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## Commentary

Market Opinions and Topics of Interest

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### What Is Taylor-Rule Neutrality For The Federal Funds Rate?

*Using these lower estimates of inflation and the real GDP values that I just cited gives a benchmark interest rate about a percentage point above the current level. However, it seems reasonable under current circumstances to make a further adjustment for the unusual interest rate spreads that currently exist in the money market. As I explain later in this testimony, recent research and experience in the money markets suggests an additional adjustment, but this would still imply an interest rate target above current levels in my view. John Taylor's Feb. 26 [Testimony before the House of Representatives](#)*

*The latest economic projections, which were submitted in conjunction with the FOMC meeting at the end of January and which are based on each participant's assessment of appropriate monetary policy, show that real GDP was expected to grow only sluggishly in the next few quarters and that the unemployment rate was seen as likely to increase somewhat. In particular, the central tendency of the projections was for real GDP to grow between 1.3 percent and 2.0 percent in 2008, down from 2-1/2 percent to 2-3/4 percent projected in our report last July. Bernanke's Feb. 27 [Testimony before Congress](#)*

As noted in a recent [Market Facts](#), both the binary options market and the federal funds futures market are expecting **at least** a 50 basis point **cut** at the March 18 FOMC meeting. However, as the first quote above points out, Stanford economist John Taylor, creator of the Taylor Rule, believes the current federal funds rate is already too low relative to the neutral rate. The explanation for this divergence in opinion between the Taylor Rule and the federal funds market is simple: These are not normal times for the Federal Reserve. Its primary mandate is to preserve the integrity of the banking system and act as a lender of last resort. It has acted accordingly in the face of the credit crunch.

Where should a neutral federal funds rate be? The Taylor Rule offers an objective standard to answer this question.

#### Taylor Rule Construction

Taylor assumed a neutral real policy rate of 4%, composed of a 2% neutral inflation rate and a 2% neutral real short rate. This is denoted as  $r_{\text{Neutral}}$  in the equation to the right.

The most important components in the Taylor Rule are potential GDP and potential inflation. While both are calculated by many Wall Street firms, we will use the **Congressional Budget Office** (CBO) measure. An "inflation gap" is calculated by comparing actual readings to the potential level. An "output gap" is

calculated by comparing actual readings to potential GDP. Both gaps are multiplied by a coefficient of 0.5 and summed to produce the Taylor neutral rate per below:

$$\text{Taylor Rule Rate} = r_{\text{Neutral}} + 0.5(\text{Inflation Gap}) + 0.5(\text{Output Gap})$$

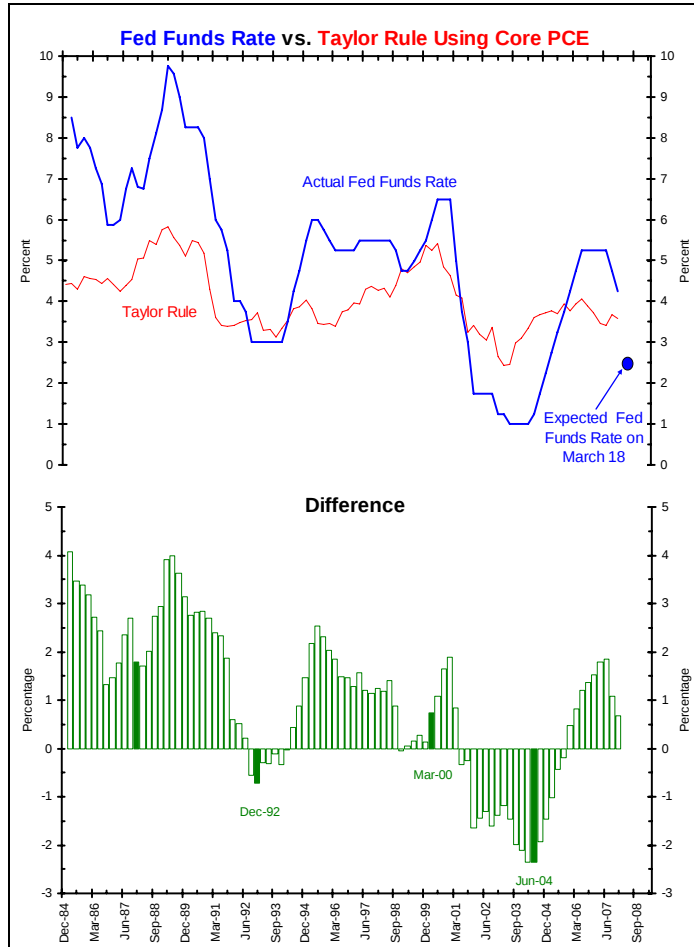
The CBO estimates potential GDP is running 110 basis points above actual GDP, meaning this part of the calculation subtracts 55 basis points from the federal funds target since the economy still has some spare capacity. Measured inflation has moved higher in recent quarters, thanks in large part to rising energy prices. Core PCE is 24 basis points above the preferred rate at present, meaning this part of the calculation adds 12 basis points to the target funds rate as inflation is running slightly higher than the preferred rate.

**Using these variables and assumptions, the Taylor rule suggests the funds rate should be 3.57%, derived as  $[4.00\% + 0.5(-1.10) + 0.5(0.24)]$ .**

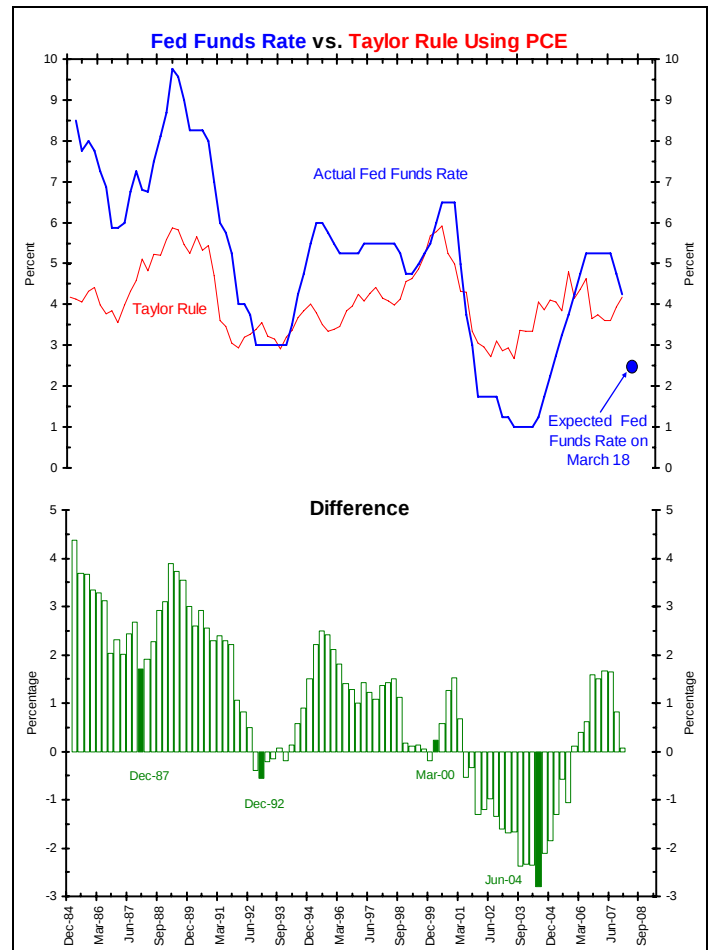
#### Taylor Rule Using PCE vs. Core PCE

The inflation gap component of the Taylor Rule often accounts for most of the differences between various interpretations of the model. It is useful, therefore, to compare iterations of the Taylor Rule using core and headline PCE readings as the measure of inflation.

The first chart below shows the actual federal funds rate in blue versus the **Core PCE-derived** Taylor Rule in red. The bottom panel of this chart shows the degree to which the Federal Reserve is accommodative or restrictive. Through December 2007, the latest GDP release, this measure showed the actual funds rate to be 68 basis points above the Taylor Rule's recommended policy rate. The cumulative cuts of 125 basis points since December and the likelihood of an additional cut of at least 50 basis points in March are likely to push the target federal funds rate well below Taylor neutrality once first quarter GDP data are released.



The next chart shows the actual federal funds rate in blue versus the **PCE-derived** Taylor Rule in red. The bottom panel of this chart shows the degree to which the Federal Reserve is accommodative or restrictive. Through December 2007, the latest GDP release, this measure showed the actual target federal funds rate to be 6 basis points above the Taylor neutrality. Per the comments above, we expect to see the actual target federal funds rate dip below Taylor neutrality once March GDP data are released.



### Conclusion

John Taylor says that while the funds rate is below neutral, one must adjust this for the credit/money market problems. Others like [Pimco](#) agree.

However, this does not square with the Federal Reserve's forecast. As the second quote at the beginning of this commentary shows, the Federal Reserve expects below-average growth now and above-average growth later this year. If correct, this would mean the FOMC is way too accommodative and running inflationary policy. This is certainly the market's worry.

In fact, we might be in a rare period where the Federal Reserve must be hoping their official forecast is wrong. If not, they will have a serious inflation problem. As Milton Friedman taught us, inflation is everywhere and always a monetary phenomenon.

Given that everyone is making these endless adjustments to Taylor's concept of neutral, while ignoring official forecasts and market worries about inflation, we remain with zero transparency and no idea where the funds rate will bottom.

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