg-Mission (13.0), and Corpus Christi and Lubbock (13.2).

The P/R ratio for the United States rose from 22.7 in 2005 to 24.3 in 2006. Over the same period, the Texas P/R ratio rose from 16.2 to 16.8. But despite this rise, the 2006 Texas P/R ratio was still only 69.1 percent of the national average.

The P/R ratio for Austin–Round Rock in 2006 was 20.3, smaller than in 2005. After Austin–Round Rock, Dallas–Fort Worth–Arlington with 18.7 and Houston–Baytown–Sugar Land with 17.9 had the largest P/R ratios, both larger than their 2005 ratios. The P/R ratio for San Antonio rose from 14.9 in 2005 to 15.4 in 2006 but was still significantly below the national average.

The lower-than-national-average P/R ratios for Texas and its metro areas suggest that the risk of a home price bubble is minimal. In fact, the mean-reverting nature of home prices and rents indicates that even higher home prices and rents may be expected in the foreseeable future.

Movement of investment funds from and to different asset classes as well as movement of people and resources from and to different regions of the country result in the convergence of the long-run P/R ratios for homes and the long-run P/E ratios for stock prices. Analyzing long-run price and earning data for stocks (from Shiller) suggests a long-run P/E ratio of about 20 for the U.S. stock market, or a 5 percent yield including inflation rate.

Assuming the same long-term P/R ratio for the U.S. residential markets, the P/R ratios for the United States in 2005 and 2006 exceeded the long-term P/R ratio (Table 1). There is much news these days about slower home price growth and even home price decreases in a number of U.S. regions. But all Texas metro areas except Austin have P/R ratios of less than 20.

As in any economic study, some data and statistical problems must be acknowledged. The home price data used in this research are for owner-occupied units. Rent data are contract rents defined by the U.S. Census Bureau as "rent agreed to or contracted for, regardless of any furnishings, utilities, fees, meals, or services that may be included."

Regarding the home prices, prices for rental units and owner-occupied units in any area normally follow each other although with some time lags. The prices of apartments, condos and co-ops — residential units mostly used for renting — in major Texas metro areas were well below the national average in third quarter 2007 (Table 2). The ratios of prices in metro areas to the average price for the United States again indicate that the risk of a home price bubble for Texas in current economic conditions is low.

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THE TAKEAWAY

House values are determined by net rents. Stock price-to-earnings ratios can be helpful when studying home price-to-rents ratios. Monitoring these ratios can yield a "normal" price-to-rent ratio for an area, which in turn can suggest whether a price bubble may occur.

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Tierra Grande (ISSN 1070-0234) is published quarterly by the Real Estate Center at Texas A&M University, College Station, Texas 77843-2115. Subscriptions are free to Texas real estate licensees. Other subscribers, $20 per year.