

Can We Predict a Bubble in Real-time? Evidence from the Pre-Crisis Academic Literature

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- The views expressed today are mine.
- The do not necessarily reflect the views of
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Ex-ante Housing Price Predictions by Academic Economists

- Absolutely no consensus!
- Huge dispersion of opinions and theories about the future trajectory of housing prices in 2002-2006 period.
- Many were optimistic, questioning the idea of a bubble and believing that fundamentals justified huge price increases.
- Some were extremely pessimistic, citing indicators like price-rent ratio and price-income ratio that were reaching historic highs.
 - But virtually none of the pessimists had the timing right.
- Others did not take strong positions, voicing some concerns about a bubble, but not believing that outcome would be so adverse.

Housing Bubble: Pessimists

Some academics argued for a bubble — but far too early

In the absence of any other credible theory, the only plausible explanation for the sudden surge in home prices is the existence of a housing bubble. This means that a major factor driving housing sales is the expectation that housing prices will be higher in the future. While this process can sustain rising prices for a period of time, it must eventually come to an end.

Dean Baker (2002)

Nonetheless, our analysis indicates that elements of a speculative bubble in single-family home prices — the strong investment motive, the high expectations of future price increases, and the strong influence of word-of-mouth discussion — exist in some cities.

Karl Case and Robert Shiller *Brookings Papers* (2003)

Housing Bubble: Optimists

Many academics took an anti-bubble position in the 2002-2006 period

For the past several years, Chicken Littles have squawked that the sky — or the ceiling — is about to fall on the housing market. And it's tempting to believe them ... Yet basic economic logic suggests that this apparent evidence of a bubble is anything but. Even in the highest-price cities, housing is, at most, slightly more expensive than average. Here's why: While house prices over the last decade have gone through the roof, the annual cost of owning a house has not.

Chris Mayer and Todd Sinai (Columbia and Wharton)
"Bubble Trouble? Not Likely," *Wall Street Journal*, September 19, 2005

Based on academic work that appeared in the *Journal of Economic Perspectives*

Housing Bubble: Optimists

These researchers believed that a proper accounting of the fundamentals showed housing was not overvalued

We show how to estimate the fundamental value of a house and use unique rent and price data for matched single-family homes in ten metropolitan areas to illustrate this approach. These data indicate that the current housing bubble is not, in fact, a bubble in most of these cities in that, under a variety of plausible assumptions, buying a house at current market prices still appears to be an attractive long-term investment.

Margaret Smith and Gary Smith (Pomona College)
"Bubble, Bubble, Wheres the Housing Bubble?,"

Brookings Papers on Economic Activity, Spring 2006

Housing Bubble: Neutral

Other economists voiced bubble concerns, but underestimated the adverse effects of a bubble bursting.

- Morris Davis, Andreas Lenhert, and Robert Martin estimated a long time-series for the rent-price ratio
 - From 1960-1995, the rent-price ratio is fairly constant
 - This ratio declines dramatically from 1995-2006
 - Paper written in 2006, published in 2008
- The bottom line?

If the rent-price ratio were to rise from its level at the end of 2006 up to about its historical average value of 5 percent by mid-2012, house prices might fall by 3 percent per year, depending on rent growth over the period. That said, this is more of a back-of-the-envelope calculation than an actual forecast for house prices because we do not have a fully satisfactory model of the rent-price ratio

Predicting a Housing Bubble in Real-time

- Wide dispersion of *ex-ante* predictions should not be surprising.
- Asset pricing theory tells us that to a first approximation prices should be unpredictable.
- Currently do not have good theories about formation of asset pricing bubbles.
- What can we learn from these observations going forward?
- Need to be more realistic about the capabilities of our regulators.
- Leap of faith to think that a “systemic risk regulator” can
 - 1 Precisely identify when asset prices are moving away from fundamentals (i.e. beginning of a bubble).
 - 2 Precisely predict when the bubble reaches its peak and is about to burst.

So What Can We Do?

- There was too much leverage on the part of many borrowers.
- According to our loan-level data (Northeastern states), the median *cumulative* LTV ratio for subprime purchase mortgages was 100% in 2004-2006.
 - Most loan-level datasets showed an *increase* in average downpayments leading up to 2007!
 - No information on second liens (piggy-backs)!
- High leverage resulted in borrowers with less of an equity cushion in the event of adverse financial events.
- Perhaps we should require a 10% downpayment to become a homeowner?
 - The only thing in the world that the Mortgage Banker's Association and the Center for Responsible Lending can agree on is that increasing downpayment requirements is a bad idea!
 - Both opposed to changing minimum downpayment on FHA loans from 3.5% to 5.0%.