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PPI versus CPI Inflation

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In November and December of 2002, the producer price index (PPI) declined unexpectedly, contributing to concerns about deflation. In November, the PPI for finished goods fell 0.4 percent. In December, although analysts expected a 0.3 percent increase, it was unchanged. In each of these months the core PPI (that is, the PPI excluding food and energy) surprised analysts by falling 0.3 percent.

Should we be concerned about declines in the PPI as a possible harbinger of economy-wide deflation? The chart, which presents a long-run perspective on the consumer price index (CPI) and the PPI, includes four price measures that are indexed to one in January 1967: (i) the PPI, (ii) the all-item CPI, and (iii) the services and (iv) goods components of the CPI. Since at least 1980, services prices have tended to rise relative to goods prices. In just the past five years, the services component of the CPI has increased at an average rate of 3.2 percent per year, while the goods component has increased at only a 1.1 percent rate.

Why have goods prices risen so much more slowly than services prices? The answer, as shown by the data, is tremendous advances in technology and productivity in goods production. For example, the PPI component for electronic computers and computer equipment has fallen an average of 12.3 percent per year for the past five years. Computer prices are expected to decline far into the future, and no one thinks that this is a sign of deflation. Rather, it is a sign of technological advances and cost saving in computer manufacturing.

The average price changes for the eight major components of the CPI have been widely dispersed in the past five years. The food component of the CPI increased at an average rate of 2.2 percent—which is close to the all-item CPI inflation rate (2.3 percent). Four components had lower average price increases than the all-item CPI: apparel (–1.6 percent), transportation (1.5 percent), recreation (1.3 percent), and education and communications (1.8 percent). The fall in electronic equipment prices has helped moderate the relative rise in communications prices. Three components had higher average price increases than the all-item CPI: housing (2.8 percent), medical care (4.1 percent), and the "other" category (5.0 percent). The "other" category includes tobacco products and personal care services.

We should not be too concerned about price declines in the PPI (or any subset of the CPI basket) as long as the broad price indexes such as the CPI are stable. If CPI inflation remains at about 2 percent per year, then recent trends suggest that the PPI will increase at a rate of about 1 percent. Similarly, CPI inflation would have to be below 1 percent before we would expect to see ongoing price declines in the goods sector. ■

Price Indexes