

Research Department  
Federal Reserve  
Bank of  
San Francisco

September 5, 1980

## In Pursuit of Money

Last October 6, the Federal Reserve made what was probably the greatest change in monetary policy since the Federal Reserve-Treasury Accord of 1951, when the Fed broke loose from the Treasury dominance which had characterized the World War II and early postwar years. On October 6, 1979, the Fed announced that it was changing the basic way in which it conducts open-market policies—the buying and selling of Government securities—in the pursuit of its monetary objectives. The Fed described this basic change to Congress as follows:

“Previously the reserve supply had been more passively determined by what was needed to maintain, in any given short-run period, a level of short-term interest rates, in particular a level of the Federal-funds rate, that was considered consistent with longer-term money growth targets. Thus, the new procedures entail greater freedom for interest rates to change over the short-run in response to market forces.”

Many economists had argued that under previous operating procedures, monetary policy tended to amplify movements in real output (GNP), instead of moderating and stabilizing such cyclical swings as it should. To these critics, the policy shift (if successfully pursued) presaged a more stabilizing role for monetary policy. But the man in the street—and many financial analysts—remain dubious about the outcome of this policy shift. The greater stability in money-supply growth (if achieved) may seem too great a price for the increased variability in interest rates since last October. For that reason, it might be useful to examine the intellectual background of monetary-control rules and operating procedures. This means reviewing the previous criticism of the Fed's operating procedures, as well as the rules of thumb that economists have proposed for appropriate monetary policy.

### Critical legacy

According to the earlier critics, the Federal Reserve, by “targeting” or attempting to moderate interest-rate movements, had caused “procyclical” monetary growth. In this view, the Fed's attempts to prevent interest rates from rising too fast in a cyclical expansion caused the Fed to supply too many reserves to the banking system, and thus led to overly rapid money growth. Rapid money growth then led to unsustainable real growth—and in the long run, to greater inflation. Conversely, the Fed's attempts during a cyclical recession to prevent an over-rapid decline in interest rates generally led the Fed to expand reserves and money less rapidly than required to maintain reasonable real-output growth, and thus tended to worsen each economic downturn. In critics' eyes, then, the Fed inadvertently tended to amplify each business cycle instead of stabilizing it. Moreover, its mistaken policies eventually led to more rather than less inflation, and caused greater and not less peak-to-trough movements in interest rates.

With its previous interest-rate approach to control of monetary growth, the Fed attempted to influence the public's demand for money. Since money demand is inversely related to interest rates, this approach dictated an increase in interest rates (providing fewer reserves) when the Fed wanted to reduce money growth—and dictated a reduction in rates (making reserves more plentiful) when the Fed wanted to stimulate money growth. Under this approach, then, the supply of reserves to the banking system was determined residually, as the above quotation suggests. In other words, the Fed supplied whatever level of reserves that appeared consistent with its short-run interest-rate targets.

The Fed in the short run thus determined the monthly Fed-funds rate target, usually in terms of a range of about 50 to 100 basis points ( $\frac{1}{2}$  to 1 percentage points), while the

FEDERAL RESERVE BANK OF SAN FRANCISCO WEEKLY LETTER

Research Department  
Federal Reserve  
Bank of  
San Francisco

Opinions expressed in this newsletter do not necessarily reflect the views of the management of the Federal Reserve Bank of San Francisco, nor of the Board of Governors or the Federal Reserve System.

---

public's demand for money determined the supply of reserves. To many Fed critics, the October 6 policy move did not represent simply a choice of operating targets, as between the funds rate and bank reserves. Rather, it represented a vindication of their longstanding view that the economy can be better controlled with a monetary aggregate than with an interest-rate target.

#### **Choice of target**

Such critics thus welcomed the new control procedures which require Fed control over the supply of reserves. Finally, they said, the Fed has learned to let the marketplace determine interest rates. But does this by itself insure greater stability of the real economy? Most economists would probably answer yes. The real economy in recent years has been hit by a series of unexpected shocks—shocks affecting supply and demand conditions for goods and services. These shocks included the series of oil price increases of 1973-74 and 1979-80, as well as the sharp reduction in consumer saving in 1978-79. These "real shocks" are best absorbed if the Fed concentrates its efforts on controlling the nominal quantity of money. If it instead attempts to control interest rates, the effect on the economy of these outside shocks could be amplified.

But this is not the entire story; the economy is also subject to "monetary shocks." In late 1974, for example, we witnessed a breakdown in the previously stable relationship between the aggregate demand for money, on the one hand, and income and interest rates, on the other. This development came about in part because of the growth of a variety of close "money substitutes," such as money-market mutual funds and thrift-institution NOW accounts. But it also re-

flected the tendency of high interest rates to discourage the holding of demand deposits and currency, the components of the narrowly defined (M-1) money supply. Nor did money growth show much stability this spring, when the M1-B money measure declined at a 14-percent annual rate in April but then grew at a 14½-percent rate in June.

With the economy subject to both "real" and "monetary" shocks, which is the most appropriate monetary-policy response—money-growth targeting or interest-rate targeting? Brown University Professor William Poole, writing in 1970, argued that if the real shocks are greater and less predictable than the monetary shocks, the Fed should respond by targeting the money supply—and in the reverse case, it should respond by targeting interest rates. In recent years, real shocks seem to have had the greater impact. Thus, in moving explicitly to control monetary growth via the supply side (bank reserves) rather than via the demand side (interest rates), the Fed is now in a better position to respond to shocks to the economy coming from the real side.

#### **Impact on the markets**

Since the adoption of the new control rule last October, U.S. financial markets have been rocked by unprecedented movements in interest rates. This volatility could be attributed in part to major shifts in expectations of inflation. But it could also be attributed to the Fed's desire to let financial markets determine the interest rates that equate the supply and demand for money and credit—rather than have the Fed determine interest rates and have the markets determine the levels of money and bank reserves. For example, the Fed's decision to let interest rates fall as the economy weakened this spring—instead of holding them up artificially—tended to cushion the decline in real output without jeopardizing the Fed's long-run anti-inflationary policy.

While greater interest-rate volatility could be expected on the basis of the change in Fed operating procedures, no one correctly anti-

anticipated the amount of volatility involved. The three-month Treasury-bill rate jumped from about 10 percent in September 1979 to more than 15 percent in March 1980, then plummeted to less than 8 percent in May, and finally rose to 10 percent again by late August. Again, these volatile interest-rate movements reflect more than just a change in Fed operating procedures. Nonetheless, they lend support to the *Business Week* contention that "analysts can no longer be confident that they know what the central bank is up to simply by watching the key Federal-funds rate."

There's no doubt that the change in operating procedures has created an educational problem for the Fed. It must first convince the public why the change occurred, and explain that interest rates no longer have the policy significance they once did. But just as important, it must convince the public that the new operating procedures can bring about greater control of the monetary aggregates.

**Control rule**

The Fed is encouraged to "stick to its guns" because of the growing perception that the public's economic behavior is sensitive to the "control rule" of the monetary authorities. In contrast, poorly understood changes in policy threaten to add disruptive uncertainty into the real economy. Indeed, substantial policy-rule changes could reduce our understanding of how the real economy operates, specifically through the mechanism of the econometric models which attempt to forecast and explain the behavior of our market economy. University of Chicago Professor Robert Lucas, Jr., has strongly criticized these econometric models, on the grounds that they fail to capture the basic changes induced by major policy changes in the "structure"—the behavioral relationships—of the U.S. economy. The Fed's policy change of last October thus may have changed our ability to understand how certain sectors of the economy will respond to monetary and fiscal stimuli.

A more recent case in point was the introduction and subsequent removal of the credit-

restraint program this spring. Economists are now puzzling over the effect that that program may have had on money demand and interest rates during the March-June period. This suggests that policy changes which are poorly understood by the public can create as many problems as they are intended to solve, and blur our understanding of how the private economy works.

On this subject, economists are in a new ball game. At this point, we have only a vague understanding of how economic behavior changes in response to the way economic policy is conducted. State-of-the-art econometric models assume that the private sector will respond to government stimuli in the same way it has in the past. But in a recent paper ("After Keynesian Economics"), Professor Lucas and Minnesota University Professor Thomas Sargent have attacked this assumption: "There is no reason, in our opinion, to believe that these (econometric) models have isolated structures which will remain invariant across the class of interventions that figure in contemporary discussions of economic policy."

The Federal Reserve policy change of last October 6 could be interpreted as having altered our understanding of how the private market economy interacts. For this reason, the Fed is under pressure to stick to its present operating procedures—targeting money supply rather than interest rates—so as to maximize their credibility with the private market. According to this view, the need for "credibility" on the part of the monetary authorities is not simply rhetoric, but is a means of insuring the structural stability of the private economy.

**Joseph Bisignano**

Research Department  
Federal Reserve  
Bank of  
San Francisco

Alaska • Nevada • Oregon • Utah • Washington  
California • Hawaii

**BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT**

(Dollar amounts in millions)

Selected Assets and Liabilities	Amount Outstanding	Change from	Change from			
			8/20/80	8/13/80	Dollar	Percent
<b>Large Commercial Banks</b>						
Loans (gross, adjusted) and investments*	138,115	- 7		6,719		5.1
Loans (gross, adjusted) — total#	116,437	- 43		7,983		7.4
Commercial and industrial	33,618	101		1,990		6.3
Real estate	47,214	127		7,307		18.3
Loans to individuals	23,577	27		652		2.8
Securities loans	888	- 97		- 1,038		- 53.9
U.S. Treasury securities*	6,290	48		- 1,278		- 16.9
Other securities*	15,388	- 12		14		0.1
Demand deposits — total#	43,587	- 246		1,280		3.0
Demand deposits — adjusted	31,537	- 297		896		2.9
Savings deposits — total	29,401	121		- 1,272		- 4.1
Time deposits — total#	62,589	375		10,190		19.4
Individuals, part. & corp.	54,400	361		10,370		23.6
(Large negotiable CD's)	23,369	437		4,443		23.5
<b>Weekly Averages of Daily Figures</b>	<b>Week ended</b>	<b>Week ended</b>	<b>Comparable</b>			
	<b>8/20/80</b>	<b>8/13/80</b>	<b>year-ago period</b>			
<b>Member Bank Reserve Position</b>						
Excess Reserves (+)/Deficiency (-)	41	- 57		11		
Borrowings	36	31		230		
Net free reserves (+)/Net borrowed(-)	5	- 88		- 219		

\* Excludes trading account securities.

# Includes items not shown separately.

Editorial comments may be addressed to the editor (William Burke) or to the author . . . Free copies of this and other Federal Reserve publications can be obtained by calling or writing the Public Information Section, Federal Reserve Bank of San Francisco, P.O. Box 7702, San Francisco 94120. Phone (415) 544-2184.