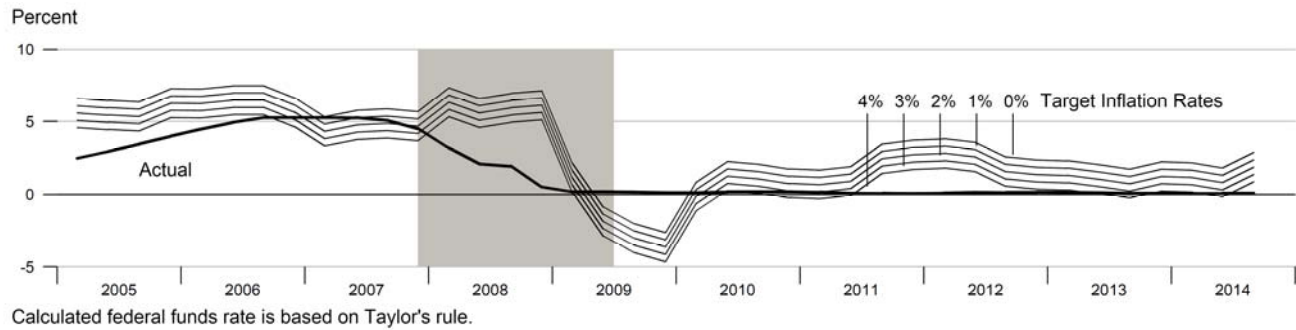


### Taylor Rules

$$i_t^{FedFunds} = \pi_t + \beta(y_t - y_t^*) + \delta(\pi_t - \pi_t^*) + r_t^*$$

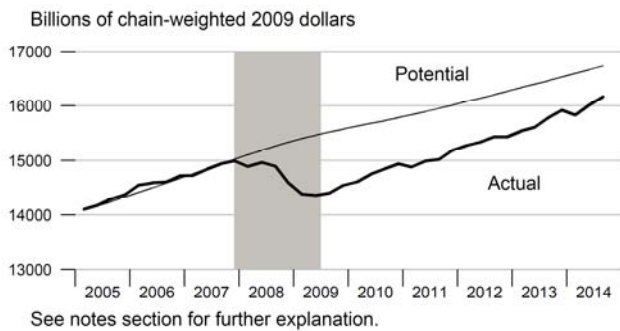
$$i_t^{FedFunds} = (1 + \delta)\pi_t + \beta(y_t - y_t^*) + r_t^* - \delta\pi_t^*$$

### Federal Funds Rate and Inflation Targets

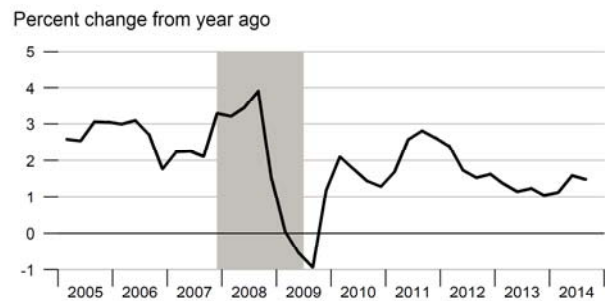


### Components of Taylor's Rule

#### Actual and Potential Real GDP



#### PCE Inflation



Source: St. Louis Fed, *Monetary Trends*. December 2012 <http://research.stlouisfed.org/publications/mt/page10.pdf>

*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,  $\pi_{t-1}$  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 estimated by the Congressional Budget Office (CBO).

Figure 1  
Federal funds, unemployment, and inflation rates  
Percent

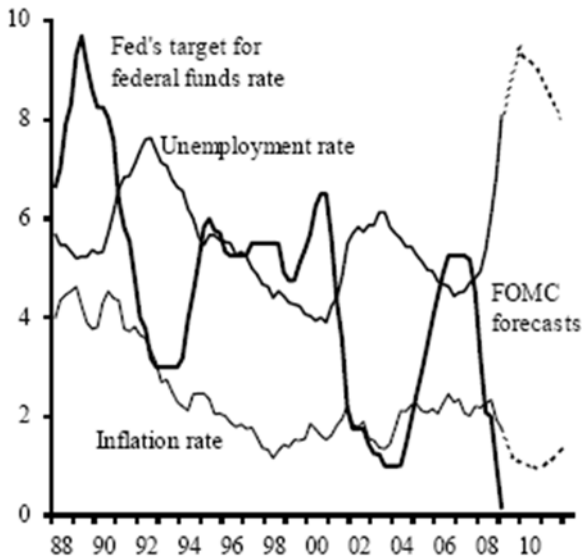
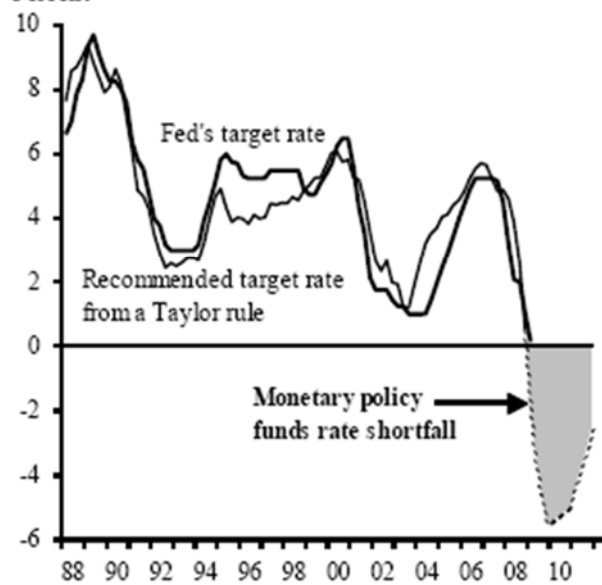


Figure 2  
Federal funds rate  
Percent



Source: Rudebusch (2009)

$$i_t^{FedFunds} = \pi_t - 2(u_t - u_t^*) + 0.3(\pi_t - \pi_t^*) + r_t^*$$

## Baseline Taylor Rule Estimates of the Fed Funds Rate (1987-2012)



Source: Bloomberg; {TAYL <go>}