

TWO ESSAYS ON THE HOUSING BUBBLE

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University of Nebraska, 2011

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The first essay uses a vector error correction model (VECM) to examine the rapid rise in housing prices that occurred between 1997 and 2007. We evaluate the data to determine whether housing prices rose during this period because of a “bubble” (i.e., due to past price increases), or because of fundamental factors. By integrating housing prices, real GDP, the default premium and the 30 year mortgage rate into a VECM, we are able to capture the historic relationship between these macroeconomic factors and housing prices, which existed prior to 1996. Using these four macro variables, we show that a cointegrated system exists, which fits the pre-1996 data well, and predicts the increase in housing prices would have occurred based upon fundamental factors, rather than the conventional view that home prices increased because of an irrational bubble.

In the second essay we use a variance ratio procedure derived from the Campbell-Shiller return decomposition to test whether there is evidence of a bubble in housing returns for the period 1997 to 2007. The test rejects a housing bubble. In addition, we argue that an asset bubble, by its very nature is a self-generating price run-up, and is idiosyncratic to a market or asset. Within a common vector auto regression (VAR), we find strong shared behavior in the cash-flow derived returns of housing and equities. This suggests that any run-up in housing prices was shared by equities and was not idiosyncratic to housing; thereby providing further evidence against a housing bubble.

We conclude that economic fundamentals explain the increases in housing and stock; thus rejecting an argument for price appreciation in the housing market due to non-fundamental speculation.