

TAYLOR, J.: "Discretion versus policy rules  
in practice" (C.R., 93,

$$r = p + .5y + .5(p - 2) + 2 \quad (1)$$

where

$r$  is the federal funds rate,  
 $p$  is the rate of inflation over the previous four quarters  
 $y$  is the percent deviation of real GDP from a target.

That is,

$y = 100(Y - Y^*)/Y^*$  where  
 $Y$  is real GDP, and  
 $Y^*$  is trend real GDP (equals 2.2 percent per year from  
1984.1 through 1992.3).

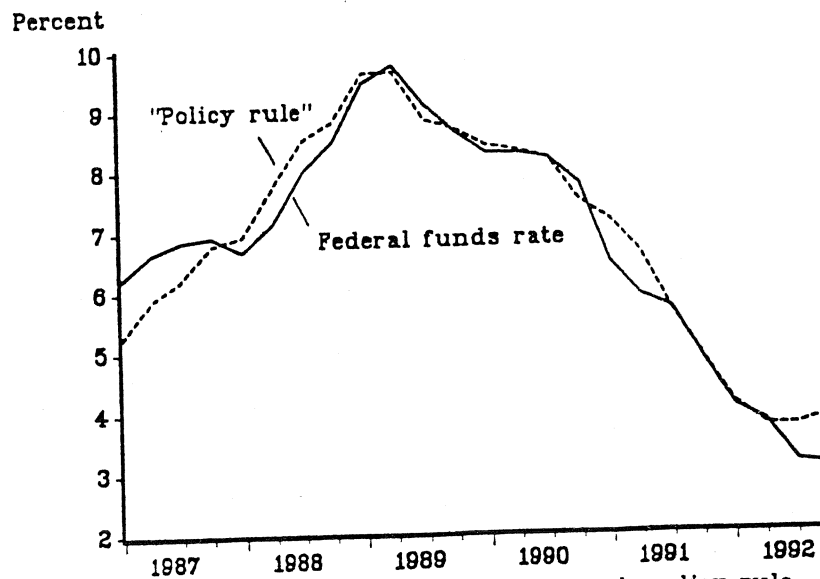
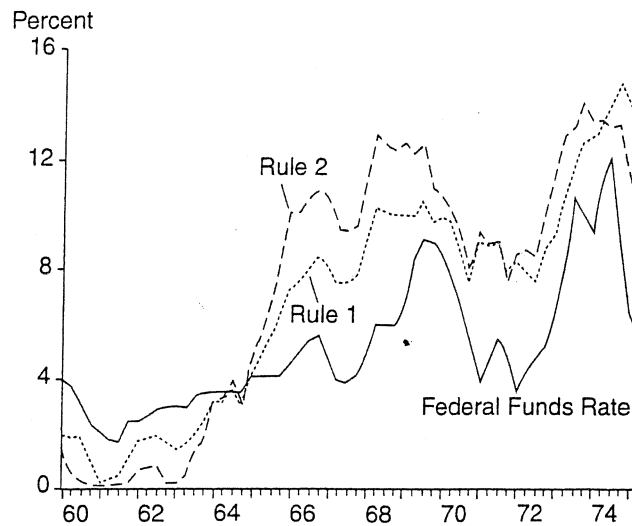
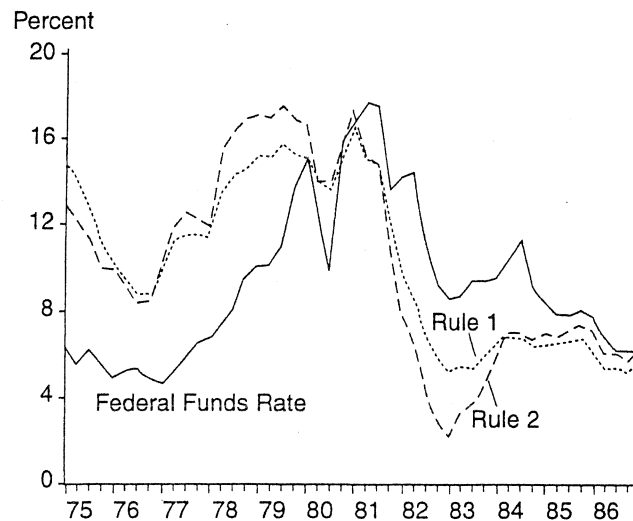


Figure 1. Federal funds rate and example policy rule.

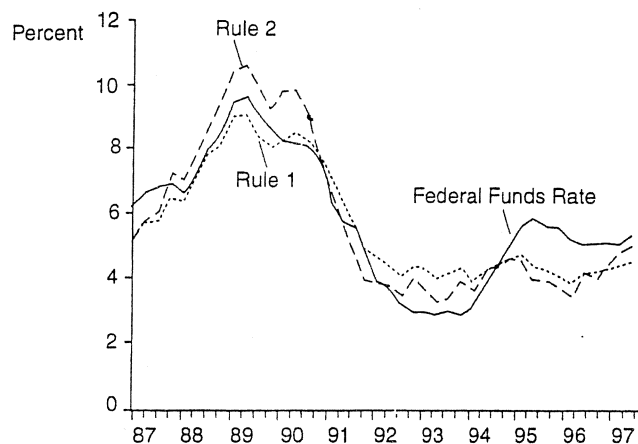


**Fig. 7.4** Federal funds rate: too high in the early 1960s; too low in the late 1960s

Note: Rules 1 and 2 are given by the monetary policy rule in eq. (1) with  $g = 0.5$  and  $1.0$ , respectively.



**Fig. 7.5** Federal funds rate: too low in the 1970s; on track in 1979–81; too high in 1982–84



**Fig. 7.6** Federal funds rate: on track in the late 1980s and 1990s

TABLE II  
BASELINE ESTIMATES

	$\pi^*$	$\beta$	$\gamma$	$\rho$	$p$
Pre-Volcker	4.24 (1.09)	0.83 (0.07)	0.27 (0.08)	0.68 (0.05)	0.834
Volcker-Greenspan	3.58 (0.50)	2.15 (0.40)	0.93 (0.42)	0.79 (0.04)	0.316

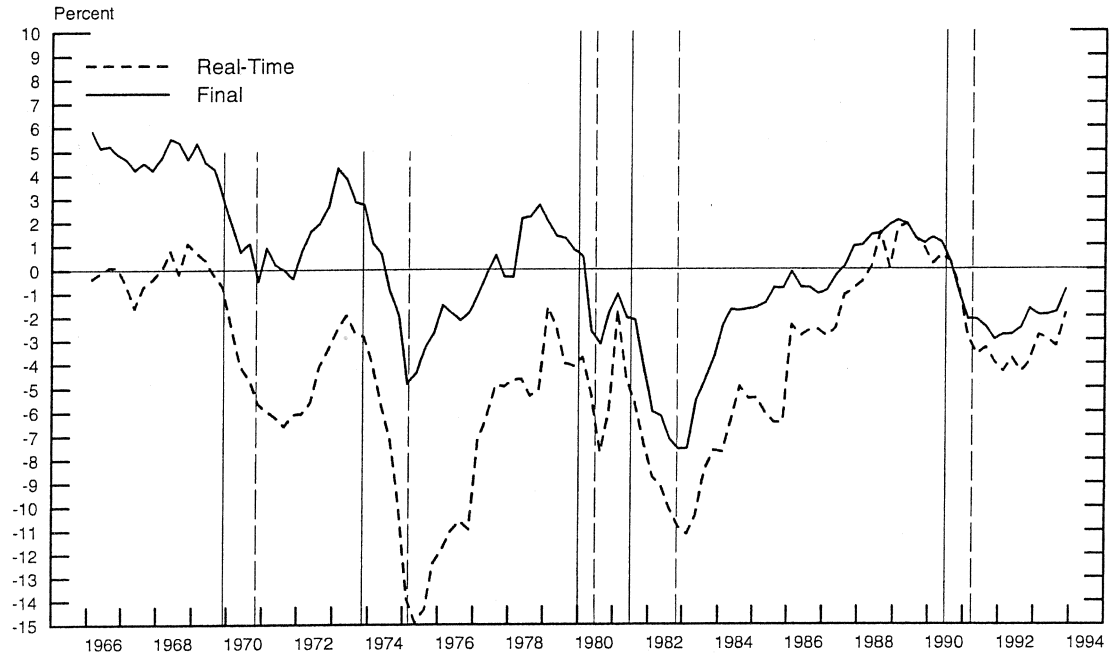
Standard errors reported in brackets. The set of instruments includes four lags of inflation, output gap, the federal funds rate, the short-long spread, and commodity price inflation.

TABLE III  
ALTERNATIVE VARIABLES

	$\pi^*$	$\beta$	$\gamma$	$\rho$	$p$
<b>Detrended Output</b>					
<i>Pre-Volcker</i>	4.17 (0.68)	0.75 (0.07)	0.29 (0.08)	0.67 (0.05)	0.801
<i>Volcker-Greenspan</i>	4.52 (0.58)	1.97 (0.32)	0.55 (0.30)	0.76 (0.05)	0.289
<b>Unemployment Rate</b>					
<i>Pre-Volcker</i>	3.80 (0.87)	0.84 (0.05)	0.60 (0.11)	0.63 (0.04)	0.635
<i>Volcker-Greenspan</i>	4.42 (0.44)	2.01 (0.28)	0.56 (0.41)	0.73 (0.05)	0.308
<b>CPI</b>					
<i>Pre-Volcker</i>	4.56 (0.53)	0.68 (0.06)	0.28 (0.08)	0.65 (0.05)	0.431
<i>Volcker-Greenspan</i>	3.47 (0.79)	2.14 (0.52)	1.49 (0.87)	0.88 (0.03)	0.138

Standard errors reported in brackets. The set of instruments includes four lags of inflation, output gap, the federal funds rate, the short-long spread, and commodity price inflation.

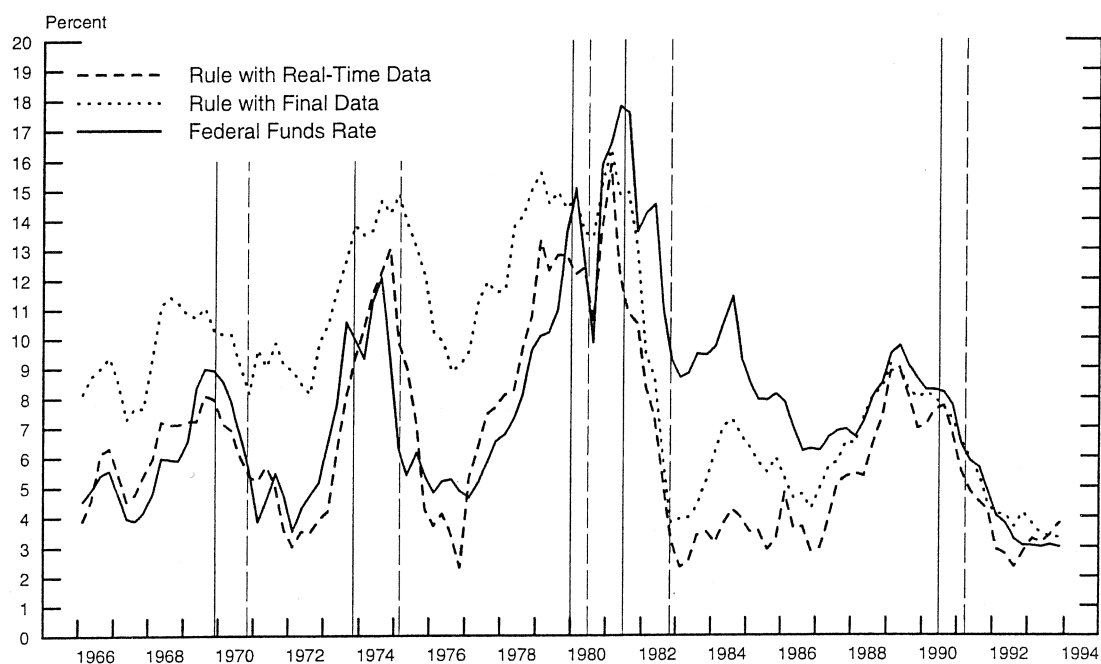
Figure 4  
The Output Gap in Real-Time and Final Data



Notes: The output gap is the difference between real output and potential output, measured as a fraction of potential output using seasonally adjusted quarterly data. Real-time data reflect information as of the middle of the quarter shown. Final data reflect historical information with data available at the end of 1994. The solid and dashed vertical lines denote NBER business cycle peaks and troughs, respectively.

Figure 9

Then and Now  
Taylor Rule with Final and Real-Time Data



Notes: For each quarter, the dashed line shows the Taylor rule prescription based on data available in real-time. The dotted line shows the corresponding prescriptions with data available at the end of 1994. The solid line reflects the actual federal funds rate. The solid and dashed vertical lines denote NBER business cycle peaks and troughs, respectively.

Table 1  
Estimated policy rules

	$\theta_0$	$\theta_i$	$\theta_\pi$	$\theta_{\Delta y}$	$\theta_y$	<i>see</i>
<i>Greenbook forecasts</i>						
1969:1–1997:4	−0.42 (0.29)	0.88 (0.04)	0.44 (0.10)	0.27 (0.10)	0.14 (0.03)	1.04
1969:1–1979:2	0.53 (0.92)	0.75 (0.14)	0.44 (0.12)	0.14 (0.15)	0.19 (0.04)	0.95
1982:3–1997:4	−0.33 (0.32)	0.81 (0.06)	0.52 (0.13)	0.51 (0.17)	0.10 (0.03)	0.56
<i>Survey forecasts</i>						
1969:1–2002:4	−0.51 (0.22)	0.84 (0.05)	0.55 (0.12)	0.36 (0.13)	0.17 (0.03)	0.96
1969:1–1979:2	0.74 (1.28)	0.91 (0.29)	0.25 (0.16)	0.32 (0.35)	0.21 (0.05)	0.99
1982:3–2002:4	−0.66 (0.21)	0.83 (0.05)	0.58 (0.09)	0.53 (0.11)	0.16 (0.03)	0.49

Notes: Least-squares estimates of

$$i_t = \theta_0 + \theta_i i_{t-1} + \theta_\pi \pi_{t+3}^a + \theta_{\Delta y} \Delta^a y_{t+3} + \theta_y y_{t-1},$$

where  $\pi_{t+3}^a = p_{t+3} - p_{t-1}$ ,  $y_{t-1} = q_{t-1} - q_{t-1}^*$  and  $\Delta^a y_{t+3} = y_{t+3} - y_{t-1} = \Delta^a q_{t+3} - \Delta^a q_{t+3}^*$ . All variables dated  $t$  and later reflect real-time forecasts formed during quarter  $t$ . HAC standard errors in parentheses.