

## **Housing Prices and Consumption**

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Headlines in the financial press over the last several months have trumpeted concerns about the housing downturn and the possibility that house price decline will produce a decline in consumption and the onset of recession. According to the oft-cited Case-Shiller index, home prices have already dropped by 14.1 percent from March 2007 to March 2008. This is greater than the 10.5 percent drop in this index for 1932, the worst year for housing prices during the Great Depression.

Many pundits and forecasters believe that house price declines, like any loss of wealth, must reduce consumption. Fed Chair Ben Bernanke was quoted recently saying that unless house prices stabilized, “growth risks will remain on the downside.” Some estimates of the elasticity of consumption with respect to housing price change (including the estimate used by the Fed) suggest consumption responses averaging perhaps as large as 3 or 4 percent of lost housing wealth. A simple-minded calculation along these lines would suggest that the huge Case-Shiller index decline could reduce consumption by enough to cause a recession.

But this pessimistic math should not be taken seriously. Logic and evidence suggest little reason for concern about an adverse consumption wealth effect from the current house price decline. When one properly considers how house prices affect consumption, and properly estimates the housing price changes that are relevant for consumption, the right conclusion to draw is that there will be virtually no consumption decline produced by house prices.

Most importantly, the Case-Shiller index substantially exaggerates the house price decline experience of the population of people who are most likely to respond to a house price

decrease with a drop in consumption. In fact, central banks and most other quantitative macroeconomic forecasters use data from the Office of Federal Housing Oversight (OFHEO), not the Case-Shiller index, to measure house prices. This matters a great deal; irrespective of which OFHEO index one uses (one OFHEO index includes data on only home purchases, while another includes purchases as well as appraised values from refinancings), using OFHEO rather than Case-Shiller substantially reduces the estimated house price decline. In contrast to Case-Shiller's headline-grabbing 14.1 percent drop over the past year, the full OFHEO index reports a drop of less than four hundredths of one percent over the same period.

There are good reasons for macroeconomic forecasters to avoid Case-Shiller. Case-Shiller exaggerates the actual decline in house prices (because of regional coverage gaps), and gives greatest weight to those whose consumption response to a house price decline is the smallest. The weighting difference reflects the broader criteria for including a mortgage in the Case-Shiller index, and its use of value weighting of mortgages.

With respect to regional bias, the OFHEO index covers all of the United States, while the Case-Shiller has much less complete coverage. One study reported that the Case-Shiller has no coverage of thirteen states and incomplete coverage of twenty-nine others. Our research shows that those regions omitted by Case-Shiller have had a much more positive housing experience than the rest of the country, according to OFHEO data.

With respect to inclusion criteria, the OFHEO index includes data only on mortgages which are "conforming." OFHEO's indexes exclude sub-prime mortgages (many of which were based on paper-thin down payments, for which no significant homeowner wealth was ever at risk), or those in excess of \$417,000 (which are granted to wealthier individuals, whose consumption response to a loss of wealth are much smaller than average). Finally, the Case-

Shiller index's value-weighting means that it gives much greater weight to mortgages of wealthy individuals, who tend to be older and whose consumption wealth effects should be negligible.

How do economists know that wealth effects vary across individuals? Economic theory tells us that house price declines for wealthy individuals (e.g., older folk with jumbo mortgages in Florida, Arizona, and Nevada), or for those with no wealth at stake in their homes, are likely to matter little or not at all for non-housing consumption. As economist Willem Buiter has correctly emphasized, housing consumption (an imputed rental of one's own home) varies directly with the market value of housing wealth, and so, as house prices change, measured housing consumption moves in tandem, although there is no effect on the actual amount of housing services consumed by homeowners. Furthermore, in the absence of market imperfections that constrain consumer borrowing, the fact that house wealth pays for house consumption implies that housing wealth should have a negligible effect on non-housing consumption. For any individual, the size of the effect of housing wealth on non-housing consumption should depend on how much wealth is actually tied up in the house, and on how much borrowers rely on their house to fund their non-housing consumption. Young, middle-income people (who are more likely to be borrowing constrained, and also to have less non-housing wealth) should exhibit much larger than average housing wealth effects on non-housing consumption.

In a recent empirical study, Jie Gan confirms that prediction; the small wealth effect that she identifies for Hong Kong residents on average depends entirely on the behavior of the young. Even the recent empirical paper by Case, Quigley and Shiller, which argues for a significant consumption wealth effect resulting from house price declines, employs the OFHEO, rather than the Case-Shiller index to measure house prices. Our own empirical analysis indicates that house

prices, regardless of which index is employed, add little predictive power to consumption forecasts, but that the OFHEO index has a slightly larger correlation with consumption than Case-Shiller.

Thus, overall, the OFHEO indexes give a much clearer picture of the house price experience for the “representative” US consumer for whom non-housing consumption is likely to respond to housing wealth. So far, according to the OFHEO measures, house prices have been flat, on average over the past year, for this group. In our recent study, which forecasts housing prices for 2008-2009, even when employing very pessimistic estimates of future foreclosures, we estimate that house prices are likely to remain essentially flat or drop only modestly on average through 2009.

Consumption growth is likely to be limited in the near term by the tighter lending standards of recent times; and a consumption growth slowdown may be at hand. But house prices are unlikely to be a source of declining consumption, or the trigger for recession, in the near term.

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