Housing Cost Indices Invite Skepticism

While good compliance officers, risk mangers and former KGB interrogators at the Lubyanka prison might disagree, torture is a bad way to extract useful information from subjects: After a point the victim will confess to anything just to make the pain or demand for one more continuing education module stop. Besides, they know somewhere along the line the questioner has made them look guilty.

So it is with conspiracy theories; whether it is aliens landing at Roswell, New Mexico or Area 51 in Nevada, once the government starts acting as if it is hiding something, it becomes guilty. Or, as Otto von Bismarck advised, "Never believe anything in politics until it has been officially denied."

Consumer Price Reports

Our good friends at the Bureau of Labor Statistics would understand. Every month, middle of the month, they release the Consumer Price index report, replete with a dizzying array of subindices. Most traders tend to focus on two headline numbers, the All-Urban CPI, not seasonally adjusted, which is used for the inflation accrual index for Treasury Inflation-Protected Securities (TIPS) and on the "core" CPI number, which measures consumer prices ex-food and energy. This last fiction is based on the argument both food and energy prices are subject more to supply shocks than to monetary variables or other policy decisions.

The CPI, unlike most other economic data, thus has an actual role in finance and commerce in addition to its role as an economic indicator and as a basis for various OTC derivatives. Union contracts, Social Security cost-of-living adjustments and TIPS all have real money changing hands on this report. Moreover, to an extent its creators may not realize, the CPI numbers form an important bridge of trust between the federal government and American citizens: Should enough people decide, "That's not *my* cost of living!" the government will solely but surely lose credibility.

In reality, calculating any price index is an imperfect art and science. The CPI is a Laspeyres index, which means it traces the price of a fixed-basket of goods going forward in time. Stop right there and ask yourself whether your basket of goods, your consumption patterns, are fixed or do they change with time, technology, your family situation, the availability of substitutes, changes in your preferences and your general psychological feeling of well-being. These flaws have been recognized for years, and the BLS has labored, no pun intended, to correct them by employing what are known as hedonic adjustments for high-technology goods such as computers whose prices fall as their quality rises and by adjusting the weights of the market basket employed. Each change invites criticism and brings the conspiracy theorists out of the woodwork.

The Housing Indices

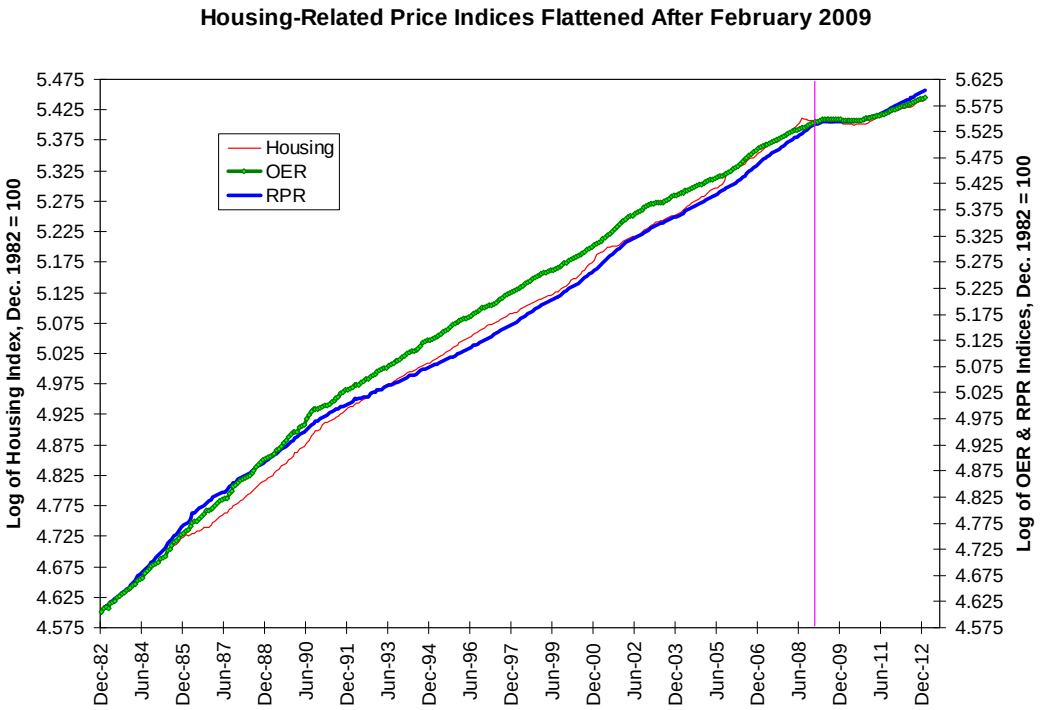
While homelessness is a reality, we have to base economic policy on the assumption everybody lives somewhere and has to pay for the privilege. This sounds simple, but it is not. The main Housing sub-index, which accounts for 41.96% of the CPI, is broken down into three major subindices itself, Shelter (31.303%), Fuels and Utilities (5.081%) and Household Furnishings and Operations (5.576%).

Within that Shelter index are two categories we will put to the side, Lodging Away From Home (0.831%) and Tenants' and Household Insurance (0.347%). The two we will focus on are Rent of Primary Residence (RPR, 6.418%) and Owners' Equivalent Rent (OER, 22.308%). RPR is a fairly straightforward concept: What are rents for tenants and how are they rising? There are actual leases, canceled checks, apartment-for-rent ads on Craigslist and other solid data points to measure here.

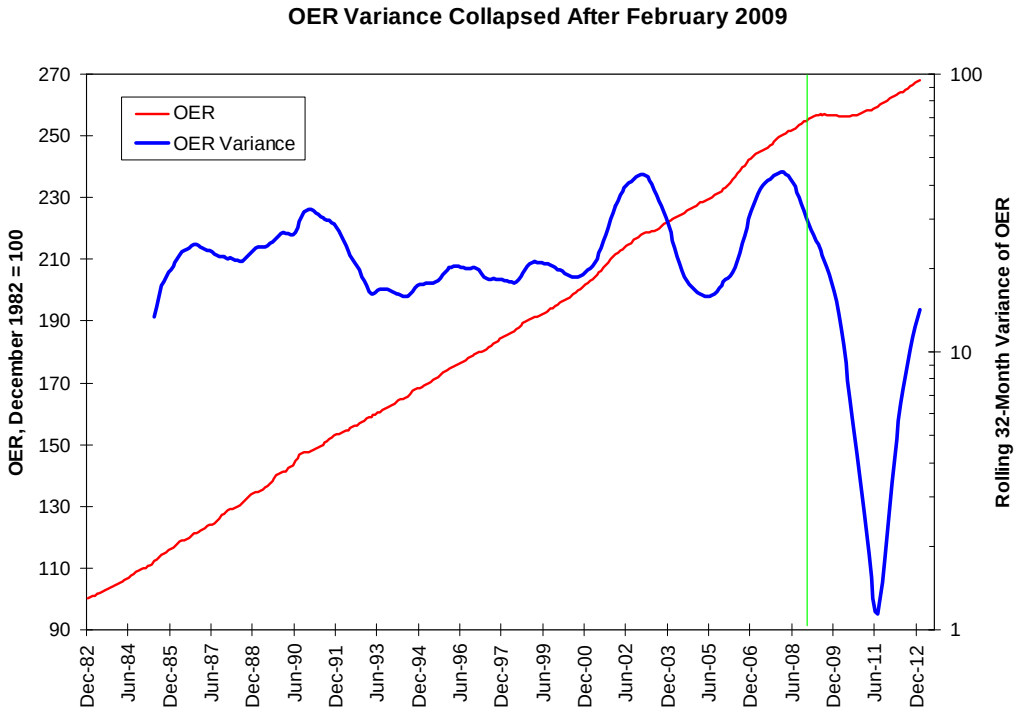
What, though, about OER? This is a calculated, not a measured, number; you will spared the details unless you seek them out for yourself on the BLS at www.bls.gov/cpi/cpifact6.htm. Suffice it to say, "Rental equivalence measures the change in the implicit rent, which is the amount a homeowner would pay to rent, or would earn from renting, his or her home in a competitive market." The BLS, to its credit, goes on to say, "Clearly, the rental value of owned homes is not as easily determined dollar amount, and Housing survey analysts must spend considerable time and effort in estimating this value."

Anyone who has been a tenant, a homeowner or who has lived through the housing bubble-and-bust of the past decade or who has studied the effect of plunging mortgage rates, massive foreclosures, first-time homebuyer's tax credits, rising unemployment or even the effects of rising and falling gasoline prices on urban geography recognizes the BLS' dry wit with regard to the sheer impossibility of their task.

Given all of these cross-currents, the OER number must have been very volatile since the Federal Reserve started buying $1.25 trillion in mortgages back in March 2009, marked on the chart below, right? Um, no: If we plot the CPI main Housing index and both RPR and OER on logarithmic scales re-indexed to December 1982, we see something unusual. What had been fairly steady rates of increase suddenly stopped as if they hit a limit until mid-2011. Anyone who has devoted most of their adult life to the analysis of economic data and market statistics knows they rise, fall, gyrate and oscillate but rarely do they stagnate. Moreover, if they do stagnate, they do not do so for more than two years.

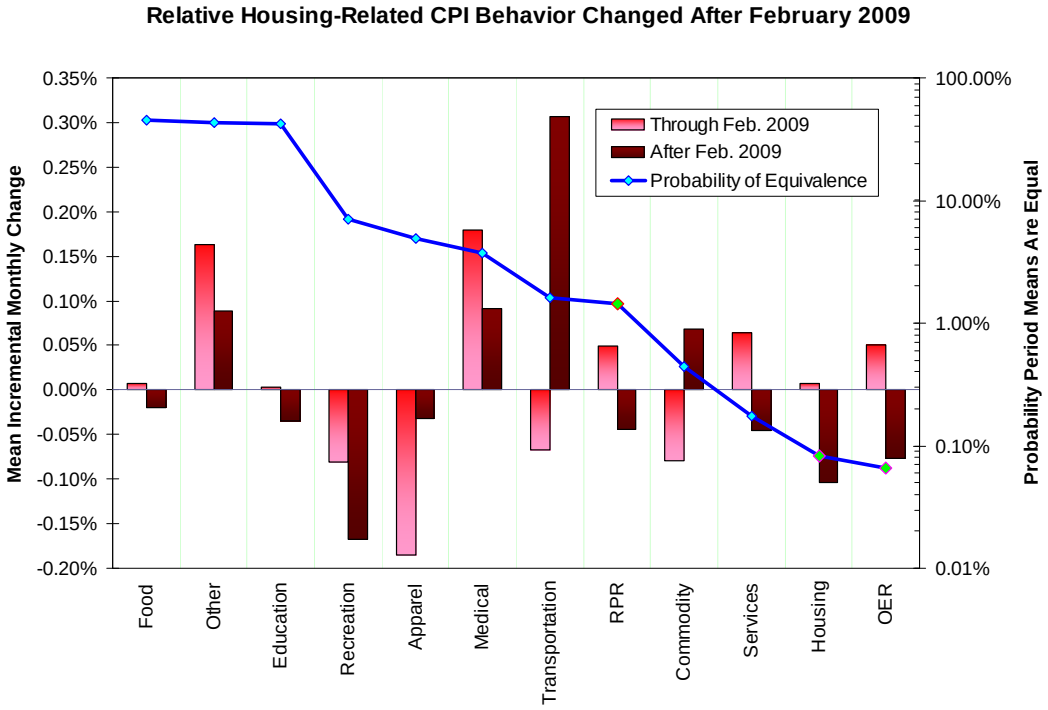


The data on OER can be rearranged to produce an even more striking picture. If we calculate the rolling variances for OER in a period equivalent to time between March 2009 and November 2011 and plot it against OER itself, you can see just how far and how fast its variance collapsed before rebounding. As noted above, variance of economic data simply does not behave like this.



Relative Performance

You might protest, "Yes, of course OER flattened out during a period when the CPI was falling and the Federal Reserve if no one else was fretting about deflation." Fair enough; let's normalize the monthly changes in a group of CPI subindices to the changes in the CPI itself and compare their average changes for the periods through February 2009 and then for March 2009 onwards. The Housing component, RPR and OER are displayed separately in Chart 3, along with the subindices for Apparel, Education, Other, Medical, Food, Recreation, Transportation, Commodities and Services.



We can calculate the probability the means of the two time periods are equal. Once again, the variations are so large we have to display them on a logarithmic scale. The housing and OER indices' probabilities of equivalence are less than 1% and RPR's is a mere 1.44%. We can conclude statistically the behavior of OER, the largest single

component of the entire CPI by a large margin, changed to an unusual level of stability after the Federal Reserve started buying mortgages and justifying their actions by warning of deflation.

You are free to extrapolate other conclusions for yourself. As real dollars change hands on the CPI and as the largest component of the CPI is calculated and not measured and as its variance plunged to less than 1% of its historic norm and as its probability of equivalence after a policy change plunged to less than 1% as well, analysts and traders both need to know whether they are living in the world of the real or in the world of the imagined.

The late Meyer Lansky always insisted his (then-illegal) casinos run a fair game. His logic was the odds so favored the house he had no need to cheat his customers; all he needed to do was make sure they came back often enough to lose all of their money.