Determining the Number of Households Priced Out of a Market

The issue of house price changes and their impact on affordability arises in a number of contexts, such as when considering policies that impose fees on new construction. A relatively straightforward approach often used by NAHB to analyze this situation is based on mortgage underwriting standards. Under those standards, it is relatively easy to calculate the number of households that can qualify for a mortgage before an increase in a representative home price, but not afterwards. The difference is the number of households that are 'priced out' of the market for a representative home.

A priced out analysis doesn't answer all possible questions about impacts on housing markets, such as what the differences in home sales or housing starts would be. Although these are important questions, a reasonable attempt to answer them requires estimates of key economic parameters such as the willingness of households to accept homes that are somewhat smaller or have fewer amenities to achieve affordability, the relationships among different segments of the housing market in question, and the adjustments builders make in the products they offer in response to changed affordability conditions on the rise. Good estimates of these parameters are seldom available. In comparison, a priced out analysis that simply shows how many households in an area cross a particular affordability threshold is relatively easy to understand and can be calculated in a straightforward manner using data that are available for any housing market in the U.S.

According to the American Housing Survey (which is financed by HUD and conducted every other year by the U.S. Census Bureau), only about one-fifth of home buyers purchase their homes for cash. Thus, affordability for most prospective buyers is tied tightly to ability to qualify for a mortgage, and mortgage underwriting standards provide a reasonable basis for estimating affordability. Indeed, in the recent economic environment characterized by many financial institutions trying to recover from past errors in judgment, lenders have become very conservative and are more likely than ever to apply conventional underwriting standards with little flexibility.

Standards to qualify for a mortgage are typically expressed as a fraction of prospective buyers' income. One common standard is based on what the industry calls a "front end ratio"—the percentage of income that would be consumed by paying principal and in interest on the mortgage, as well as property taxes and property insurance. The front end ratio can easily be computed for a set of assumptions about the mortgage and household income.

The assumptions NAHB typically uses in "priced-out" computations are a downpayment equal to 10 percent of the purchase price and a 30-year fixed rate mortgage. For a loan with this downpayment, lenders would typically require mortgage insurance, so NAHB also assumes an annual premium of 45 basis points for private mortgage insurance. Local information about property taxes and property insurance per dollar of home value can be computed from the Census Bureau's American Community Survey (ACS) data.

Detailed 2015 income distributions for all states and metropolitan areas are also available from the ACS. NAHB makes relatively minor adjustments to the ACS income distributions to account for income and population changes that may have occurred since 2015. Dollar boundaries of the income distribution are adjusted based on percentage changes in the median family income estimates that HUD produces annually for all states and metropolitan areas. The number of households in each income bracket is adjusted using the 2014-2015 percentage change in the number of households reported in the ACS, assuming that this household growth rate applies evenly across all income brackets rate in the period after 2015.