

Research Notes

How Much Worse for the U.S. Housing Market?

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After booming for many years, the U.S. housing market has entered a recession. While the quantities, i.e. units sold, have been in decline over two years now (see Fig.1), prices have taken longer to begin declining.

New home sales seem most sensitive to the changing conditions in the housing market. After peaking in July, 2005, new home sales have dropped a stunning 53% and are now at 1996 (not to mention 1986 and 1976) levels. The bulk of the market consists of existing home sales, which have also fallen off, but to a lesser degree than new home sales. Existing home sales also peaked in mid-2005, and have declined by about 30% since then.

Fig. 1: Sales of New Homes in the U.S., 1975 to 2007, 000s units, seasonally adjusted at annual rates

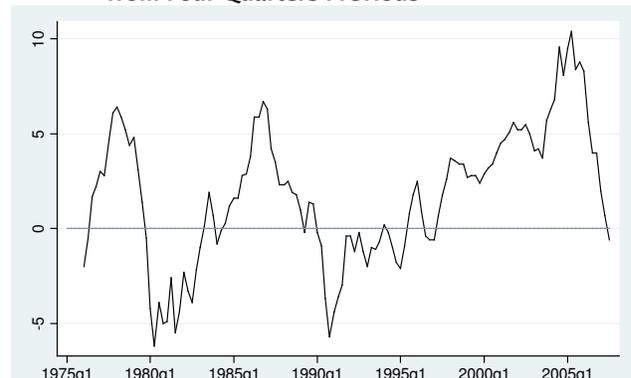


Source: US Census Bureau. Monthly data for 1975m1 to 2007m11.

House price adjustment has taken longer, suggesting considerable stickiness in house prices. Deflating the OFHEO house price index (HPI), by total CPI gives a measure of real house prices, shown in Fig.2. The profile is very similar to that of new home sales, but the timing of the recent peak is quite different. The most recent

peak of in real house prices at the national level occurred in 2006Q4, more than a year after sales turned downward. OFHEO's *nominal* HPI seems to have peaked even later, in 2007Q2, as did the nominal median price of new homes.

Fig. 2: Real House Price Growth in the U.S., % Change from Four Quarters Previous



Sources: OFHEO Nominal HPI, deflated by total CPI.

Of course, we would like to get an idea how long this decline is likely to last, and how much house prices may fall. While the past is unlikely to repeat itself, it is probably one of the best guides to putting the current situation in context.

Previous Housing Market Cycles

The OFHEO data contains two previous house price booms, from 1975Q4 to 1979Q1 (3.5 years), and from 1982Q3 to 1989Q3 (7 years). Both these booms were followed by substantial contractions in real house prices.

The relatively short 1976-79 house price boom involved a real price gain of 15%. It was followed by a bust period that lasted 3.75 years, a bit longer than the preceding boom. This house price contraction saw real prices decline



by 13%, nearly wiping out all of the gains of the preceding boom.

The seven-year house price expansion from 1982 to 1989 resulted in a cumulative gain in real prices of 19%. It was followed by a house price recession of 5.75 years, from 1989Q4 to 1995Q1, when real HPI declined by about 10%. In much of 1995 and 1996, real prices fluctuated from quarter to quarter with little real gain or decline over that period. Real house prices began growing again as the most recent expansion took hold at the beginning of 1997. So the period of real price declines and then stagnation in house prices lasted about as long as the preceding boom.

What's Next?

The most recent house price expansion lasted 10 years, considerably longer than both the previous booms. The cumulative gain in real house prices over that decade was a remarkable 62%. Therefore it will likely take quite a while to fully unwind from that kind of boom. If the past two housing cycles are any guide, we should expect a long period of declines in real house prices.

In both preceding booms, the real price declines or stagnation periods had about the same duration as the house price expansion period. If that is the case this time, we may not see real house prices appreciate again for close to 10 years. As we've only just entered the period of declining house prices, then there may not be another real house price expansion until 2016!

In terms price decline amounts, the longer boom during the 1980s is probably the best comparison. In that cycle, real house prices gained 19% and then lost 10% in the following bust, leaving a bit less than half of the original gain. If these proportions hold in this cycle, we would expect real house prices to decline by over 30%. If the contraction lasts a decade, that means decreases of about 3% per year in real house prices.

At the end of 2006 the median house price was about \$220,000. By the end of 2007, it was about \$210,000 in 2007 dollars, or about \$204,000 in 2006 dollars. Thus, the *nominal* median house price has already dropped by 4.5%. In real terms, there has been a decline of 7%. If inflation averages 3% per year over the next decade, while real prices decline by 3% per

year, then we should expect nominal median house price to be about the same in 2016 as they were in 2006. The real value of the median home, however, would have fallen from \$220,000 to \$154,000 in real, 2006 dollars in 2016.

Of course, mortgage and financial markets are considerably different now than they were during the previous housing cycles. Perhaps these differences will speed up the adjustment process, or somehow make the current housing bust less long or less painful. Nevertheless, we often think that "it's different this time" about economic cycles. In many ways it is, but somehow many of the same problems and patterns continue often seem to repeat.

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Addenda: Tales of Boom and Bust

As analysts, we often literally "see" asset price bubbles or busts as data in tables and graphs, as we do in this note. Yet, it is interesting to observe how these asset price cycles are manifested in the actions of real people.

During the stock-market bubble of the late 1990s, everyone was day-trading from your grandpa to your plumber. A similar phenomenon seems to be occurring today in China. The housing bubble both in the U.K. and North America generated an amazing array of reality television shows on renovating and flipping houses. People watching shows about paint drying and real estate speculation should alert us that something unusual is going on.

Now, the housing price bust in the U.S. is also generating some pretty amazing anecdotes. One of the oddest stories from the housing bust comes from Stockton, CA. Despite a drought this summer, the Stockton area apparently had a malaria problem. Why? All those untended swimming pools created ideal mosquito breeding conditions. From subprime meltdown to malarial resurgence. Asset price bubbles can definitely lead to some bizarre side effects.

So what is the next asset price anomaly? Anyone's hairdresser buying gold bullion?

