October 1999

National Economic Trends

THE FEDERAL RESERVE BANK of ST. LOUIS

Forecasting CPI Inflation

Consumer price indexes that exclude the volatile food and energy sectors are commonly reported in the financial press as core inflation. Food and energy sectors are particularly susceptible to large supply shocks that sometimes cause the overall price index to reflect the transitory effects of supply shocks, rather than the underlying monetary inflation rate. Of course, supply shocks can affect other sectors as well. Bryan and Cecchetti (1994) have generalized the process of removing large—possibly transitory—price shocks by calculating the core inflation rate as the median CPI inflation rate.[1] As one might expect, the volatile food and energy sectors are rarely found to be the median, while the large and relatively stable housing component often is.

Bryan and Cecchetti used statistical models to show that the median CPI has been a relatively good predictor of future CPI inflation, especially in periods when the trend rate of inflation was changing slowly, if at all. Forecasters should be wary of median CPI as a predictor, however, in periods when monetary policy is likely to bring about a change in the trend rate of inflation. To demonstrate this, consider median CPI and the subsequent trend behavior of inflation in two episodes, 1986 and 1997-98.

In 1986, oil prices fell sharply, and the all-items CPI increased at an annual rate of only 1.2 percent. During this period, the Federal Reserve and other government officials frequently reminded people that this low inflation was a temporary effect of the oil price decline. In particular, Federal Reserve policymakers did not suggest that monetary policy actions would sustain the lower rate of inflation. The accompanying chart shows that median CPI was a good predictor of future inflation in this episode.

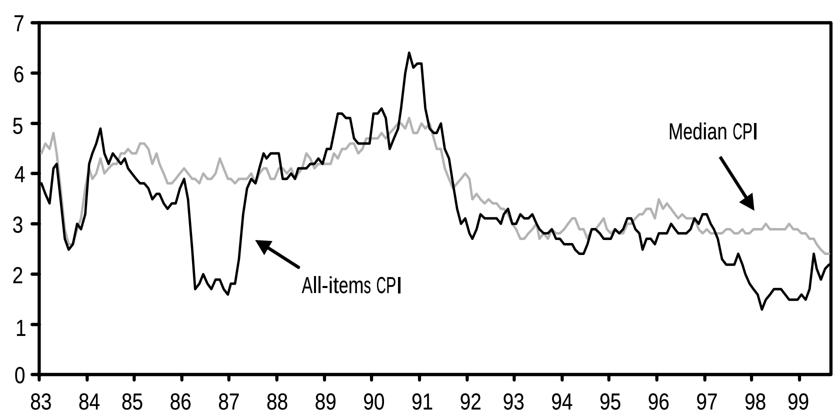
In 1997 and 1998, median CPI also exceeded the all-items CPI inflation. The all-items CPI inflation rate fell to around 1.5 percent each year, while the median CPI inflation rate hovered at 3 percent. Once again, falling oil prices contributed to the decline in the all-items CPI inflation. This time, however, monetary policymakers indicated their determination to bring about a reduction in the trend rate of inflation, as seen in their statements in favor of price stability and their own forecasts of 2 to 2.25 percent inflation. Consequently, the initial 3 percent median CPI inflation rate proved to be an overstatement of the subsequent inflation rate of the all-items CPI, as shown in the chart. The lesson is that forecasters need to pay attention to the intentions and actions of policymakers, as well as to measures of the prevailing trend rate of inflation.

—William T. Gavin

[1] Bryan, Michael F., and Stephen G. Cecchetti. "Measuring Core Inflation," in *Monetary Policy*, Mankiw, Gregory, ed. University of Chicago Press (1994), pp. 195-215.

CPI and Median CPI Inflation

(12-month average of annualized percent changes)



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