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June 2011

By The Numbers: Sizing Excess Housing Inventory in the U.S.

The state of the domestic housing market is broadly recognized to be an important driver of economic prospects for the U.S., with good reason. New home sales matter directly for GDP, as new residential investment generates expenditures that are counted in the national accounts. Several studies show that housing construction has led the U.S. out of many post-war recessions. In addition, existing home sales maintain home prices, which keeps net worth stable and therefore savings rates down. Low savings rates are an important prop for consumption expenditures.

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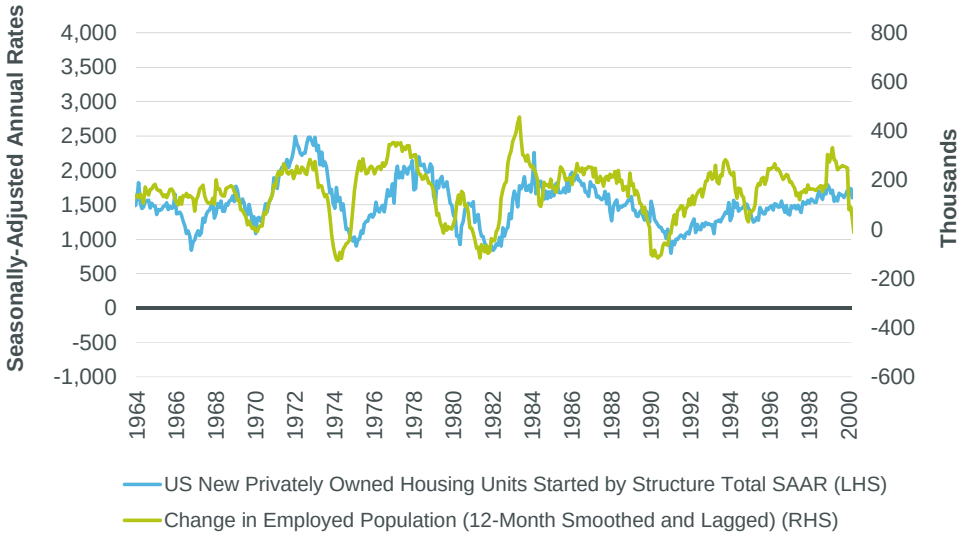
In this context, getting a handle on how much housing inventory is out there is important in order to see how long it will drag on growth in the U.S. (residential construction has been a drag on the economy for 17 of the past 20 quarters). The Census Bureau gives us an indication of excess supply of housing units, expressed in months, that assumes the current sales rate and looks only at listed new homes for sale (often misrepresenting condos and other multi-family units). The National Association of Realtors does the same for existing homes, but ignores the large shadow inventory out there.

It would be helpful to have a total overhang figure in both new and existing homes based on some economic fundamentals. To get a simple proxy of how much overbuilding occurred in the U.S. markets, we can look at the relationship between the number of people working in the U.S. and the housing stock. In the 30 years from 1964 to 2000, there was a stable long-term relationship between the growth of the employed labor force in the U.S. and the number of new houses that were built in any given year. Figure 1 illustrates this relationship.

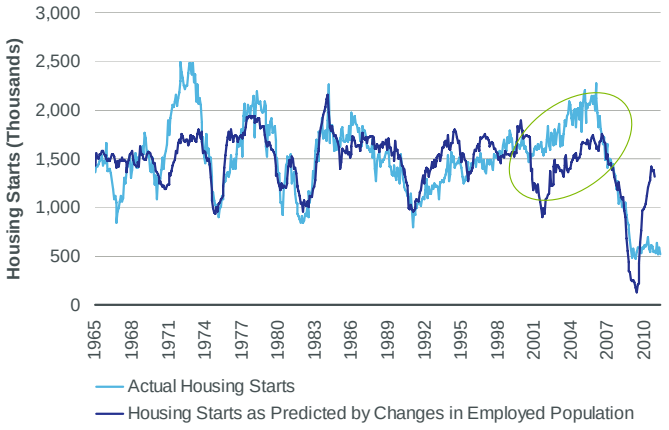
Figure 1: Relationship between the growth of the employed U.S. labor force and the number of new houses built



Source: Bloomberg, U.S. Census Bureau, Bureau of Labor Statistics; data through 30 April 2000

The 0.67 correlation between housing starts and the growth of the working population makes intuitive sense, and avoids the measurement issues that affect estimates of household formation and homeownership rates. It also allows us to estimate the "ideal" housing starts figure, by simply regressing starts on the change in the employed population. Figure 2 shows the results of this exercise.

Figure 2: Estimating the "ideal" housing starts figure by regressing starts on the change in the employed population



Source: BlackRock, Bloomberg, National Association of Realtors, Bureau of Labor Statistics; data through 30 April 2011

The results show a period of overbuilding from 2001 through 2006. That period of overbuilding coincides with the dramatic change in the behavior of home prices, which started rising unusually fast after the 2001 recession.

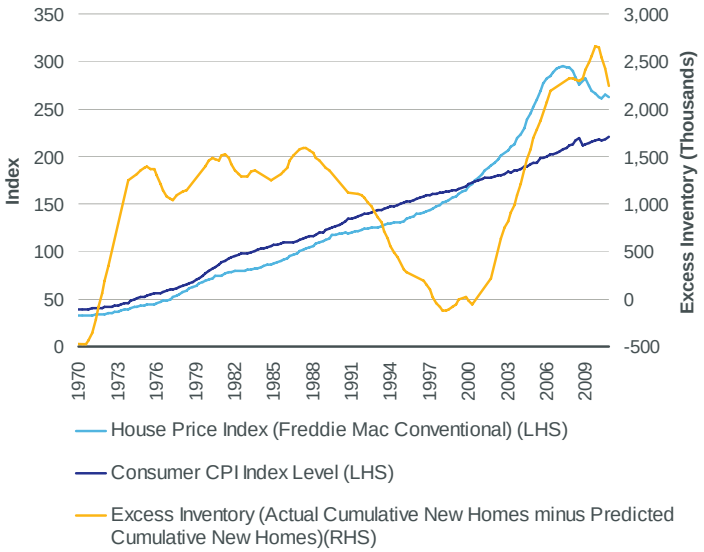
According to this simple model, the U.S. was roughly at equilibrium in terms of new houses being added to the stock every month versus natural demand for new houses from newly employed individuals. From that point through the end of 2006, the U.S. homebuilding industry added 2.3 million more homes than would be required if we looked only at the growth in the workforce. We get this figure by simply subtracting actual monthly housing starts from the predicted housing starts, and cumulating that difference.

Since the beginning of the housing crisis, the U.S. residential market has slowed down dramatically, even as the predicted demand for new housing has started to increase since the middle of 2009. This has helped reduce the difference between natural demand and actual supply. The current cumulative inventory overhang appears to be in the neighborhood of two million units.

As long as large inventories persist, home prices are unlikely to rise much faster than the rate of inflation. This means that potential growth in the economy will be lower than it was in the recent past, all else being equal. The natural question is: How long will this excess overhang persist? If we assume 500k of new housing construction and the current total home sales figure of 800k (ignoring teardowns), then 300k extra houses that will be subtracted from excess inventories each year. Given the two million unit overhang calculated earlier in the article, it will take nearly seven years to work off the excess before we can see significant price appreciation of houses above the rate of inflation.

The periods of excessive overbuilding, those of the late 1960s and the mid 2000s, coincided with periods of time where policy was easier than might be suggested by simple Taylor Rules[1]. Interestingly, the large overhang of about 1.4 million units that was generated between 1968 and 1974 took until 1997 to be "worked-off". Only at that point does the rate of home price inflation start growing meaningfully faster than the rate of growth of general consumer purchases inflation.

Figure 3: Outperformance of Home Price Index over CPI since mid-1990s - coincident with drop of excess inventory to zero



Source: BlackRock, Bloomberg, Freddie Mac, U.S. Census Bureau; data through 31 December 2010

1 To see how we have used Taylor Rules in the past, refer to the November 2010 edition of *By The Numbers*.