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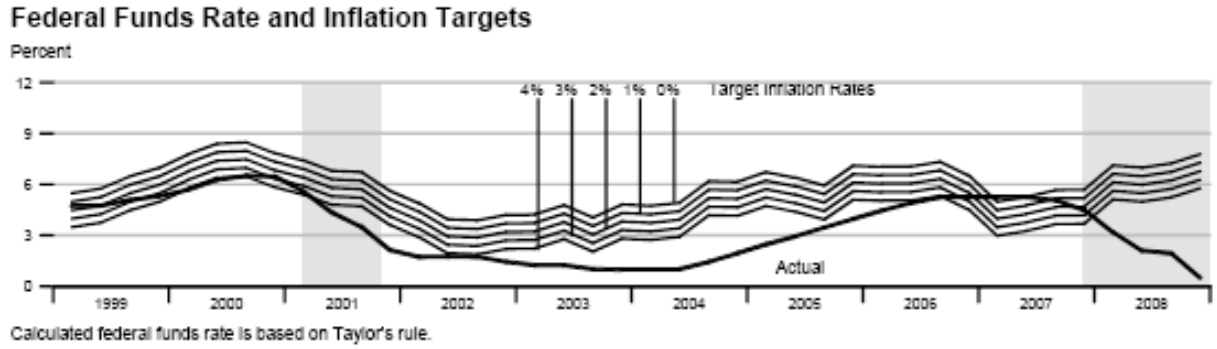
Inflation, the Taylor Rule, Real Time Issues

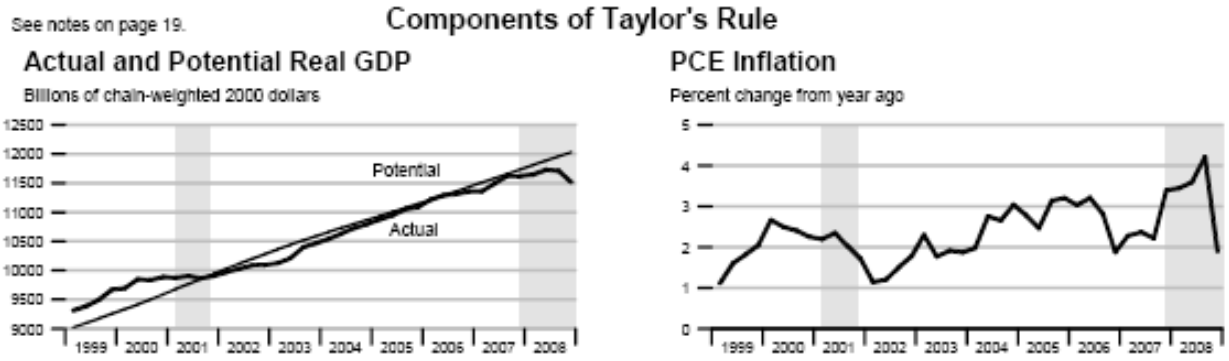
Page 10: **Federal Funds Rate and Inflation Targets** shows the observed federal funds rate, quarterly, and the level of the funds rate implied by applying Taylor's (1993) equation

$$f_t^* = 2.5 + \pi_{t-1} + (\pi_{t-1} - \pi^*)/2 + 100 \times (y_{t-1} - y_{t-1}^P)/2$$

to five alternative target inflation rates, $\pi^* = 0, 1, 2, 3, 4$ percent, where f_t^* is the implied federal funds rate, π_{t-1} is the previous period's inflation rate (PCE) measured on a year-over-year basis, y_{t-1} is the log of the previous period's level of real gross domestic product (GDP), and y_{t-1}^P is the log of an estimate of the previous period's level of potential output. **Potential Real GDP** is as estimated by the Congressional Budget Office.

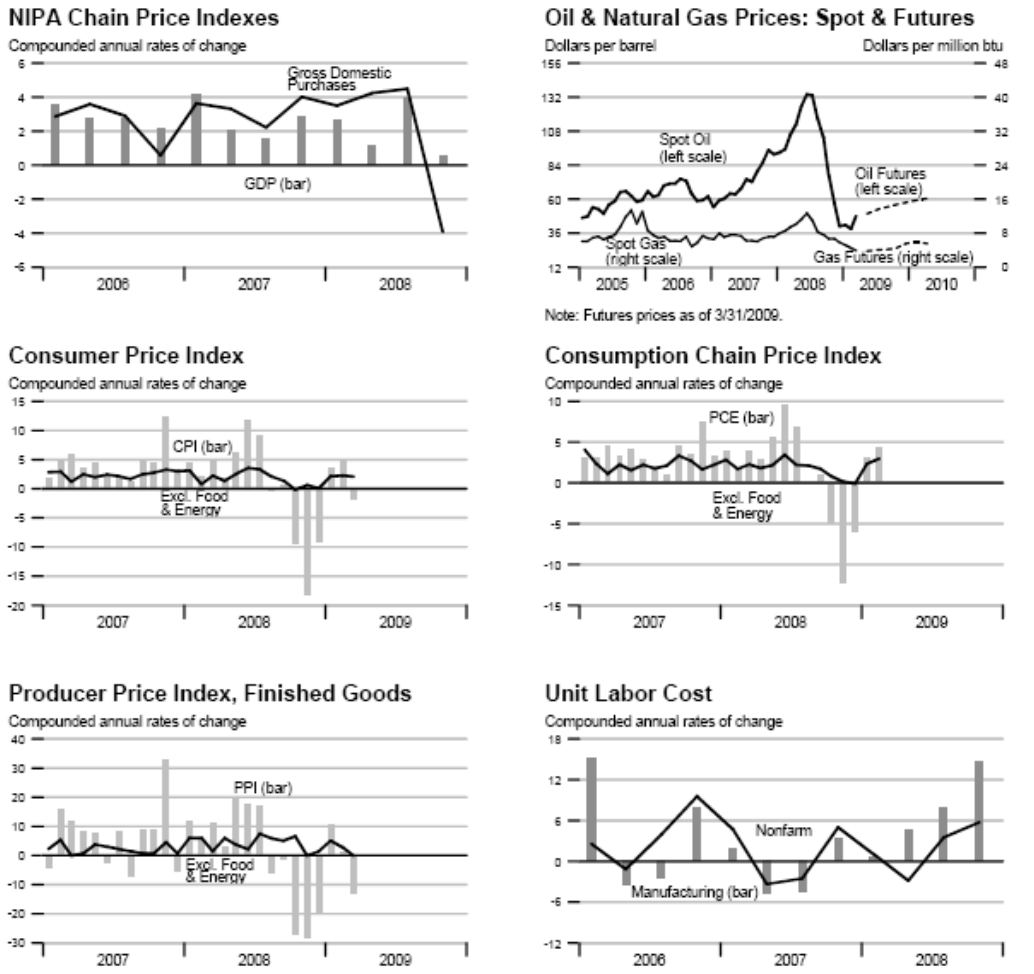


See notes on page 19.



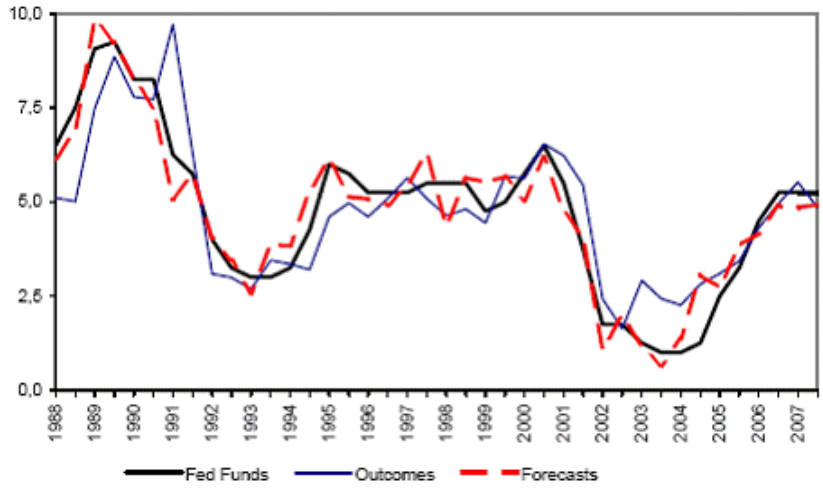
From St. Louis Fed, *Monetary Trends*, April 2009

http://research.stlouisfed.org/publications/mt/



From St. Louis Fed, *National Economic Trends*, April 2009. http://research.stlouisfed.org/publications/net/

What about real time data? This is what the Fed's Greenbook (dashed) says should've been the Fed Funds rate vs. the ex post data available in 2007 (solid thin line).



Actual path of fed funds rate (black line), path predicted by a Taylor Rule that uses actual values of PCE inflation and GDP (blue line), and path predicted by a Taylor Rule that uses forecasts of inflation and GDP (red line). Source: Figure 6, Orphanides and Wieland (2007). http://research.stlouisfed.org/conferences/policyconf/papers2007/Orphanides_Wieland.pdf