

MONETARY POLICY INSIGHTS
POLICY FOCUS



DOES THE FED FOCUS ON CORE OR HEADLINE INFLATION?

Several recent commentaries have argued that the Fed responds to headline inflation rather than core inflation. We disagree with this view. The Fed focuses on core inflation, because it provides a better proxy for underlying inflation trends in the economy. This perspective is what presumably prompted the FOMC to begin showing core PCE inflation in its semi-annual forecasts in the Monetary Policy Report. Moreover, estimates of monetary policy rules indicate that core inflation has been an important determinant of monetary policy decisions during Greenspan's tenure, and that headline inflation has had no identifiable effect on the funds rate.

Several recent commentaries have argued that the Federal Reserve responds to headline inflation rather than core inflation. An editorial in yesterday's Wall Street Journal went as far to argue that the Fed suffers from "energy illusion," in that the only way to explain movements in the federal funds rate in recent years is to assume that the FOMC has (inappropriately) reacted to changes in headline inflation driven by swings in oil prices.¹ The editorial went on to say that it is "difficult to discover any coherent relationship" between the funds rate and core measures of inflation. We disagree completely with these arguments.

The Federal Reserve views core inflation as a better indicator of underlying inflation trends in the economy. Core inflation captures the influence of labor costs and other persistent inflationary forces that the Committee attempts to offset through its setting of monetary policy. By contrast, the Committee generally "looks through" movements in headline inflation, because those movements are often seen as transitory. In fact, when there is an increase in headline inflation due to energy prices, the Fed's inflationary concerns are usually limited to the possibility of "second round" effects—that is, the possibility that higher readings on headline inflation will affect wage and price setting behavior in a way that could result in a persistent effect on core inflation.

This is not to say that movements in headline inflation associated with energy price movements are irrelevant. The deviation between headline and core inflation can be taken as a proxy for the effects of energy prices on spending power, and these effects can play an important role in shaping the forecast for economic growth. In addition, as mentioned above, energy prices could have some pass-through effects on core inflation. The point we are making is that the Fed does not simply respond to headline inflation in the same manner that it responds to core inflation, as suggested by the recent commentaries.

¹ See the editorial "The Fed's Crude Policy" that appeared on page A14.

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The Fed's focus on core inflation measures is evident in several dimensions. First, the Committee last year decided to switch from showing overall PCE inflation to core PCE inflation in its semi-annual forecasts included in the Monetary Policy Report. Presumably, this decision was made to provide the markets with more information about the inflation measure that is most relevant for policy decisions.

In addition, the staff uses core inflation in much of the analysis that it regularly provides the Committee. Two notable examples come to mind. First, in estimating the neutral real funds rate, the staff computes the real funds rate using core PCE inflation. Second, the staff computes predictions from estimated policy rules, or equations that attempt to explain the level of the funds rate based on variables such as resource slack and inflation (as in the Taylor rule). In those rules, the staff uses core PCE inflation.

The decision to use core inflation in its estimates of monetary policy rules reflects the staff's judgment that it is the appropriate measure of inflation to which the FOMC should respond. A finding that it enters the rule significantly would indicate that, in fact, the Committee has responded to core inflation. We can check the significance of core inflation by estimating our own version of the Taylor rule. The results are as follows:

$$i_t^{ff} = 0.75 - 2.10 \cdot (u_t - u_t^*) + 1.67 \cdot \pi_t^{core}$$

(1.39) (-11.55) (11.55)

where i_t^{ff} is the federal funds rate, $(u_t - u_t^*)$ is the unemployment gap, or the difference between the unemployment rate and our estimate of NAIRU, and π_t^{core} is core CPI inflation over the past year.² The equation is estimated using quarterly data since 1987. As can be seen from the t-statistics (in parentheses), both the unemployment gap and core inflation have very significant effects on the funds rate over the sample.

To see if the FOMC reacts to headline inflation, we can add this measure to the policy rule and estimate its coefficient. The results are as follows:

$$i_t^{ff} = 0.82 - 2.13 \cdot (u_t - u_t^*) + 1.78 \cdot \pi_t^{core} - 0.12 \cdot \pi_t^{overall}$$

(1.44) (-11.14) (6.15) (-0.40)

where $\pi_t^{overall}$ is headline CPI inflation over the past year. As can be seen, the coefficient on headline inflation has the wrong sign (Fed eases when inflation is high) and is not statistically significant (indicated by the small t-statistic). We take these results as evidence that it is core inflation, rather than headline inflation, that drives monetary policy decisions. That is, we reach exactly the opposite conclusion as the WSJ editorial: there is a strong statistical relationship between core inflation and the funds rate, and no relationship between headline inflation and the funds rate.

² We use CPI inflation rather than PCE inflation in part because it is included in our forecast.

CORE OR HEADLINE INFLATION?



The path of monetary policy going forward will be significantly influenced by the evolution of inflation. In this regard, the relevant measure is core inflation. It is core inflation that the FOMC will be watching, and hence that we all should be watching as well. At this point, it is not clear whether core inflation is moderating and will remain well within the comfort zone, or whether it is moving up towards the upper end of the comfort zone. The outcome that emerges will be an important factor shaping the FOMC's decision of when to slow or stop the tightening process.