Inflation

BY AARON STEELMAN

Most people have a general idea of what inflation means: a rise in prices. But the issue can get confusing when you move to specifics, because inflation is measured in so many different ways. Three of the most common measures are examined below.

Consumer Price Index

When you hear a news item about inflation, chances are the reporter is talking about the Consumer Price Index (CPI). The CPI tracks the change in prices paid by urban consumers for a market basket of goods and services. That basket is made up of more than 200 categories, arranged into eight major groups: food and beverages, housing, apparel, transportation, medical care, recreation, education and communication, and other goods and services. The CPI also includes government-charged user fees (such as auto registration fees) and taxes that are directly related to the sale of a good or service (such as sales taxes).

More than 2 million workers are covered by collective bargaining arrangements that tie wage increases to the CPI. What's more, the CPI is used to adjust tax brackets and transfer payments, such as Social Security.

The prices of certain items within the CPI basket tend to change more than others. The "core CPI" is an attempt to control for that problem. It excludes food and energy, because their prices are often volatile on a month-to-month basis. The core CPI usually gives a better measure of where inflation is headed in the near future.

Recently, the CPI has been criticized for overstating inflation, for a variety of technical reasons. Consider the problem of "quality bias." "New and improved products often cost more because of their enhanced features. In theory, however, such improvements should not count as a net price increase to the consumer," writes Kevin Kliesen of the St. Louis Fed. "Examples that improve living standards include new medical procedures and more energy-efficient central air conditioners. While difficult, accounting for this quality change is nevertheless necessary." The Bureau of Labor Statistics (BLS), which compiles inflation figures and reams of other economic data, is refining the way it estimates the CPI in response to such criticisms.

ILLUSTRATION BY TIMOTHY COOK

Producer Price Index

While the CPI measures the prices paid by the consumer, after production is complete and the item is ready for sale, the Producer Price Indexes (PPIs) measure prices earlier in the process, when companies are buying the materials they need to make finished products.

PPIs are available for more than 10,000 individual items and are frequently used as the basis for contract escalator clauses. For instance, a long-term contract for bread could be indexed to account for changes in the PPI for wheat.

"Seasonally adjusted" PPI and CPI numbers are also available. According to the BLS, seasonal adjustment is a statistical technique that "eliminates the influences of weather, holidays, the opening and closing of schools, and other recurring seasonal events from economic time series. This permits easier observation and analysis of cyclical, trend, and other nonseasonal movements in the data. By eliminating seasonal fluctuations, the series becomes smoother and it is easier to compare data from month to month."

Personal Consumption Expenditures Price Index

The Department of Commerce's Bureau of Economic Analysis compiles the Personal Consumption Expenditures Price Index (PCEPI). The PCEPI differs from the CPI in important ways. First, the formula it uses for combining component prices is known to better approximate true changes in standards of living. Second, it tracks the prices of several items that are completely left out of the CPI. Third, it assigns different weights to certain categories of goods and services. For example, in 1996, physician expenses amounted to roughly 3.77 percent of the total spending that falls within the scope of the PCEPI, but just 1.89 percent of the CPI market basket. Finally, the PCEPI takes into account "substitution effects" — that is, when consumers replace one product with a lower-priced alternative, over time the weights on those products shift accordingly. The weights in the CPI, in contrast, remain fixed for years at a time.

The CPI and the PCEPI often track fairly closely. But in a recent paper, Dennis Fixler and Ted Jaditz of the BLS note that there have been "several periods where the differences between the two inflation rates is large." For instance, CPI inflation was 2.4 percent from December 2001 to December 2002, while inflation as measured by the PCEPI was 2 percent over the same period.

The PCEPI hasn't replaced the CPI as the inflation measure of choice. But it's increasingly popular with economists and policymakers. **RF**