

September 3, 1982

Volatility in Money and Interest

Starting in the early 1970's, the Federal Reserve began to shift the focus of its monetary policy from the level of interest rates to control of the supply of money. This change was spurred primarily by the accumulation of much evidence linking inflation with excessive money growth. The Fed has achieved considerable success reducing the growth of the monetary aggregates on an annual basis since 1979, with the resultant benefit of a downward turn in the rate of inflation, but it has been less successful at controlling the supply of money over shorter periods of time.

Some of the Fed's critics, including leading monetarists like Milton Friedman and Allan Meltzer, have charged that variability in monetary growth contributes to uncertainty about inflation, high interest rates and the poor performance of the economy. But the Federal Reserve has countered that tight short-run monetary control could further increase the variability in interest rates and, besides, would not contribute measurably to economic stability.

The critical assumption in the Fed's argument is that short-run changes in the quantity of money represent differences in the underlying desire of the public to hold money, that is, changes in the demand for money. This view is often used by the Fed to justify accommodating rather than resisting deviations of the quantity of money from its target.

The alternative view posits that the observed changes in the quantity of money result from changes in the supply of money which do not necessarily correspond to changes in the demand for money. According to this view, the Fed should not accommodate money control deviations as often.

Accommodating demand

To illustrate why accommodating changes in money demand can be appropriate, assume that the public suddenly wanted to hold more

of its wealth in the form of money (at given levels of income and prices). If the Fed did not supply the extra money, interest rates would rise because the demand for money would have risen relative to the supply. The higher interest rates would exert a depressing effect on the economy, perhaps going as far as to cause a recession. To avoid this result, the Fed believes it must provide the additional money.

M1 growth between October 1981 and April 1982 provides a good example of accommodating perceived increases in money demand. In this period, M1 (the chief definition of money used by the Fed) grew relatively rapidly to a level above the upper boundary of its annual target range. This growth was thought mainly to reflect the desire of the public to hold more money as a precaution against the uncertainties of a recession. The Fed reasoned that if monetary policy were not to be tighter than intended, then this apparent change in the demand for money would have to be accommodated.

Supply-side influences

An alternative view often attributes rapid M1 growth to factors affecting the supply of money rather than its demand. This view emphasizes two important features of money in the U.S. economy.

Buffer stock. The first is the widely accepted idea of money as a "shock absorber" or buffer stock between the public's receipts and spending. In this view, short-run variations in the observed stock of money may represent independent changes in the quantity of money supplied by banks to which the public has not had time to adjust completely.

The view of money demand as largely passive in the short run, accommodating itself to changes in the supply of money, reflects the transactions costs of managing money balances closely. Unanticipated inflows or outflows of funds cause inventories of money

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, or of the Board of Governors of the Federal Reserve System.

balances to wander away from their desired levels in the short-run because it is too costly for some money holders to make the necessary purchases and sales of securities (or goods and services) to bring money balances back to their desired levels quickly.

This view does not dispute the effectiveness of sophisticated cash management techniques and new instruments, like repurchase agreements, that emerged in the 1970s. These developments significantly lowered transactions costs for large corporations and, perhaps, wealthy households. But for most households and small corporations, with relatively low money balances on average, the costs of managing money more closely using the new techniques may still be too high. Therefore, it remains optimal for these groups to leave their inventories out of balance in the short-run.

If money finds its way into these "loosely" managed portfolios, it may stay there for a while. Moreover, as one money holder tries

to bring his balances into line, he may throw the portfolio of other holders out of balance. For this reason, the system as a whole takes longer to adjust than does any one household or corporation.

Recent empirical evidence at this bank suggests that buffer stock effects are significant—that the monetary aggregates can depart significantly from levels desired by the public for up to six months at a time. This departure has, however, only modest effects on interest rates. In other words, over a period as long as half a year, it is possible for money supply factors to influence movements in the money stock as the public's demand for money accommodates independent changes in supply.

Bank loans. The second feature in the supply view is the relationship between changes in the public's demand for *credit*, and changes in the stock of money. Essentially, disturbances in the market for credit—for equities, bonds, and money market instruments like commercial paper—may filter through the banking system and affect the stock of transactions deposits which are an important component of money.

The critical variable connecting money and credit is the stock of commercial bank loans. From the public's point of view, bank loans are an alternative form of financing to borrowing in open financial markets such as the commercial paper market. The rate that banks charge on their loans (prime rate) relative to open market rates therefore helps determine the amount of bank loans the public wants to take out. A lower spread between prime and commercial paper rates encourages the public to borrow more from banks. The resulting rise in bank loans causes the supply of money to increase as the loan proceeds are paid out to the borrowers in the

form of newly created transactions deposits. As we have seen, the transactions costs of cash management mean that part of these new deposits may stay in the economy for up to six months with but slight effect on interest rates.

An important implication of this view of the money supply process is that "disturbances" in the credit markets can influence the money stock. For example, an unexpected decrease in the public's demand for bank loans would cause a decrease in the money stock. The credit control program of March 1980 is a dramatic example of a credit market "shock" that influenced the money supply, having contributed to its sharp decline in the spring and its rebound in the summer and fall. Another example is the collapse of the bond market in early 1980, which suddenly shifted borrowing into banks and caused M1 to accelerate. Finally, developments in the real sector, such as inventory cycles, can influence bank loans and M1.

Policy Implications

The supply side view provides an alternative to the traditional explanation of the observed positive association between money and interest rates in the short run. In the supply view, the positive relationship between money and interest rates is explained by shifts in the demand for credit. An increase in the demand for short-term credit (including bank loans), perhaps because of high cost and uncertainty in the long-term bond market, would lead to both an increase in deposits as banks provided more loans and an increase in interest rates as banks competed for additional reserves to support the new deposits. This appears to have been one of the influences in the October 1981–April 1982 period of high M1 growth when fast growth in bank loans contributed to an increase in money growth and interest rates.

The implications for policy of the supply-side analysis are quite different from that of the demand view. The latter, as we have seen, would argue that accommodating increases in money demand would prevent interest rates from rising or falling and, thus, monetary policy from being inadvertently too tight or too loose.

In contrast, the supply view would argue that the increase in money, thought to be a change in demand, actually represents an incipient excess supply of money. If not removed, this excess supply would cause spending to rise. In other words, policy would turn out to be more expansionary than intended if the increase in money were accommodated. Hence, policy should resist the increase in money. The supply view argues for keeping relatively tight control over the stock of money in order to prevent money "surprises" from exerting a destabilizing effect on the economy.

John P. Judd and John L. Scadding

FIRST CLASS

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

San Francisco

Bank of

Federal Reserve

Research Department

PRESORTED
FIRST CLASS MAIL
U.S. POSTAGE PAID
PERMIT NO. 752
San Francisco, Calif.

BANKING DATA—TWELFTH FEDERAL RESERVE DISTRICT

(Dollar amounts in millions)

Selected Assets and Liabilities Large Commercial Banks	Amount Outstanding 8/18/82	Change from 8/11/82	Change from year ago	
			Dollar	Percent
Loans (gross, adjusted) and investments*	161,049	337	9,478	6.3
Loans (gross, adjusted) — total#	140,979	334	10,336	7.9
Commercial and industrial	44,337	- 248	4,915	12.5
Real estate	57,297	20	3,264	6.0
Loans to individuals	23,408	18	475	2.1
Securities loans	2,722	206	1,365	100.6
U.S. Treasury securities*	6,454	2	478	8.0
Other securities*	13,616	1	- 1,336	- 8.9
Demand deposits — total#	38,663	- 628	- 970	- 2.4
Demand deposits — adjusted	26,901	- 672	- 104	- 0.4
Savings deposits — total	30,801	- 60	939	3.1
Time deposits — total#	99,934	1,116	13,945	16.2
Individuals, part. & corp.	90,212	754	12,351	15.9
(Large negotiable CD's)	37,924	870	2,497	7.0
Weekly Averages of Daily Figures	Week ended 8/18/82	Week ended 8/11/82.	Comparable year-ago period	
Member Bank Reserve Position				
Excess Reserves (-)/Deficiency (-)	28	- 212		16
Borrowings	4	79		32
Net free reserves (-)/Net borrowed(-)	24	- 291		- 16

* Excludes trading account securities.

Includes items not shown separately.

Editorial comments may be addressed to the editor 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.