Naming the Taylor Rule!

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DISCRETION VERSUS POLICY RULES IN PRACTICE

by
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Actual Fed Funds Rate and Taylor Rule Prescriptions

<table>
<thead>
<tr>
<th>Inflation Target Measures:</th>
<th>Alternative 1</th>
<th>Alternative 2</th>
<th>Alternative 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Natural Real Interest Rate Measures</td>
<td>2PercentInflation</td>
<td>2PercentInflation</td>
<td>2PercentInflation</td>
</tr>
<tr>
<td>Resource Gap Measures:</td>
<td>U3gapFOMC</td>
<td>U3gapFOMC</td>
<td>CBOGDPgap</td>
</tr>
<tr>
<td>Inflation Measures:</td>
<td>CorePCEInflation</td>
<td>CorePCEInflation</td>
<td>CorePCEInflation</td>
</tr>
<tr>
<td>Weight on Gap:</td>
<td>0.5</td>
<td>1</td>
<td>0.5</td>
</tr>
<tr>
<td>Interest Rate Smoothing:</td>
<td>0</td>
<td>0</td>
<td>0</td>
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</tbody>
</table>

Source: Atlanta Fed
At present, however, market participants increasingly are skeptical of the Fed’s prospective success. Despite the drop in inflation, the Fed’s primary task for more than four years has been accommodation. To many observers, therefore, the recent progress in reducing inflation does not reflect new Fed initiatives as much as other factors, including the Fed’s tightening during the late 1980s, unexpectedly slow growth abroad, contractionary U.S. fiscal policy, ongoing corporate restructuring, and the inability — or unwillingness — of U.S. banks to expand their balance sheets. Because these developments made it difficult to gauge the impact of monetary policy, some analysts argue that Fed policy was tighter than indicated using traditional measures and probably was tighter than the Fed had intended. Such skepticism has been encouraged, among other things, by a recent study indicating that until last year, the Fed’s policy actions were consistent with an implicit 2% inflation target, but that its failure to hike rates during the past year has called into question the stringency of the Fed’s policy goals.5

Testimony by

Alan Greenspan

Chairman

Board of Governors of the Federal Reserve System

before the

Joint Economic Committee

United States Congress

January 31, 1994

<table>
<thead>
<tr>
<th>FOMC Meeting Date</th>
<th>Rate Change (bps)</th>
<th>Federal Funds Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feb. 1, 1995</td>
<td>+50</td>
<td>6.00%</td>
</tr>
<tr>
<td>Nov. 15, 1994</td>
<td>+75</td>
<td>5.50%</td>
</tr>
<tr>
<td>Aug. 16, 1994</td>
<td>+50</td>
<td>4.75%</td>
</tr>
<tr>
<td>May 17, 1994</td>
<td>+50</td>
<td>4.25%</td>
</tr>
<tr>
<td>April 18, 1994</td>
<td>+25</td>
<td>3.75%</td>
</tr>
<tr>
<td>March 22, 1994</td>
<td>+25</td>
<td>3.50%</td>
</tr>
<tr>
<td>Feb. 4, 1994</td>
<td>+25</td>
<td>3.25%</td>
</tr>
</tbody>
</table>

The monetary policy tightening cycle of 1994-1995 is commonly remembered as a rare instance of the Fed carrying out a so-called “soft landing” for the economy. Between February 1994 and February 1995, Greenspan led the FOMC to almost double the fed funds rate in just seven increases.

After a brief recession earlier in the decade, the U.S. economy was booming—GDP was +3.5% in 1992, +2.8% in 1993 and a whopping +4% in 1993. Back then, baby boomers were at the height of their careers, immigration was strong and new technology was transforming the economy.

With strong productivity rates keeping unemployment low, the Fed hiked into a strong economy. "The decision was taken to move toward a less accommodative stance in monetary policy in order to reduce the risk of inflationary pressure building in the economy,” said Greenspan. The Federal Open Market Committee (FOMC) had just increased rates by 25 basis points (bps) at its meeting last Tuesday, bringing the Fed Funds rate to 3.25%.
1994 A TERRIBLE YEAR FOR LONG-DURATION BONDS

By Paul G. Barr


Monetary Policy Update

Salomon Brothers

Policy Rules Shed New Light on Fed Stance

- The growing interest in developing formal monetary policy operating rules reflects earlier disenchantment with monetary targeting and a heightened desire to anchor policy decisions systematically to a goal of low inflation.
- Although Federal Reserve officials at present do not adhere to an explicitly rules-based procedure, a rules framework provides a useful context in which to analyze current monetary policy.
- Judged in a rules-based context, Fed policy in recent years has been aimed *de facto* at heading off rising inflation.
- Rule-based analysis bolsters the view that Fed policy moved to a restrictive stance in late 1994 despite the apparently low rates. This latest shift toward restraint was neither more nor less aggressive than previous efforts to curb inflation in the Volcker-Greenspan era.
Although arguments can be made against their use—for example, that monetary base velocity is variable and that interest rates are ambiguous—both monetary base growth and short-term interest rates can be manipulated by the Fed and therefore are acceptable instruments. Currently, M2 is not fully under the Fed’s control, thus its inclusion as a potential instrument is theoretical.1

Researchers have proposed a variety of targets, including money, inflation, real economic growth, and nominal income; however, a general consensus is emerging in favor of nominal income targeting.2 The recent breakdown in the money/output relationship has dampened interest in the money aggregates as targets.2 Although price targeting may seem appropriate to the long-term policy goal of lower inflation, critics contend that it could lead to unstable output. Hybrid rules, which target both inflation and real economic growth, attempt to stabilize both prices and output. Other rules target nominal income under the assumption that if nominal income growth is held steady and, on average, output growth remains stable, inflation also will be stabilized.

There are drawbacks to using either real or nominal output as targets. Primarily, income and output data with great lags to changes in policy instruments. Also, these statistics are released only quarterly and often are revised significantly. However, these drawbacks apply not just to the use of economic growth statistics in policymaking rules, but to their use in policymaking in general.

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1 M1 and M2 in the economy are not subject to monetary management, whereas the bank via policy can be aggregated to a database (e.g., M2 in the economy size) as an element of others. Furthermore, changes in economic growth on all M1 factors (e.g., money in the economy size) affect the economy size with the price of M1.

2 Fed and M2 are M2 targets.


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3
Researchers also debate the appropriate form of the feedback element — whether to target growth or levels. Level targeting may be too strict, while a growth rate target may allow for too much drift from the desired growth path. For example, a sharp, temporary increase in oil prices, like the one experienced at the onset of the Gulf War, would shift the level of prices higher, away from its target. The feedback element would suggest tighter policy to eliminate the gap between the actual and desired price level. However, if inflation, rather than the price level, were targeted, the rule would show a one-time shift.

Much empirical testing has been performed in an attempt to determine the most appropriate policy rule. These efforts simulate what economic history would have been like if a proposed rule had been followed. However, the results of these simulations are inconclusive. The debate has raised as many questions about the difficulties of economic modeling as it has about the potential usefulness of policy rules.

**POLICY RULES SHED LIGHT ON CURRENT POLICY**

Nonetheless, the literature provides a very useful perspective for policy watchers and market participants on the course of recent — as well as past — policy and its impact. Most notably, analyzing current policy from a rules perspective corroborates the following views: (1) that policy moved to a restrictive stance in the latter half of 1994 despite the apparent that interest rates were low; (2) that the forces motivating policymakers were quite transparent during the recent shift toward restraint, despite often heard criticisms that the Fed has been "lying by the seat of its pants;" and (3) that the recent tightening was neither more nor less aggressive than prior anti-inflationary efforts in the Volcker-Greenspan era. Our research has focused on three rules defined by their authors’ names: the Taylor rule, which ties the Fed funds rate to a hybrid inflation and output level target; the McCullum rule, which uses monetary base growth as the instrument and targets the nominal income level; and the Feld & Monkey rule, which calculates the change in short-term interest rates as a function of the difference between actual and targeted nominal income growth. We outline the specifics of these rules in the Appendix.

The forces driving recent Fed decisions are readily transparent when policy is judged in the context of rules. In particular, the path of the funds rate implied by the Taylor rule tracks the actual funds rate closely over most of the Greenspan era dating back to 1987 (see Figure 3). This result is not surprising because Taylor’s rule instructs the Fed to keep inflation trending down toward 2% while retaining some sensitivity to current economic conditions, parameters that capture the stated intentions of virtually all Fed officials.
TOO RICH A DIET? SALOMON HAD A BAD YEAR. YOU WOULDN'T KNOW IT FROM ITS EXECUTIVES' TAKE

By Brett D. Fromson
July 2, 1995

Salomon Brothers Inc.'s London-based trading department lost $400 million last year, but the executive in charge, managing director Stephen J.D. Broft, had reason to smile. His compensation for 2001 soared.