

August 28, 2008

Monitoring the inflation bees, striving not to get stung

As pure blogging fodder, [Willem Buiter's Jackson Hole "advice"](#) to the Fed is a gift that keeps on giving. From Buiter's paper:

"It has not always been clear whether the Fed actually targets core inflation or whether it targets headline inflation in the medium term and treats core inflation as the best predictor of medium-term inflation."

As luck would have it, our boss (Federal Reserve Bank of Atlanta President Dennis Lockhart) had [a few words](#) to say on exactly that topic yesterday:

"Attempts to measure the aggregate rate of price change—no matter how sophisticated—remain imperfect. As a result, when it comes to measuring inflation, judgment is needed to distinguish persistent price movements that underlie overall inflation from the relative price adjustments. Separating the inflation signal from noise involves much uncertainty—especially when making decisions in real time. Discerning accurately the underlying trend is difficult."

The difficulty of precisely "separating the inflation signal from the noise" is not a new problem. In fact, this difficulty can be traced at least as far back as the development of index numbers to measure economic aggregates—and aggregate inflation in particular—by the famous economist [Irving Fisher](#). Fisher struggled with the idea of being able to separate out the general movement in prices from the relative price disturbances:

"It would be idle to expect a uniform movement in prices as to expect a uniform movement for bees in a swarm. On the other hand, it would be as idle to deny the existence of a general movement of prices ... as to deny a general movement of a swarm of bees because the individual bees have different movements."

The distinction between the direction of the swarm and the individual bees is an important one that is the direct path to discussions of measures of "core" inflation. The conceptual issues were nicely articulated in [a recent article by Dallas Fed economist Mark Wynne](#), and they go something like this: Suppose we thought of the percent changes in prices of individual goods and services between two periods as containing a common component (core) and price changes that are unique to the supply and demand conditions of a particular products markets. The object of our desire (the honey if you like) is the level and direction of the common component. The problem is how to measure it.

In his commentary on the "will-o'-the-wisp of 'core' inflation," Professor Buiter decides on a selective concept of core:

"The only measure of core inflation I shall discuss *is the one used by the Fed*, that is the inflation rate of the standard headline CPI or PCE deflator excluding food and energy prices. Other approaches to measuring core inflation... will not be considered."

We added the emphasis because we want to contrast that comment with these words from President Lockhart's speech:

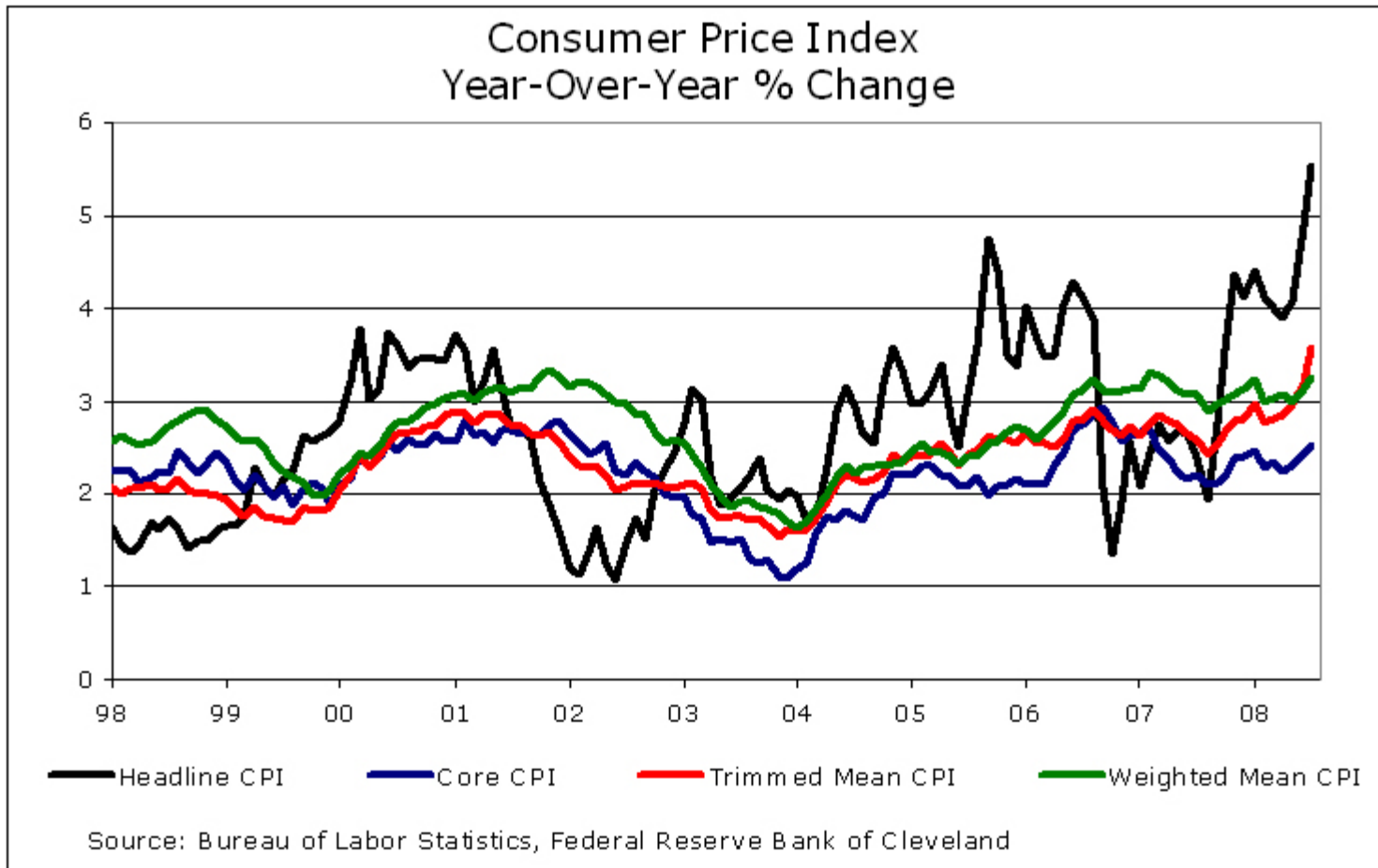
"It is essential for those of us who have responsibility for responding to these trends to use a wide variety of core measures and inflation projections to make the most informed judgment we can."

The variety of core measures is in fact wide. Some are familiar—the traditional statistics that exclude food and energy prices, [the Cleveland Fed median CPI](#), and [the Dallas Fed trimmed-mean PCE](#) are examples. Some important, but less familiar, measures focus on persistence over time in individual price changes and exploit correlation over time in the common and product-specific components. Work by [Michael Bryan and Steven Cecchetti](#) and [Domenico Giannone and Tyler Matheson](#) are examples. An alternative approach is to define core inflation by decomposing headline inflation measures into permanent and transitory components, identifying core inflation as the permanent component. Examples include research by [Jim Nason](#) and [James Stock and Mark Watson](#).

[Michael Kiley just recently extended the Stock and Watson approach](#) and found the common trend in inflation during the 1970s and early 1980s was attributable to persistent movements in both energy/food and nonenergy/food prices. More recently, that trend has

been less influenced by food and energy inflation.

Maybe that isn't all good news. It is noteworthy that the traditional measures of underlying trend inflation have moved higher over the past year or so, some more than others.



As President Lockhart noted at several points in his remarks yesterday:

“No matter how you measure it, the aggregate inflation we are experiencing in the United States at the moment is uncomfortably high...

“Measures of core inflation in the United States suggest that overall price pressures have been on the rise, perhaps because higher commodities costs have begun to affect prices paid by consumers and businesses across a broader range of other goods and services...

“I'm acutely aware that the current FOMC has inherited the inflation policy credibility that was hard won by our predecessors. One thing that has impressed me since taking my position last year is the seriousness with which my colleagues approach the duty to protect that legacy. I am confident that the Federal Reserve's institutional commitment to maintaining low and stable inflation will prevail.”

Professor Buiter raised several theoretical challenges to the core inflation concept that deserve discussion. It really is time, however, to lay to rest the straw-man assertion that central bankers are diverted by a pursuit of single and overly simplistic notions of core inflation.

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