

# Bubble Trouble

Is America's Housing Market  
set to *Crash?*

*A* At least once each week

*I see a newspaper piece*

*or television teaser*

*asking that question.*

*With memories of the*

*2000 tech bubble collapse*

*and the ensuing recession*

*still fresh, people seem to*

*be looking for the next*

*piece of bad news. Let's look at some of the fundamentals*

*affecting the housing market to try to assess the current risk.*



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### What makes a bubble?

At first glance the current housing market appears to be a good candidate for bubble status. In the past, bubbles have occurred amidst a speculative fervor when an asset or sector becomes the focus of increasingly unrealistic estimates of its future value. These events are usually preceded or accompanied by a flood of low-cost liquidity. Asset values spiral up until there is no longer any relationship between the fundamental nature of the asset and investors' expectations of it. At some point, an event triggers a collapse in this irrational price bubble. It could be a liquidity crisis in the credit markets. It could be a rational voice emerging from the wilderness of enthusiasm. It could be the governmental hand of intervention. Whatever the actuality, all bubbles must collapse at some point.

The U.S. housing market looks suspiciously like the description above. Values have risen dramatically in the past several years at a rate far exceeding the growth rate in the Consumer Price Index (CPI). Buyers have ridden a wave of cheap money and liberal financing schemes into the ranks of homeownership. Home prices no longer reflect the ability of people to pay for housing with a realistic portion of their income. What are the chances that we are in a housing bubble?

### Have Home Prices Reached Elevated Levels?

We all have anecdotal evidence of the high cost of housing whether it be the million dollar tear-down near the beach or the high prices that seemingly ordinary houses bring today. But looking at the entire market, a different picture emerges. Housing affordability is best measured by matching up incomes and housing prices. The Housing Affordability Index calculated by Economy.com does that by establishing the ratio of local median family income to the income necessary to purchase

a home at the local median resale price. Thus, if the median family income is exactly the amount needed to qualify for the median resale, the index is equal to 100. If the median income is more than sufficient, the index rises above 100. Conversely, an index value below 100 represents the percent of median resale value that the median family income can support.

Of 318 metropolitan areas tracked, only 29 have affordability indices below 100 today. Of those, only 19 have index values below 90. In 289 U.S. cities the median family income is sufficient to buy the median value home. In fact, the average index value is 180. The average across all metro areas indicates that the median family income can qualify for nearly twice the median home value. There are 118 metro areas where the index is greater than 200. In fact, there are only six metro areas outside of California or the New York/New Jersey markets that fall below 100; Honolulu, Boston, Las Vegas, West Palm Beach, Fort Lauderdale and Miami. These data are small comfort for the 56 million people who live in the less affordable markets, of course. Of them, over 31 million are in California, a state that offers few affordable alternatives. California has only Sacramento, Yuba City, Modesto, Visalia and Bakersfield in the affordable range.

Despite the high prices in California, it appears that 75% of the U.S. population lives in affordable or very affordable housing markets. This surprising level of affordability is certainly aided by low interest rates on home mortgages. But even a one-percent increase in mortgage interest rates would have the effect of reducing the affordability cut-off by about 15%. A change of that magnitude would increase the markets below an index level of 100 to 43, capturing the rest of California (except for Visalia), much of New England and northern New Jersey. At that level nearly 30% of the population would be in less affordable markets.

## Isn't it all just a house of cards built on low interest rates?

But what is likely to happen if interest rates spike? The last time we had high interest rates, home prices soared. High interest rates that persist for any length of time typically are associated with high expected inflation rates. Inflation is good for homebuyers with fixed rate mortgages. People willingly signed up for 14% mortgages in an era that saw 20% and 30% price increases. "Borrow heavily and repay with cheap dollars" was a mantra of the 1970s and early 1980s. During that era, the stock market was basically flat, so housing was seen as both an inflation hedge and an attractive alternative investment. Looking back, we find that home price increases have actually *preceded* spikes in the CPI and interest rates by two to four years since 1970. *The housing market might be telling us something about the future of our capital markets.*

We also hear frequently about the "over-leveraged" consumer household, yet the Federal Reserve's Flow of Funds Accounts estimate that the U.S. household is levered just about the same as it was in 1999. At year-end 2003, the Fed's estimate of household equity in owned housing was \$8.3 trillion, up from \$5.8 trillion in 1999 or about a 9% annual growth rate. Their estimate of equity as a percent of real estate value was 55.1%, down slightly from 56.5% in 1999. Given the fact that mortgage rates were almost 200 basis points higher at year-end 1999 than at year-end 2003, it makes sense that the mortgage ratio would have risen, but it appears to be stable.

## Younger Buyers are Leaving Apartments for Homeownership

Ask any apartment operator, public or private, why rents and occupancy are weak and you are likely to hear that low interest rates are sucking renters out of buildings into home ownership. We tend to

Homebuyer Demographics		
	1989	2003
Single Male	9.0%	11.0%
Single Female	12.5%	21.0%
Married Couple	74.2%	58.8%
Unmarried Couple	3.8%	7.8%

believe that fundamentals have been weak due to the slow pace of job creation and uncertainty on the part of consumers to a much greater degree than they are due to home buying by traditional renters. The most recent available data on the subject comes from the National Association of Realtors (NAR).

Age of Home Buyers			
		1991	2003
Age	18-24	5.7%	5.4%
	25-34	40.7%	30.1%
	35-44	29.1%	25.2%
	45-54	13.0%	21.3%
	55-64	6.9%	11.3%
	65-74	4.5%	5.3%
	75 and over	NA	1.3%

These data suggest that it is marital patterns that are changing, not home buying behavior. It's not likely that married couples have reduced their home demand by 15%, but more likely that people are delaying marriage relative to earlier times and are proceeding with home purchases despite that decision.

These data also suggest that the home-buying group is an older, not a younger group. The more recent distribution reflects the shifting age groups within the population of course, but it seems to indicate that there is not a heightened level of activity by the young. Between 1991 and 2003, the share of homebuyers with children under 18 in the home dropped from 50% to 38%, perhaps underscoring the age shift as well as the increase in single buyers.

There is a possibility that first-time home-buyers are on the rise in the younger age groups, so let's look at the buyers' prior living arrangements.

Living Arrangement Prior to Purchase		
	1989	2003
Lived with Parents	6.3%	10.5%
Rented Apartment	41.6%	40.6%
Rented House	2.2%	1.5%
Owned another House	45.3%	45.4%

These data suggest very little change in home buying activity in recent years. The biggest change was a 4% increase in those moving from their parents' home to an owned home. If we assume that these are predominantly young people, they might represent as much as 20 basis points of increased demand (4% of 5%). It is more likely that the marriage postponement discussed above coupled with a protracted economic slowdown increased the number of people who stayed at home until they were financially capable of buying a home. These people apparently skipped the rental phase of their life completely. Their absence from the rental pool would certainly contribute to weak fundamentals, but not to the degree necessary to explain away market conditions.

### Second Homes and Investment?

Observers of the current housing boom may conclude that much of the activity represents second home purchases by aging Baby Boomers - perhaps in anticipation of retirement. Others have suggested that people have shifted their investment focus from the stock market to real estate. The same NAR data on home purchasers shows a slight increase from 1991 to 2003 in the share of homes not bought as primary residences, rising from 2.1% to 4.1% of home purchased. These include vacation homes, vacation

rental properties that will also be for personal use and properties bought for investment. Interestingly, the share for this category had remained in the 2% range through 2001 so there may be some validity to the investment argument. The data show the largest increase in the "vacation rental and personal use" group.

### There is an Explosion of Condo Development

Some markets – notably high density urban markets – have shown substantial condo development activity in the past few years. But the multi-family share of housing starts has been declining for the past 35 years. In 1969, multi-family starts were almost 45% of total housing starts. In 2003, they were less than 25%. This ratio has been falling steadily over the years, rising only in response to a steep fall during recessionary periods, notable 1973-1975 and 1989 – 1993.

Given the dynamics that we see in the marketplace; marriage postponement, inner city revival, empty-nester Baby Boomers and affluent, professional younger people it seems that we may be catching up from a shortfall of multi-family units and condos in particular.

### Housing Prices in General have Risen far Faster than Inflation

Home prices do appear to have outstripped inflation, but there are at least four potential drivers of that price behavior.

**1. Inflation in non-housing goods is measured differently.** The Bureau of Labor Statistics (BLS) uses a technique known as Hedonic Adjustment in their price series that measures inflation. Hedonic adjustment is meant to take out changes in quality or the make-up of a good that would lead to an apples to oranges comparison of price level. New cars, for instance are vastly more sophisticated and complex than new cars were twenty years ago. Hedonic

adjustment is meant to “back out” those increases in quality or components such as leather upholstery, ABS, smart suspensions, fuel efficiency and other refinements. But the net effect is that the Consumer Price Index (CPI) measures the price of a (relatively) “constant” basket of goods that the average consumer can not buy. The average new car buyer looks at a sticker price of \$20,000 or \$40,000 and sees a huge price increase over what they paid for a new car twenty years ago. The BLS estimates that hedonic adjustment takes as much as 70% of nominal price increases out of the CPI. If we were to measure home prices the same way – back out the smart climate control, energy efficiency, higher-end kitchens and other modern features we might see much lower rates of price increase.

Perhaps ironically, the only hedonic adjustment made to the shelter component of the CPI is to *reduce* the imputed value to reflect depreciation. While this practice may further the “constant quality” goal of the index, it seems a bit contrary in the face of rising home values.

**2. *The conversion of land to residential uses has slowed dramatically in the past decades.*** One scholarly estimate puts the expansion of residential land stock at a rate of 0.60% of the stock per year (Davis and Heathcote)<sup>1</sup>. If households are growing at the rate of 1.3% per year, then the stock of residential land is trailing demand by more than 50%. Anytime excess demand enters the picture, prices are sure to rise on a real basis, which they have. If the real cost of residential land rises, two things might happen. Housing density will increase in order to spread the land costs across more units of housing. Alternatively, builders will put up more expensive houses to help cover the cost of the more expensive land. We think that both of these

outcomes can be seen in today’s market. The renewed interest in condominium development may reflect the need for higher density uses, while rising land values lead to the larger and more complex single family residence of today.

**3. *A third element of this picture is increased land use and environmental regulation.*** Without arguing the merits of such increased regulation, it is fairly clear that it adds to the cost of developing land for housing. One study in Carlsbad, California <sup>2</sup>– a coastal community – estimated that the average cost impact of regulation on a new single family home in a planned unit development was \$96,000 out of a sales price of \$371,000.

**4. *A large factor in the low reported inflation rate in recent years is an explosion of productivity-enhancing technology coupled with a rapidly globalizing economy.*** Products are produced more cheaply and efficiently, transported more efficiently and distributed through new retail channels. Unfortunately, the building trades have not yet figured out how to outsource framing to Asia or



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carpet laying to India, so home costs are driven to a great extent by the cost of U.S. labor. While new products are being introduced all the time that substitute manufactured components for site-built labor intensive practices, automated manufacturing of homes is not yet achievable. Thus, home building lags productivity growth in other areas of the economy so real home prices will rise over time unless the same degree of productivity enhancement can be applied to housing.

### Condomania?

Several markets have seen rapid growth in condominium development in recent years, notably South Florida, Chicago, San Francisco, San Diego and New York. While these markets all have sound fundamental economics, there may also be an element of bubble pricing in the mix. The danger signs are pronounced in south Florida where units are being bought and “flipped” by people who have no intention of occupying them. In other markets there appear to be a meaningful share of buyers who are buying the units as investment alternatives to the stock market. The economics of owning a single condominium unit as a rental are not very attractive. Management costs, rental commissions and homeowner’s fees take a big bite out of rental income. Buyers who see condos as an investment are typically betting on strong price increases to offset low or negative income during their holding period. A *pro forma* model of the condo and rental markets in San Francisco and Miami shows that buyers in San Francisco who rent out their units at

significant negative cash flow can still earn attractive returns if prices grow at 5% per year or above. The history of the local market would certainly encourage believers in that strategy. Non-market constraints on housing stock growth are severe in San Francisco and contribute to the continued scarcity of affordable housing. In Miami on the other hand, higher property tax rates and homeowner assessments are likely to make the strategy a bust if prices don’t continue a 10% or better annual rise.

## Scarce housing is expensive housing.



The other disturbing element in the south Florida condo scene is the ratio of occupant-buyers to those who intend to rent or re-sell their units after a short holding period. Some developers have reported that as many as 70% of buyers reserving condos at “pre-construction” pricing intend to sell their interest without occupying their units. Perhaps they would reconsider if they saw the \$1 million plus condo currently offered for sale in the area. Advertised as “never lived in”, it was built in 1998.

### What does it all mean?

The potential for a bubble raises the specter of financial loss and potential ruin. What drives price volatility? We believe that upward and downward price movements are driven by the same variables, some moving in inevitable cyclical swings. But what about the long term trend? **The factors discussed above argue for a long-term rise in housing cost relative to other goods and services.**

► The slower pace of productivity growth in housing production implies a continued rise in the

real cost of new homes which will also influence the value of existing homes.

▶ The likely continuation of present levels of regulatory and environmental controls implies a continued upward pressure on land values as parcels are brought into production for housing uses.

▶ Over the next twenty years the demographic makeup of the U.S. population argues for continued upward pressure on home prices from aging Baby Boomers and maturing Echo Boomers.

▶ In the short run, job growth and volatility of supply deliveries may have a negative as well as a positive influence on value

▶ In the short run alternative asset classes may offer superior returns and pull capital out of housing, causing a sharp decline in condo demand

▶ We believe that the positive pressures on value will outweigh the potential negatives over time. **In the short run, specific markets may experience negative price changes.** History shows that the volatility can be on the order of 20% or more, but that prices usually recover within a few years. In many cases in the past, price declines were less than the previous year's gains, minimizing the impact of the volatility.

In markets with meaningful constraints on supply like San Francisco or markets where new supply represents a geographic and demographic

shift like downtown San Diego, price movements are likely real and are not expected to collapse like the dot.bombs of 2000. Scarce housing is expensive housing. A home or apartment should continue to provide the same sort of shelter that it was designed for regardless of price expectations. The problem with the tech bubble was that valuations were built entirely on expectations of triple or quadruple digit growth in earnings streams that were illusory in many cases. Housing prices have risen in single or double digit trends for the past fifty years with short run and localized interruptions in trend.

▶ U.S. housing prices are beginning to resemble the cost of housing seen in Western Europe or parts of Asia where tradition, capital flows and government restraints have made housing a costly consumption good. We don't expect that trend to reverse itself any time soon. ■

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#### Endnotes

<sup>1</sup> Davis, Morris and Jonathan Heathcote, "The Price and Quantity of Residential Land in the United States", Federal Reserve Board Working Paper Series; July 2004<sup>2</sup> "The Economic Impact of Government Regulation: Case of the Smith Family House"; California Building Industry Association; 2000