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- . 1997. “Comment: America’s Peacetime Inflation.” In *Reducing Inflation: Motivation and Strategy*, edited by Christina Romer and David Romer, chapter 6. Chicago: University of Chicago Press.
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Comment Bennett T. McCallum

I enjoyed this chapter by Andrew Levin and John Taylor very much. I started studying economics in the early to mid-1960s, about the time that Levin and Taylor date the beginning of the Great Inflation, and moved into monetary economics as the inflation progressed. I recall discussing Volcker’s announcement of October 6, 1979 with Allan Meltzer during a visit to Carnegie-Mellon just a week or so later. And I recall a telephone conversation with Marvin Goodfriend (at the Richmond Fed) during the summer of 1981 at a time at which the Federal Reserve was trying to decide whether to let the M1 growth rate climb back into its official target range, after finally getting it down to about 2 percent per annum.

Anyhow, the account given by Levin and Taylor rings true. More specifically, I think they are correct to redate the Great Inflation (GI) away from the “1970s” label, although I believe most of us have understood that to be the case, with the label used just as a shorthand. They date the episode as 1965 to 1980. A look at the data (see table 4C.1) shows that M1 growth rates were significantly higher after 1964 than before, so their start date seems about right.¹ Stating that the GI “ended in late 1980” seems a bit inadequate, however. The interest easing in spring 1980 came about after the imposition of credit controls, against the Fed’s wishes, which precipitated a truly sharp fall in output. To me it was the tight money over the first two-thirds of 1981 that was crucial—the tightness shows up, by the way, in M1 growth figures when “adjusted” values used by the Fed at the time are taken into account. (Mine come from Broaddus and Goodfriend 1984.)

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1. It is also the case, though not documented here, that monetary base growth rates show a distinct increase around 1964.

Table 4C.1 Selected statistics, percentages (average or changes)

Year or average over	CPI infl.		Fed funds rate	"Real" funds rate	M1 growth rate	Adj. MI growth: AB&MG (1984)	Unemployment rate
	Dec. to Dec.	Dec. to Dec.					
1960-1964	1.2		2.9	1.7	2.8		5.7
1965-1969	3.9		5.4	1.5	5.0		3.8
1970-1974	6.7		7.1	0.4	6.1		5.4
1975	6.9		5.8	-1.1	4.7		8.5
1976	4.9		5.0	0.1	6.7	5.8	7.7
1977	6.7		5.5	-1.2	8.0	7.9	7.1
1978	9.0		7.9	-1.1	8.0	7.2	6.1
1979	13.3		11.2	-2.1	6.9	6.8	5.8
1980	12.5		13.4	0.9	7.0	6.9	7.1
1981	8.9		16.4	7.5	6.9	2.4	7.6
1982	3.8		12.3	8.5	8.7	9.0	9.7
1983	3.8		9.1	5.3	9.8	10.3	9.6
1984	3.9		10.2	6.3	5.8	5.2	7.5
1985-1989	3.7		7.8	4.1	7.7		6.2

Source: McCallum (2008). "AB&MG (1984)" refers to Broadus and Goodfriend (1984) in the reference list.

In this chapter, Levin and Taylor make two analytical claims that will be contested by some participants. First, they dispute the idea that the GI can be attributed to mismeasurement of the output gap. Second, by arguing that there was not a single regime in place during the relevant years, they in effect deny the idea—associated with Clarida, Galí, and Gertler (2000) and Taylor (1999)—that the problem was “instability” resulting from an interest rate rule that does not satisfy the Taylor principle. Here I think that their “shifting inflation target” hypothesis could perhaps be represented as one hyper-rule that does fail to satisfy the Taylor principle. In that case, the conclusion (as is now fairly well known) is that the difficulty is the non-learnability of either of the two stable rational expectations (RE) solutions (McCallum 2003).

A major feature of the Levin and Taylor analysis is their figure 4.6, which is a Taylor-rule type of diagram, with differing inflation targets for different periods, and with the rule expressed as a real-rate rule (using the Livingston measure for expected inflation). My reading of this plot shows actual rates being fairly consistent with a Taylor rule with target inflation $\pi^* = 5$ over 1966 to 1975 (except for 1969 to 1970) and with $\pi^* = 8$ over 1977 to 1980. That is slightly different from their stop-start episodes, but is also different from a maintained Taylor rule with $\pi^* = 1$ or 2 percent, and more different at the end of 1965 to 1980. I do not disagree basically with their characterization of policy, except that I would give even more emphasis to the idea that the Fed was simply not taking responsibility for inflation control. Of course, there were many academics in the 1960s (and early 1970s) who thought of several other topics, rather than monetary policy, when discussing inflation.

Levin and Taylor’s use of real-rate versions of the Taylor rule is useful, but does not give a drastically different conclusion than a nominal-rate comparison between rule and actual values, as in Taylor (1999). This type of comparison continues, I believe, to be valuable. In that regard, it is interesting to compare the messages of four different rules discussed in McCallum (2000). These rules are as follows:

- (1)
$$R_t = \bar{r} + \Delta p_t^a + 0.5(\Delta p_t^a - \pi^*) + 0.5\tilde{y}_{t-1}$$
- (2)
$$\Delta b_t = \Delta x^* - \Delta v_t^a + 0.5(\Delta x^* - \Delta x_{t-1})$$
- (3)
$$R_t = \bar{r} + \Delta p_t^a - 0.5(\Delta x^* - \Delta x_{t-1})$$
- (4)
$$\Delta b_t = \Delta x^* - \Delta v_t^a - 0.5h_{t-1}.$$

The data used reflects annualized percentages, 1960:Q1 to 1998:Q4. The variables are: $R = \text{FFR}$, $x = \log \text{GDP}$, $y = \log \text{real GDP (linked)}$, $p = x - y$, $v = x - m$, $\Delta p_t^a = \text{average of past four quarters}$, $\Delta v_t^a = \text{average of past sixteen quarters}$, \tilde{y}_t is Hodrick-Prescott cycle component, $\pi^* = 2$, $\bar{r} = 2$, $\Delta x^* = 5$, h in (4) is the composite target defined in (1) (see figure 4C.1). Here the picture

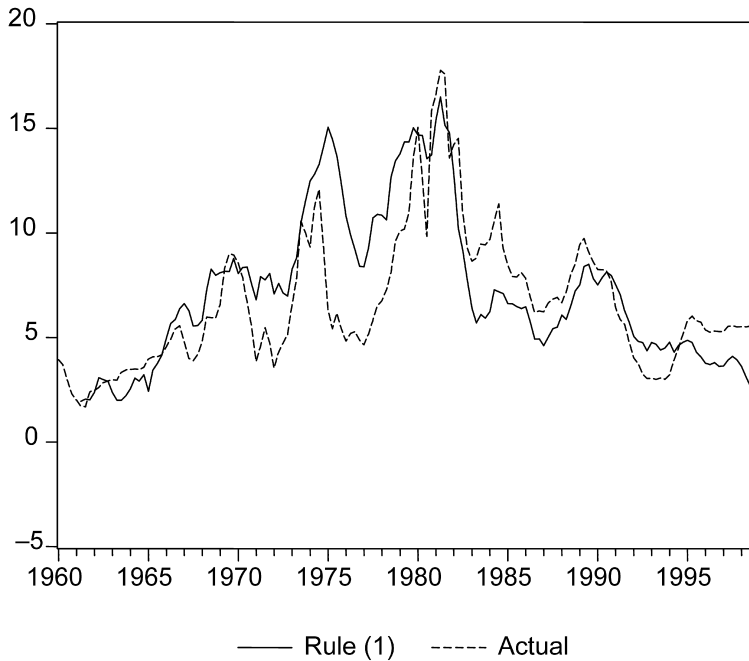


Fig. 4C.1 US interest rates, actual and implied by rule (1)

suggests that the federal funds rate was below the Taylor-rule prescription for almost every quarter during 1966 to 1980, much of the time by 300 basis points. Some critics of this historical approach complain that the rule (1) plot does not show the values that would have been obtained if the rule had been followed. That is true; to predict these would require adoption of a specific model and a simulation. But the plot clearly indicates that actual policy was such as to permit inflation.

Next, let's look at an analogous plot for rule (2), figure 4C.2, with a base-growth instrument and nominal GDP growth target. Here actual base growth is higher than specified by the rule continuously over 1961 to 1980. Units are comparable, so the message is even stronger.

In the next graph, figure 4C.3, I use the base-growth instrument and the Taylor-style target variable. Again the plot's message is stronger than with rule (1) while the rule's instrument setting is less choppy.

In figure 4C.4, we consider the interest rate instrument and Δx_t target variable. This rule would not have signaled inflationary policy over 1972 to 1974.

In the foregoing four-way comparison, the clearest signals come from the two rules with base-growth instruments. Is it counterintuitive that the instrument variable would appear more important than the target variable? My interpretation is that different instruments require different auxiliary

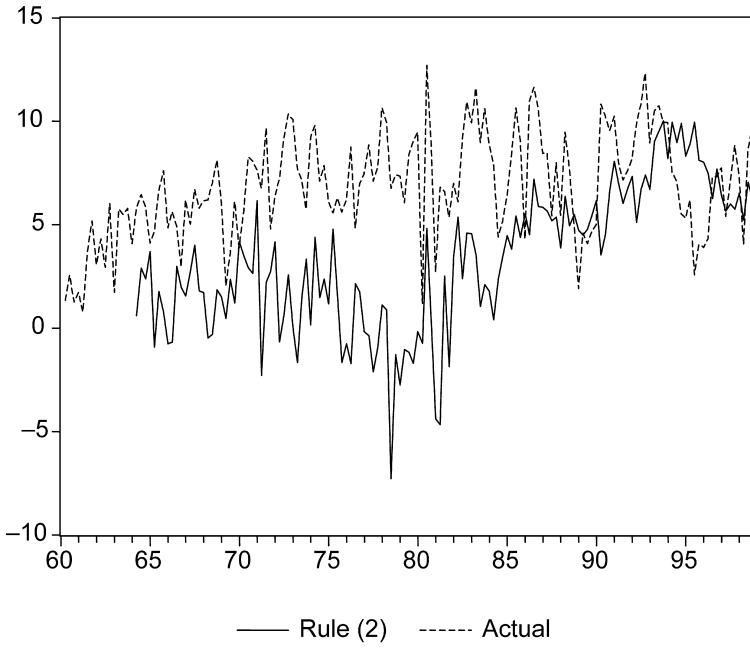


Fig. 4C.2 US base growth, actual and rule (2)

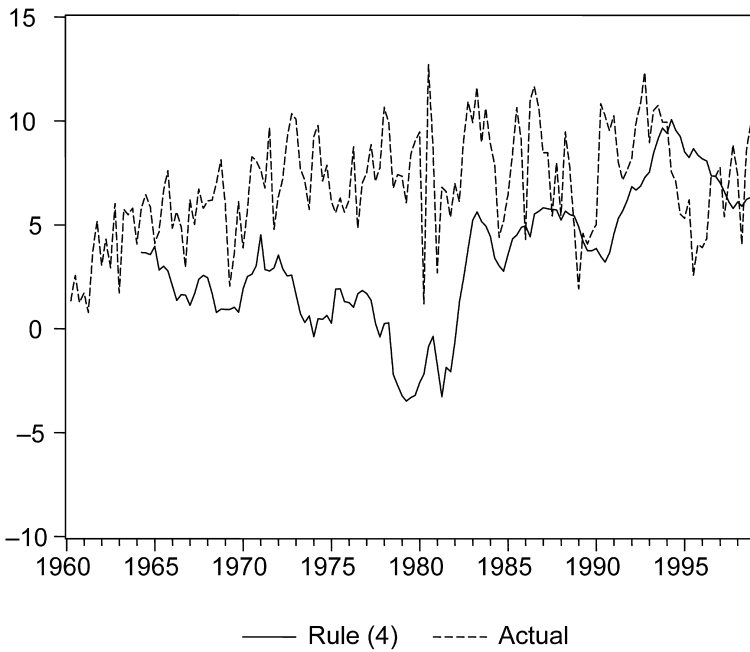


Fig. 4C.3 US base growth, actual and rule (4)

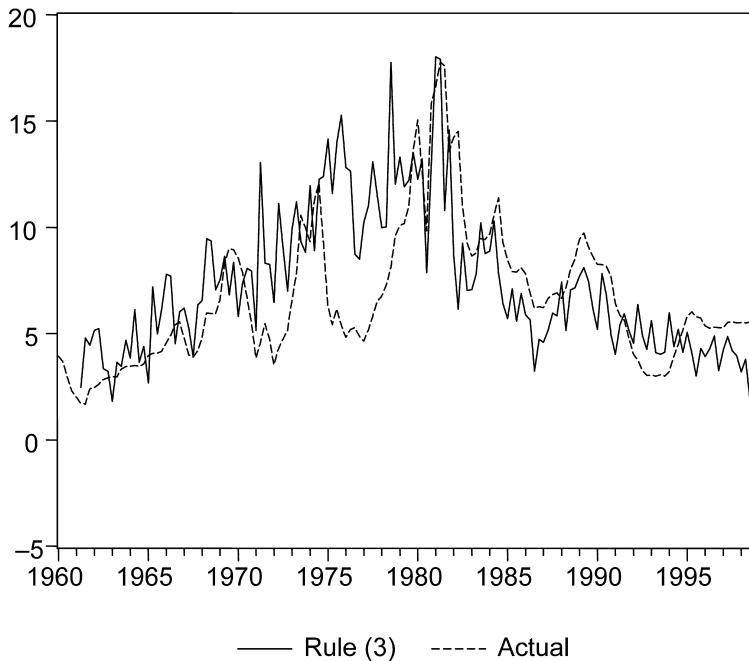


Fig. 4C.4 US interest rate, actual and rule (3)

assumptions: a constant value for \bar{r} in R_t rules as compared with use of Δv_t^a as an implicit forecast of future Δv_t in Δb_t rules.

In any event, three of these four rules would have called for considerably tighter monetary policy over the period studied and the fourth (rule 3) would have called for tighter policy most of the time. Accordingly, the results of this examination are certainly consistent with Levin and Taylor's punch line, namely, that "the risk of a recurrence of the Great Inflation—as well as other costly policy choices—could be addressed through the use of simple rules as benchmarks for the conduct of monetary policy."

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Discussion

Christina Romer felt the need to emphasize that the authors are rediscovering the wheel of the Great Inflation starting in 1965. Any story that stresses money or ideas cites the 1960s as the onset of the Great Inflation. Romer also took issue with the role of credibility and unanchoring of expectations. There is a mystery of why inflation expectations did not take off until 1976 or 1977. In 1974 and 1975, Chairman Arthur Burns ran tight monetary policy in a recession, so it makes sense that people’s expectations did not become uninged. Romer’s last point dealt with the natural rate mismeasurement. The natural rate was computed wrong for a reason. It was a symptom of the bad ideas, most importantly the idea that monetary policy was not effective. Matthew Shapiro added that one of the reasons the gap estimates were so crazy and were often ignored by some at the Federal Reserve was due to the atmospherics. Chairman Burns often referred to estimates as the “so-called natural rate.”

Edward Nelson was not sympathetic to the idea that Chairman Burns was much better than Chairman G. William Miller. The idea that Chairman Miller should be held responsible for the period 1978 to 1979 is premised on the idea that monetary policy works on inflation immediately, which is not how the process is seen in inflation-targeting regimes. Both Burns and Miller attributed poor inflation outcomes in the late 1970s to special factors such as exchange rate depreciation. The idea that monetary policy loosened dramatically under Miller is just unfounded. On the contrary, he raised nominal and real interest rates quite a bit. If you believe that monetary policy actions take over a year to have a substantial effect on inflation, then you can blame the rise in inflation in 1978 to 1979 on Chairman Burns, not Chairman Miller, and you can attribute the decline in inflation from 1980 onward partially to the actions of Chairman Miller.

Jeremy Rudd made two small points. First, if you look at the statistical properties of the Livingston Survey, inflation expectations take off in 1972. If you do a regression of changes in the survey expectations on changes in actual inflation and its lags, however, there is no relationship between these variables from 1964 to 1972. Inflation expectations do trend up, but it is not until the end of 1972 that there begins to be a recognizable relationship