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Energy Prices: In the Mix or Swept Under the Rug?

The Federal Open Market Committee (FOMC) has responsibility for the long-run inflation rate for the U.S. economy and therefore needs a reliable indicator of trend movements of inflation. Currently, the Committee focuses on the personal consumption expenditures (PCE) inflation rate—in particular, on the core rate. The core rate excludes food and energy, two components that, since 2000, together account for approximately 18 percent of the index, about 13 percent food and 5 percent energy. Policymakers generally consider the energy component, in particular, to be too volatile to inform their month-to-month deliberations. But is it a good idea to exclude prices that are, after all, faced by consumers, when trying to read movements in trend inflation?

A trend inflation indicator that is often used is PCE inflation measured from one year earlier. The chart shows inflation rate data since 2000. Pictured are the inflation rates for the PCE, the core PCE, and the energy component of the PCE. The chart indicates that the energy component is quite volatile, as expected. If the core PCE concept is valid, the energy component should be sometimes above and sometimes below the PCE inflation rate, as it was in 2001 and 2002. In this situation, the core concept removes a volatile component and gives the Committee a better indicator of trend inflation movements.

However, the data since 2003 show a persistent divergence in the overall and core PCE inflation rates, as the inflation in the energy component has remained high. For this time period, excluding energy prices simply amounts to putting zero weight on the prices that are increasing at the most rapid rate. Accordingly, the chart indicates that the core PCE inflation rate has averaged about 1.94 percent per year, while the PCE has averaged 2.56 percent during this period. One could interpret this as a sustained understatement of the true trend inflation rate, rendering the core measure a misleading trend inflation indicator for policymakers.

The problem is this: Instead of simply being volatile, energy prices moved to a higher level and have remained at the higher level. That means that the relative price of energy has increased more or less continuously for the past several years. Given our relatively inelastic demand for energy, at least in the short run, all of us consumers were forced to spend more on energy and less on all other goods. From this source we expect downward pressure on the prices of all non-energy goods and services. Once the relative price change is complete, we would expect energy prices to be volatile around their new, higher level, but again grow at the same rate on average as the prices of all other goods. As the chart indicates, during the transition toward a higher relative price of energy there was a sustained gap between the overall and core PCE inflation rates. We conclude that excluding energy prices may not be a good idea during a period of relative price change.

—James B. Bullard and Geetanjali Pande