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Bubble Talk

By M.A. Anari

Since 2001, the U.S. residential market has experienced a housing price boom unprecedented in residential real estate history. The average price of new homes in the United States rose from $180,200 in December 2001 to $229,700 in December 2004, a 27.4 percent increase. The median price of new homes increased 23.2 percent, from $228,700 to $281,900, over the same period.

More investment in residential real estate properties coupled with higher home prices has boosted household wealth in real estate. Homeowners' equity in all types of owner-occupied housing units, including farmhouses and mobile homes, rose from $5.9 trillion at the end of 1999 to $9.6 trillion at the end of 2004, an increase of more than 62 percent. Over the same period, household wealth in corporate equities fell more than 28 percent from nearly $9.2 trillion to $6.5 trillion.

Like those in the rest of the nation, Texas homeowners have benefited from the real estate boom. The average price of homes sold in Texas rose from $132,200 in 1999 to $164,400 in 2004, or 24 percent. During that period, the state's median home price increased from $100,900 to $129,600, or 28 percent.

While homeowners have every right to be exuberant about their wealth in residential real estate, remarks made by Alan Greenspan, chairman of the Federal Reserve, during the heyday of the stock market boom remind us that what goes up can come down. In a December 1996 address to the American Enterprise Institute, Greenspan asked ". . . how do we know when irrational exuberance has unduly escalated asset values . . . ?"

Three years later, the S&P 500 Composite Index lost a quarter of its value, falling from 1,520.77 in September 2000 to 1,132.94 in September 2001. The decline troughed at 817.37 in February 2003, a fall of more than 46 percent from its peak.

Is the housing price boom that has been going on since 2001 in metropolitan areas of the United States likely to burst like the stock bubble did? It depends on whether higher home prices reflect housing market fundamentals or housing investment speculation. Higher prices may be the result of fundamental changes, such as population growth, higher construction costs and lower interest rates. But increases in population and construction costs since 1999 have not significantly differed from previous periods. Further, lower interest rates in the past have not been associated with the scale of home price appreciation occurring since 1999.

There are reasons to believe that housing investment speculation has played an important role in pushing up house prices. Investors disappointed with the performance of the stock market have channeled a significant part of their investment funds to real estate properties. Increases in the flow of funds to real estate have been enhanced by historically low mortgage rates following the Fed's policy of lower Fed Funds rates.

What Factors Determine Home Prices?

The price of any asset, whether a house or a share of stock, is the discounted value of the future net cash flow that asset will generate. For stocks, the share price is equal to the discounted value of future dividends or earnings.

As an investment good, the price of a house is equal to the present value of future streams of actual or imputed net rents — that is, gross rents minus maintenance costs, taxes, depreciation and so forth. The ratio of the price of a house to its annual rent is like the P/E ratio (current price per share divided by current earning per share) for stocks.

When earnings per share are growing, competition among investors to buy stocks leads to higher stock prices. As long as the stock price growth rate is not much higher than the earnings growth, the P/E ratio for any stock remains stable. When stock prices grow faster than earnings, higher P/E ratios lead stockholders to expect higher earnings in the future.

Chairman Greenspan's comment on "irrational exuberance" reflected his concern about high P/E ratios, which later proved

Home Price Appreciation and Home Price/Rent Ratios

Figure 1
Dallas

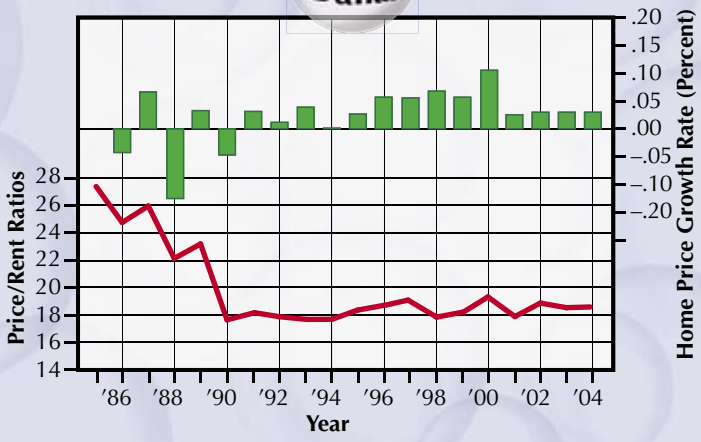


Figure 2
Houston

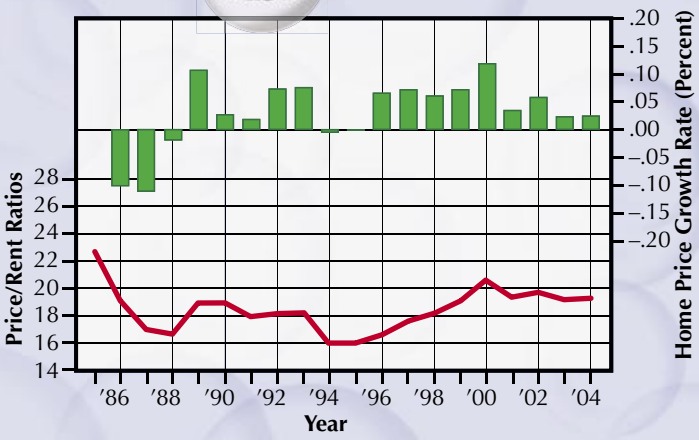
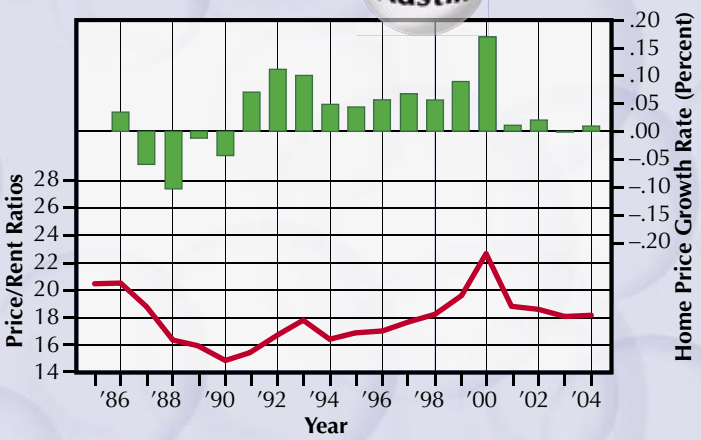


Figure 3
Austin



Sources: Real Estate Center at Texas A&M University and U.S. Department of Housing and Urban Development

to be unsustainable. The analogy between the P/E ratio for stocks and the price-to-rent ratio for houses suggests that high ratios of home prices to rents may be a sign of a housing price bubble in later periods.

The Real Estate Center researched whether a home price bubble exists in Texas residential markets. An analysis of home prices was conducted by comparing Texas home prices with home prices in the nation's residential markets. An analysis of the relationship between home prices, family income and rents in the state's residential markets also was performed.

The risk of a price bubble in the state's residential market is very low.

Comparing Sales Price to Family Income

The table shows an analysis of home prices in select U.S. residential real estate markets using median home prices, average family incomes and annual rent data. Family income is used because the incomes of both spouses are normally used for buying homes.

The ratio of the median home price to family income in U.S. cities in 2003 varied from a high of 8.95 for Santa Ana, Calif., to 1.47 for Pittsburgh, Penn. San Francisco had the highest median house price ($597,493) but also one of the nation's highest levels of family income ($67,809) with a resulting price-to-income ratio of 8.81.

On average, the ratio of home prices to family income was 3.59 in 2003. Taking this figure as the normal ratio of home prices to family income, all Texas cities posted a home price-to-family-income ratio of less than 3.59. Among major Texas cities, Austin had the highest ratio (3.16) while Corpus Christi was lowest with 1.58. Dividing the ratio of home price to income for each city by the average ratio (3.59) shows the extent to which the median home price for an area is higher or lower than the national average. For Austin, this figure is slightly more than 88 percent. Thus, the median home price in Austin is about 12 percent less than the national average from the income viewpoint.

The ratio of median home price to annual rent in 2003 varied from as low as 11.45 for Philadelphia to 47.55 for Honolulu, with a national average of 22.04. Among Texas cities, Austin was the highest with a home price-to-annual-rent ratio of 20.07 while San Antonio was lowest (12.60). Based on the home price-to-rent ratio, the city of Austin is 8.95 percent less expensive than the national average.

More insight about home prices can be obtained by looking at the relationship between the growth rate of home prices and the price-to-rent ratio. Figure 1 shows that the Dallas residential market has been stable since 1990 following a drop in home price-to-rent ratio from 27.4 in 1985 to 17.6 in 1990. Dallas home price appreciation since 1990 reflects income growth as well as general inflation.

The Houston residential market experienced home price appreciation of more than 11 percent in 2000 associated with a price-to-rent ratio of 20.6, which proved to be unsustainable (Figure 2).

Austin's residential market is a classic example showing that high home price-to-rent ratios may signal negative or lower price appreciation in later periods or even a home price bubble (Figure 3). The city experienced home price appreciation of 43 percent from 1996 to 2000. During that period, the home price-to-rent ratio rose from 17 to 22.8. The ratio of home price to rent fell to 18.1 in 2004, and the city recorded a decline in home prices in 2003.

Center researchers developed a method for calculating maximum home price-to-rent ratios for Texas residential markets. If an area's home price-to-rent ratio for any period exceeds this maximum ratio, then home prices are expected to fall. Current home price-to-rent ratios for all Texas metro areas are below the maximum ratios. Thus, the risk of a price bubble in the state's residential market is very low.

Houses are both investment goods and consumption goods. While a share of stock has no intrinsic value, people purchase houses to live in, as an investment or both. Home prices are determined not only by the present value of net rents but also by competition among homebuyers who want to live in the most desirable places (location, location, location!) and their willingness and ability to pay for their homes. Thus, in analyzing house prices, the relationship between rents and home prices as well as the relationship between family income and home prices must be considered.

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Home Prices, Family Income, Annual Rents in Selected U.S. Cities, 2003

City	House Price	Family Income	Annual Rent	Price/ Income	Price/ Rent	Above or Below Average	
						Rent	Income
Anchorage, Alaska	$195,209	$67,884	$9,420	2.88	20.72	–19.94	–5.97
Phoenix, Ariz.	140,072	43,872	7,140	3.19	19.62	–11.12	–10.99
Los Angeles, Calif.	345,737	44,479	8,700	7.77	39.74	116.40	80.31
San Francisco, Calif.	597,493	67,809	12,756	8.81	46.84	145.30	112.53
Santa Ana, Calif.	330,761	36,962	10,692	8.95	30.94	149.12	40.36
Denver, Colo.	225,337	51,686	7,788	4.36	28.93	21.37	31.28
Washington, D.C.	248,171	50,243	7,896	4.94	31.43	37.51	42.61
Miami, Fla.	183,808	28,623	6,432	6.42	28.58	78.77	29.66
Atlanta, Ga.	160,059	40,614	6,780	3.94	23.61	9.71	7.11
Honolulu, Hawaii	446,167	60,348	9,384	7.39	47.55	105.82	115.73
Chicago, Ill.	176,675	43,848	7,812	4.03	22.62	12.17	2.61
Indianapolis, Ind.	113,354	50,587	6,288	2.24	18.03	–37.62	–18.21
Louisville, Ky.	92,189	35,213	5,148	2.62	17.91	–27.12	–18.75
New Orleans, La.	79,838	38,510	5,772	2.07	13.83	–42.28	–37.24
Boston, Mass.	331,284	53,635	10,308	6.18	32.14	71.95	45.82
Detroit, Mich.	82,113	30,520	5,412	2.69	15.17	–25.10	–31.16
Minneapolis, Minn.	176,207	52,661	7,992	3.35	22.05	-6.85	0.04
St. Louis, Mo.	78,585	35,912	4,620	2.19	17.01	–39.08	–22.82
Las Vegas, Nev.	166,631	51,968	8,016	3.21	20.79	–10.74	–5.68
Albuquerque, N.M.	135,892	49,677	5,940	2.74	22.88	–23.85	3.8
New York, N.Y.	313,867	44,131	8,928	7.11	35.16	98.0	59.51
Columbus, Ohio	120,626	49,046	6,528	2.46	18.48	–31.53	–16.16
Oklahoma City, Okla.	94,856	44,565	5,124	2.13	18.51	–40.74	–16.01
Portland, Ore.	182,054	51,543	7,452	3.53	24.43	–1.67	10.85
Philadelphia, Pa.	72,716	41,577	6,348	1.75	11.45	–51.31	–48.03
Pittsburgh, Penn.	67,988	46,157	5,832	1.47	11.66	–58.99	–47.11
Memphis, Tenn.	83,104	35,309	5832	2.35	14.25	–34.48	–35.35
Arlington, Texas	117,867	57,156	6624	2.06	17.79	–42.59	–19.26
Austin, Texas	163,027	51,519	8124	3.16	20.07	–11.91	–8.95
Corpus Christi, Texas	79,977	50,613	6240	1.58	12.82	–56.01	–41.85
Dallas, Texas	116,266	41,049	7284	2.83	15.96	–21.15	–27.58
El Paso, Texas	77,633	36,338	5,436	2.14	14.28	–40.52	–35.2
Fort Worth, Texas	92,530	45,492	6,264	2.03	14.77	–43.38	–32.98
Houston, Texas	101,639	40,043	6,756	2.54	15.04	–29.34	–31.74
Pasadena, Texas	87,740	40,632	6,120	2.16	14.34	–39.88	–34.95
San Antonio, Texas	77,722	44,329	6,168	1.75	12.60	–51.19	–42.83
Virginia Beach, Va.	153,619	60,611	8,184	2.53	18.77	–29.44	–14.83
Seattle, Wash.	334,423	66,752	9,480	5.01	35.28	39.47	60.06
Milwaukee, Wis.	95,674	39,443	5,976	2.43	16.01	–32.47	–27.36
U.S. Average	174,961	47,846	7,515	3.59	22.04		

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

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