

A Reprint from *Tierra Grande*

Dismal performances by stocks and mutual funds over the past several years have business and personal investors looking for alternative places to store their wealth. Many personal investors are buying bigger, newer homes or improving the ones they already own, encouraged by the fact that housing prices have continued to rise even as stock indexes slide.

Economists see housing more as a consumption good than an investment, primarily because homeowners usually purchase custom features and amenities that may not be valued fully on resale. Living in the asset also cramps a homeowner's ability to buy and sell at advantageous times. In most cases, a seller taking advantage of a seller's market gives up that advantage when buying replacement housing. Nevertheless, homebuyers expect their homes to be sound investments.

So how has the typical home performed as an investment in recent years? Real Estate Center staff computed average investment returns for median-priced homes purchased in Texas' largest metropolitan areas for each year since 1989. For comparison, average returns also were computed for the United States as a whole. Results indicate that:

- With moderate levels of borrowing, owner-occupied homes provide attractive returns that are relatively consistent from year to year.
- Homes in Texas' big cities generally perform better than the national median, primarily because it costs more to rent comparable housing in Texas.
- Housing returns have been especially high in recent years as homeowners have enjoyed strong appreciation rates and low mortgage interest rates.

To show how a typical home's investment performance changes each year, one-year returns were calculated based on the purchase of a median-priced home during the first month of each year from 1989 to 2001.

How Returns Were Calculated

Market prices alone are misleading as an indicator of investment return. For owner-occupants, investment return consists

of net cost savings from living in the home and any increase in the value of equity. The cost savings component equals the rent that would have been paid for comparable housing minus the expenses of owning the home, including mortgage payments and routine maintenance.

The value increase component of investment return equals the value of the home at the end of the year less outstanding mortgage debt and the original equity investment. Return on investment equals the sum of the cost savings component and the value increase component divided by the cash investment (down payment plus transaction costs), or

$$\frac{\text{rent} - \text{debt payments} - \text{maintenance} + \text{end value} - \text{mortgage balance} - \text{cash investment}}{\text{cash investment}}$$

Table 1 compares annual investment returns for median-priced homes in selected Texas cities and the nation as a whole.

Note that, except for San Antonio, homes in Texas were consistently better investments than the typical American home. Returns were largely positive in the early 1990s compared

Table 1. First-Year Returns for Owner-Occupied Homes (in percent)

Year	U.S.	Dallas	Fort Worth	Houston	San Antonio
1989	4.5	(10.0)	0	29.8	(17.9)
1990	(20.2)	(8.1)	11.0	13.7	(10.5)
1991	(9.6)	7.9	19.9	21.8	22.8
1992	(12.3)	0.6	11.0	8.9	20.1
1993	(3.4)	11.2	11.7	16.2	21.2
1994	(10.3)	(7.9)	16.8	(1.0)	(3.7)
1995	11.9	26.2	39.1	28.2	19.3
1996	(1.4)	8.4	19.9	10.3	(17.5)
1997	11.1	23.6	35.2	39.3	2.8
1998	10.7	22.9	25.5	35.5	(2.2)
1999	21.3	33.4	23.9	54.0	15.8
2000	31.3	34.3	32.0	44.4	17.4
2001	22.9	9.3	20.6	10.2	(1.2)

Source: Real Estate Center at Texas A&M University

Table 2. Annual Returns for Multiyear Holding Periods Ending in 2002 (in percent)

Year of Purchase	U.S.	Dallas	Fort Worth	Houston	San Antonio
1989	5.0	6.5	9.2	16.2	7.1
1990	1.4	6.9	14.0	14.6	5.9
1991	2.3	11.9	21.2	15.5	12.1
1992	6.5	13.4	17.1	16.6	10.6
1993	7.3	16.1	17.0	20.8	8.0
1994	9.5	17.4	17.1	25.1	8.4
1995	10.4	19.4	28.5	25.0	6.3
1996	11.1	18.2	19.8	28.1	2.4
1997	10.9	19.7	24.4	26.7	1.0
1998	11.0	17.2	18.2	26.3	1.4
1999	11.3	14.7	14.8	26.0	1.6

Source: Real Estate Center at Texas A&M University

to the negative results nationwide. Fort Worth had positive returns in every year of the study.

The main reason for this relatively good performance is that comparable rents are higher in Texas cities than they are nationwide. For example, in 1994 comparable rent averaged \$532 per month nationwide, but for Dallas it was \$788, and for Fort Worth it was \$663. Houston's 1998 comparable rent was \$865 versus the national average of \$633. The rent a homeowner saves by being able to live in the home is a big part of investment return. The higher comparable rent is, the higher the return.

Multiyear Holding Period Returns

Think of annual returns as similar to annual changes in the Dow Jones Index: they show which years were good and bad for homeowners. However, few homeowners own their homes for only one year. Returns calculated over a period more in keeping with a typical homeowner's tenure would be more indicative of a home's investment performance.

Most people own a home for ten to 11 years on average. Table 2 shows annual returns on homes sold in 2002, after various multiyear holding periods. For the most part, these returns compare well with other asset types held over the same periods.

As with the first-year returns, these returns are based on 80 percent financing. Given that they all are positive, borrowing more — as many homeowners do — should provide even higher returns. The problem with borrowing more is that it increases the monthly loan payments and decreases the amount of initial equity. Higher monthly payments also reduce the savings the owner nets from living in the house. On the up side, the return from price appreciation is magnified because the required cash investment is smaller.

If the value of the home decreases, that effect is magnified as well. Equity can be completely lost through decline in value.

Owning a home can be a great core investment for one's portfolio and has provided substantial returns for a number of years, not just during the recent hot markets. By borrowing at favorable interest rates, returns can be further magnified. Refinancing when rates fall is another option that could result in returns even higher than those indicated here.

For details on methodology or data sources used in this article, email info@recenter.tamu.edu. ➦

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Deciding How Much to Borrow

When will a larger mortgage loan result in a bigger investment return?

It is impossible to know for sure whether borrowing more will be beneficial because it depends on how rapidly the home increases in value. It is possible, however, to estimate the rate of value appreciation needed to make additional borrowing worthwhile. Then buyers can decide how much to borrow based on how likely it seems that the home's value can grow that amount.

Example:

Home sales price	=	\$129,000
Mortgage interest rate	=	6.25 percent
Rent for a comparable home	=	\$1,000/month, \$12,000/year
Property taxes	=	\$3,600/year
Other costs (insurance, maintenance)	=	\$1,800
Buyer's income tax bracket (marginal tax rate)	=	15 percent

To estimate the appreciation rate needed to justify borrowing more, first calculate net rent savings as a percentage of the home's value:

$$\frac{(\text{comparable rent} - \text{property taxes} - \text{other costs})}{\text{price}} = \text{Net percentage rent savings}$$

or

$$\frac{(12,000 - 3,600 - 1,800)}{129,000} = 5.1 \text{ percent}$$

Next, calculate the after-tax interest rate:

$$\text{Interest rate} \times (1 - \text{marginal tax rate}) = \text{After-tax interest rate}$$

or

$$6.25 \times (1 - .15) = 5.3 \text{ percent}$$

The annual appreciation rate needs to be higher than:

$$(\text{after-tax interest rate}) - (\text{net percentage rent savings})$$

or

$$5.3 - 5.1 = 0.2 \text{ percent.}$$

Because 0.2 percent is less than general inflation in most years, the home likely will appreciate by at least that amount. When comparable rents are relatively high and interest rates low, additional borrowing is beneficial even when low appreciation rates are expected.

Other issues must be considered when deciding how much to borrow. For example, homeowners should maintain a cash reserve to be used for maintenance and unforeseen expenses. Borrowing too little could leave the buyer without this financial "safety net."

Of course, borrowing more money means a higher monthly payment and less discretionary money to pay for other things. Also, a higher loan-to-value ratio may raise the interest rate the buyer is offered and, more importantly, may mean that the loan has to be covered by mortgage insurance. In such a case, this analysis should be conducted again with the higher interest rate and mortgage insurance premium included.



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