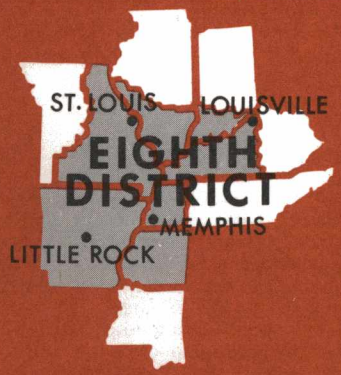
FEDERAL RESERVE BANK OF ST. LOUIS

MARCH 1976

REVIEW

CONTENTS



Vol. 58, No. 3

Recent Changes in Reserve Requirements: An Example of Contradictory Regulation

R. ALTON GILBERT

ONE responsibility of the Federal Reserve System is to promote sound banking practices. In recent years this Federal bank regulator has been concerned that some banks were tending to leave themselves vulnerable to liquidity crises by concentrating a large share of their time deposits in short maturities, particularly large certificates of deposit[1]. One tool that the Board has used to counter this tendency has been higher reserve requirements on short-term time deposits than on longer maturity deposits. The latest such Board action came in October 1975 and January 1976 when reserve requirements were reduced on member bank time deposits with maturities of 180 days or more[2].

In the *aggregate*, banks are likely to respond to these policy actions by reducing the percentage of time deposits held in maturities of less than 180 days. However, since these policy actions are intended primarily to reduce the vulnerability of banks to liquidity crises, their success should be judged not only in terms of aggregate maturity shifts, but also in terms of effects on the maturity structure of *individual* banks. As indicated in the following analysis, these reductions in reserve requirements are likely to have effects on some individual member banks which are opposite to those intended. It appears that only a small portion of member banks in the Eighth District are affected by these recent policy actions, and some of the banks that are affected actually have incentives to *shorten* the maturity structure of their time deposits.

RECENT CHANGES IN RESERVE REQUIREMENTS

Before the fall of 1974 the maturity structure of bank time deposits was not influenced by differential reserve requirements. The maturity structure of time deposits depended upon the maturity structure of bank assets, interest rates on time deposits of various maturities, interest rate expectations, and interest ceilings on deposits.

In September 1974 the Board removed marginal reserve requirements on large certificates of deposit (CDs) with initial maturities of 4 months or more, leaving a marginal reserve requirement of 3 percent on large CDs with initial maturities of less than 4 months.[3] This action created a differential in reserve requirements which favored longer-term time deposits. In December 1974 all marginal reserve requirements on large CDs were removed and reserve requirements on 30-179 day time deposits over $5 million were raised to 6 percent, with reserve

[1]The assumption that a bank is more vulnerable to liquidity crises when its time deposits are concentrated in short maturities can be illustrated in the following example. Assume that a bank experiences a temporarily large decline in the value of its assets, for whatever reason. If its time deposits are concentrated in short-term maturities, the bank may be forced to liquidate some of its less liquid assets in order to meet its current obligations, since it is unlikely that the bank could attract additional deposits during the adjustment period. The asset liquidation further reduces the bank's net worth, which aggravates its financial position and extends the period of adjustment, thereby allowing time for more short-term time deposits to reach maturity — a vicious circle which could result in a bank failure.

[2]Federal Reserve *Bulletin* (October 1975), p. 705, and (January 1976), p. 66.

[3]Marginal reserve requirements on CDs of $100,000 and over were imposed in June 1973. An extra (marginal) reserve requirement of 3 percent (in addition to the 5 percent reserve requirement on time deposits in effect at that time) applied to the amount of a bank's large CDs above the average amount it had outstanding in the week ending May 16, 1973. The marginal reserve requirements in effect until December 1974 continued to apply to large CDs over the average amount held in the week ending May 16, 1973, but did not apply to banks with aggregate obligations less than $10 million. For more details, see the Federal Reserve *Bulletin* (November 1974), p. 800.

Table I

RESERVE REQUIREMENTS ON MEMBER BANK TIME DEPOSITS

In effect from October 1, 1970 through December 11, 1974

Category of Deposits	Percent of Deposits
Savings	3%
Other Time	
First $5 million	3
Over $5 million	5

Category of Deposits	In effect from 12/12/74 to 10/29/75	In effect from 10/30/75 to 1/7/76[1]	In effect since January 8, 1976[1]
Savings	3%	3%	3%
Other Time			
Initial maturities of 30-179 days			
First $5 million	3	3	3
Over $5 million	6	6	6
Initial maturities of 180 days to four years	3	3	2.5
Initial maturities of four years or over	3	1	1

[1]Required reserves on time and savings deposits at each bank cannot be less than 3 percent of total time and savings deposits.

requirements on all other time deposits set at 3 percent (see Table I). The intended effect of this policy action was to induce banks to shift into obligations of more than 179 days. This effect was realized as the percentage of time deposits in maturities of 30-179 days declined steadily from December 1974 to September 1975.

The reserve requirement changes in October 1975 and January 1976 were designed to give banks even greater incentives to lengthen the maturity structures of their time deposits. Reserve requirements on time deposits with initial maturities of 4 years and over were reduced from 3 percent to 1 percent in October 1975, and in January 1976 reserve requirements on time deposits with maturities of 180 days to 4 years were reduced from 3 percent to 2.5 percent. Federal Reserve regulations, however, state that a member bank's required reserves on *total* time and savings deposits can be no less than 3 percent of its total time and savings deposits. In other words, a member bank's required reserves on time deposits must equal the amount based upon applying the relevant percentages to each category of time deposits *or* 3 percent of total time deposits, whichever is larger. The 3 percent minimum is crucial for the following analysis.

The two recent changes in reserve requirements on time deposits (October 1975 and January 1976) are analyzed in this note as one policy action in order to consider their combined effects. The response of an individual bank will depend on the maturity structure of its time deposits at the time of the reserve requirement change. Table II illustrates this situation by dividing Eighth District banks into three groups according to their time deposit maturity structure.

Member banks with less than $5 million in 30-179 day time deposits have no incentive (from a reserve requirement standpoint) to change their maturity structure.[4] For these banks, reserve requirements on each maturity group of time deposits were set at 3 percent in December 1974 and are still effectively 3 percent on each maturity group because of the 3 percent minimum rule.

A second group of member banks has an incentive to lengthen the maturity structure of time deposits. Under the new reserve requirements, their required reserves on total time deposits are greater than 3 percent because they have a relatively large proportion of their time deposits in 30-179 day maturities. These banks can decrease their total required reserves by shifting a larger share of their time deposits to longer maturities. The amount by which a bank in this group can reduce its required reserves is still limited by the 3 percent minimum rule.[5]

A third group of member banks, on the other hand, has an incentive to shift some time deposits to *shorter* maturities, the opposite response to that which was intended. Each of these banks had over $5 million in 30-179 day time deposits, but their total reserve requirements on time deposits was the minimum 3 percent because they had a relatively large amount of time deposits in longer maturities.[6]

---

[4]Except to the extent that they are discouraged from expanding deposits of 30-179 day maturities beyond $5 million.

[5]The condition required for a member bank's average reserve requirement on time deposits to be above 3 percent under the new reserve requirements is given as follows:

Let S be a bank's 30-179 day deposits
M be a bank's 180 day - 4 year deposits
L be a bank's deposits with maturities of 4 years and over

$$(.03)\ \$5 \text{ million} + (.06)(S - \$5 \text{ million}) + (.025)\,M + (.01)\,L > (.03)(S + L + M)$$

The condition is equivalent to

$$(.03)(S - \$5 \text{ million}) > (.02)\,L + (.005)\,M$$

If, by lengthening the maturities of time deposits, these inequalities become equalities, a bank's average reserve requirement on its time deposits becomes the minimum 3 percent.

[6]Using the notation in footnote 5, the conditions required for banks to be in this third group are as follows:

$$S - \$5 \text{ million} > 0 \text{ and}$$
$$(.02)\,L + (.005)\,M \geq .03\,(S - \$5 \text{ million})$$

Table II

CHARACTERISTICS OF EIGHTH DISTRICT MEMBER BANKS WITH DIFFERENT INCENTIVES TO CHANGE THE MATURITIES OF THEIR TIME DEPOSITS

Characteristics of Banks	Incentives to Change the Maturity Structure	Number of Eighth District Member Banks[1]
Less than $5 million in 30-179 day time deposits.	No reserve requirement advantage in changing the maturity structure of time deposits.	349
More than $5 million in 30-179 day time deposits:		
(a) 30-179 day deposits in excess of $5 million greater than ⅔ of deposits of 4 years and over plus 16⅔ percent of 180 day — 4 year deposits; average reserve requirement on time deposits over 3 percent.[2]	Incentives to shift 30-179 day time deposits to maturities of over 179 days and shift deposits of 180 day — 4 year maturities to maturities of 4 years and over	53
(b) 30-179 day deposits in excess of $5 million less than or equal to ⅔ of deposits of 4 years and over plus 16⅔ percent of 180 day — 4 year deposits; average reserve requirement on time deposits at the 3 percent minimum.[2]	Incentives to shift time deposits to maturities of 30-179 days, and possibly shift deposits to maturities of 4 years and over.	27
		Total: 429

[1]Based upon member bank time deposits in the reserve settlement week ending October 22, 1975.

[2]These relations between the maturity distribution of time deposits and the average reserve requirement of time deposits is demonstrated for the case of an average reserve requirement above 3 percent. Let

S be a bank's 30-179 day deposits
M be a bank's 180 day — 4 year deposits
L be a bank's deposits with maturities of 4 years and over

In this case:

$$(.03)\ \$5\text{ million} + (.06)\ (S - \$5\text{ million}) + (.025)M + (.01)L > .03\ (S + L + M)$$

This condition yields:

$$S - \$5\text{ million} > (.6667)L + (.1667)M$$

When the recent changes in reserve requirements went into effect, the proportions of time deposits these banks had in short maturities are assumed to be smaller than if reserve requirements had been uniform on all maturities of time deposits. Under the new reserve requirements, banks in the third group can shift some deposits with maturities of over 179 days to maturities of 30-179 days without increasing their total required reserves because of the 3 percent minimum rule. Therefore, for these banks the penalty on short-term time deposits imposed in December 1974 is effectively removed.[7] However, all of these statements about tendencies for banks to alter the maturity structure of their time deposits must be qualified to the extent that interest ceilings on time deposits prevent banks from inducing their customers to change maturities of deposits.

[7]Some banks in this third group may also increase the proportion of their time deposits with maturities of 4 years and over in response to the recent changes in reserve requirements. Suppose banks in this third group increase their time deposits in short maturities to the levels they would desire in the absence of differential reserve requirements by shifting deposits out of 180 day - 4 year maturity deposits. The average reserve requirements on time deposits would be above 3 percent for some of these banks; they could keep their average reserve requirements on time deposits at the minimum 3 percent by also shifting deposits out of 180 day - 4 year deposits to maturities of 4 years and over.

INCENTIVES FOR ALTERING MATURITY STRUCTURE: EIGHTH DISTRICT MEMBER BANKS

Time deposits at member banks in the Eighth District are examined to determine their incentives for changing the maturity structure of their time deposits under the new reserve requirements. The deposits are for the week ending October 22, 1975 — the first week for which the reserve requirement change of October 1975 applies.[8] Current reserve requirements are applied to those deposits to determine whether reserve requirements on time deposits would have been above or equal to 3 percent of total time deposits.[9]

Of the 429 member banks in the Eighth District, only 80 are affected by the recent reserve requirement changes (those with more than $5 million in 30-179 day time deposits). The relevant total reserve requirement on time deposits was the minimum 3 percent for 27 of those 80 banks and above 3 percent

[8]Under lagged reserve requirements in effect since September 1968, required reserves of a member bank for each settlement week (ending each Wednesday) are based upon its deposit liabilities two weeks earlier. The deposit liabilities of a member bank in the week ending October 22, 1975 determined its required reserves for the settlement week of October 30 through November 5, 1975.

[9]An alternative approach would involve analyzing the implications of each change in reserve requirements using deposit data for the first weeks to which each change in reserve requirements apply. This approach would create problems for determining the effects of the combined changes in reserve requirements on the incentives for banks to change the maturity structure of their time deposits. Suppose, for example, that by January 1976 banks had made partial adjustments in the maturity structures of their time deposits in response to the reserve requirement change in October 1975. In this situation there would be ambiguity as to the number of banks that would have incentives to shift deposits to short maturities under the combined changes in reserve requirements and the amount by which they could shift deposits to short maturities without increasing their required reserves. Some banks would have incentives to lengthen the maturity structure of their time deposits under the October 1975 change and shorten maturities under the change in January 1976. These offsetting influences can be netted out by applying the two changes to time deposit balances in the week ending October 22, 1975.

Table III

PERCENTAGES BY WHICH EIGHTH DISTRICT MEMBER BANKS CAN SHIFT TIME DEPOSITS TO SHORT MATURITIES WITHOUT INCREASING REQUIRED RESERVES

	Maximum Percentage Increases in 30-179 Day Time Deposits That Will Not Increase Required Reserves[1]					
	0-10%	10%-20%	20%-30%	30%-50%	50%-100%	Over 100%
Number of Banks	5	5	4	3	7	3

[1]In these calculations, 30-179 day deposits are increased by reducing 180 day — 4 year deposits by equal amounts.

for the other 53 banks. Therefore, only 53 member banks in the Eighth District have incentives to lengthen the maturity structure of their time deposits, while 27 actually have incentives to shift deposits to maturities of 30-179 days.[10]

Total deposits of banks that have incentives to shift time deposits to short maturities range from about $18 million to $130 million. Table III gives information on the extent to which these banks can shift deposits to short maturities without increasing their required reserves. Note that 10 banks can increase their short-term deposits by more than 50 percent, and of these 10, 3 can more than double their short-term deposits without increasing their total required reserves. These 27 banks can increase their 30-179 day time deposits by a total of $76.7 million without increasing their required reserves.[11]

Several of the 53 banks in the Eighth District with average reserve requirements on their time deposits above 3 percent have limited incentives to lengthen the maturity structure of their time deposits because of the 3 percent minimum rule. Suppose these banks lengthened the maturity of their time deposits by shifting 30-179 day deposits to maturities of 4 years and over. Total required reserves on time deposits would be reduced to the minimum 3 percent for 13 of these 53 banks with less than 10 percent reductions in their 30-179 day deposits. Required reserves for 8 of these 13 banks would hit the 3 percent minimum with less than 5 percent reductions in the 30-179 day deposits.

In the aggregate, however, the percentage of time deposits in 30-179 day maturities at Eighth District member banks is likely to *decline*. Banks with incentives to *reduce* their short-term deposits are generally larger than the banks with incentives to increase. As one possible response, suppose that the 53 banks in the District with average reserve requirements on time deposits over 3 percent reduce their 30-179 day deposits by 10 percent or until the 3 percent minimum rule is reached, whichever comes first. In addition, the 27 banks with incentives to shift deposits to short maturities do so by the maximum amount without increasing their required reserves. These reactions would generate a net *decrease* of $117.9 million in 30-179 day deposits. Also note that banks with incentives to lengthen the maturity of their time deposits will tend to complete their adjustment to the recent changes in reserve requirements faster than banks with incentives to shorten, since short-term deposits can be converted to long-term deposits faster than long-term deposits can be converted to short-term.

SUMMARY

In October 1975 and January 1976 the Federal Reserve Board lowered reserve requirements on time deposits with maturities of over 179 days to induce member banks to lengthen the maturity structure of their time deposits. The effectiveness of these policy actions is limited by a constraint on the reduction in reserve requirements: a member bank's required

[10]Limiting the analysis to only those banks with over $5 million in 30-179 day deposits may understate the number of banks with incentives to increase their short-term deposits under the new reserve requirements. Suppose that in October 1975 some banks would have preferred to have more than $5 million in 30-179 day deposits if there had been no penalty on those deposits, but they reduced their 30-179 day deposits to below $5 million in response to the penalty. Those banks could shift some of their longer-term deposits to short maturities, bringing their 30-179 day deposits to over $5 million, without increasing their required reserves. If there were such banks, they would have tended to keep their 30-179 day deposits just below $5 million before the recent changes in reserve requirements. In the week ending October 22, 1975, 6 member banks in the Eighth District had between $4.75 and $5 million in 30-179 day deposits, and 3 of those banks had between $4.9 and $5 million. Some of these banks may have incentives to increase their short-term deposits under the new reserve requirements.

[11]The reserve requirement reduction in January 1976 increased the number of banks with incentives to shift deposits to short maturities above the number given such incentives by the policy action in October 1975 alone. With only the first reduction in reserve requirements (reserve requirements on deposits with maturities of 4 years or more reduced from 3 percent to 1 percent), 16 banks in the Eighth District had incentives to shift deposits to short maturities. With the second change (reserve requirements on 180 day - 4 year deposits lowered from 3 percent to 2.5 percent), 11 more banks were given such incentives. Those first 16 banks could shift a total of $46 million in 180 day - 4 year deposits to maturities of 30-179 days without increasing their required reserves under the first change, and could shift $62.8 million to 30-179 day maturities without increasing their required reserves when the second change is added.

reserves on time deposits can be no less than 3 percent of its total time deposits. Banks with less than $5 million in 30-179 day time deposits are not affected by these changes in reserve requirements; most member banks are in this category. Among the larger member banks, some have incentives to lengthen the maturity structure of their time deposits under the new reserve requirements, and others are given incentives to shorten. In the Eighth Federal Reserve District, only about one-fifth of the member banks are affected by these recent policy actions, and about one-third of the larger banks which are affected have incentives to shorten the maturity structure of their time deposits.

APPENDIX

Table A-I illustrates conditions under which a bank would shorten the maturity structure of its time deposits in response to the recent change in reserve requirements. A hypothetical member bank has $100 million in time and savings deposits throughout the discussion.[1] The behavior of the bank is analyzed as though both of the recent changes in reserve requirements went into effect at the same time. This approach avoids analyzing effects of the reserve requirement changes separately. In December 1974 the bank had $25 million in 30-179 day time deposits, but by the time the recent changes in reserve requirements were imposed, it had reduced its 30-179 day time deposits to $15 million because of the 6 percent reserve requirement, while increasing time deposits with maturities between 180 days and 4 years by $10 million. Applying the new reserve requirements to each category of time and savings deposits would indicate required reserves of only $2.775 million, which would be only 2.775 percent of total time and savings deposits [see column (3)]. However, because of the 3 percent minimum rule, the bank's actual required reserves on time and savings deposits would be $3 million.

The responses of banks to the recent reserve requirement changes depend upon such influences as the maturity preferences of banks for deposits and the changing pattern of interest rates on time deposits of various maturities. Therefore, the actual response of a bank with a maturity distribution of deposits like that of the hypothetical bank in Table A-I is uncertain. Nevertheless, such banks have incentives to shift some of their deposits to short maturities, and the two possible responses illustrated in columns (4) and (6) of Table A-I indicate the types of adjustments such banks are likely to make in the maturity distribution of their time deposits.

In the first possible adjustment, the bank shifts $6.45 million of its 180 day - 4 year deposits to maturities of 30-179 days. This is the maximum such change in maturities the bank can make without increasing its required reserves [see column (5) of Table A-I].

Note that in this first adjustment the hypothetical bank has still not restored its short-term time deposits to the level desired before the penalty was imposed on those deposits ($25 million in 30-179 day deposits). As illustrated in columns (6) and (7) of Table A-I, the bank can restore its short-term deposits to that desired level without increasing its required reserves if it also shifts $8.33 million from 180 day - 4 year deposits to deposits with maturities of 4 years and over. With short-term deposits of $25 million and long-term deposits of $18.33 million, required reserves would

[1]This discussion abstracts from the effects that changes in reserve requirements have on total deposits. To illustrate such an effect, with the time and savings deposits held by the hypothetical bank in Table A-I as of October 1975, the bank's required reserves on time and savings deposits declined from $3.3 million to $3 million when reserve requirements were changed. The bank could have expanded its deposits with the reserves that were freed by the reduction in reserve requirements. In the illustration in Table A-I total time and savings deposits are held constant and reserves changed because the issue investigated in this note is the effect of changes in reserve requirements on the maturity distribution of time deposits and not effects on excess reserves and deposit expansion. Effects on the maturity distribution of time deposits are probably easier to understand if total deposits are held constant and their maturity distribution changed than if reserves were held constant, and total deposits and their maturity distribution changed.

Table A-I

CHANGES IN THE COMPOSITION OF TIME AND SAVINGS DEPOSITS AT A HYPOTHETICAL BANK
(Dollar Amounts in Millions)

Types of Deposits	(1) December 1974[1]	(2) When New Reserve Requirements Imposed[2]	(3) Calculated Required Reserves, Based On Column (2)[3]	(4) First Adjustment[4]	(5) Calculated Required Reserves, Based On Column (4)[3]	(6) Second Adjustment[5]	(7) Calculated Required Reserves, Based On Column (6)[3]
Savings	$ 10	$ 10	(.03) X $10=$0.300	$ 10.00	(.03) X $10=$0.300	$ 10.00	(.03) X $10=$0.300
Other Time Maturity—							
30-179 days	$ 25	$ 15	(.03) X $ 5+(.06) X $10=$0.750	$ 21.45	(.03) X $5 +(.06) X $16.45=$1.137	$ 25.00	(.03) X $5 +(.06) X $20=$1.350
180 days — four years	$ 55	$ 65	(.025) X $65=$1.625	$ 58.55	(.025) X $58.55=$1.463	$ 46.67	(.025) X $46.67=$1.167
Four years and over	$ 10	$ 10	(.01) X $10=$0.100	$ 10.00	(.01) X $10=$0.100	$ 18.33	(.01) X $18.33=$0.183
	$100	$100	$2.775	$100.00	$3.000	$100.00	$3.000
MINIMUM REQUIRED RESERVES			$3		$3		$3

[1]This is the maturity distribution of the hypothetical bank's deposits as of December 1974 before the bank had time to adjust the maturity of its deposits to the change in reserve requirements that went into effect during that month.

[2]This maturity distribution of deposits reflects adjustment of the bank to the reserve requirement changes in December 1974 but before adjustments are made in response to the reserve requirement changes in October 1975 and January 1976.

[3]Calculated required reserves based upon reserve requirements in effect since January 8, 1976.

[4]Shifting 180 day — 4 year deposits to maturities of 30-179 days until calculated required reserves equal 3 percent of total time and savings deposits. This is the maximum shift of 180 day — 4 year deposits to maturities of 30-179 days that does not increase required reserves.

[5]Shifting 180 day — 4 year deposits to maturities of 30-179 days and 4 years or over such that the 30-179 day deposits are at the level before the penalty was imposed on 30-179 day deposits while keeping required reserves on time and savings deposits at the minimum 3 percent.

still be $3 million. In this second possible adjustment the bank would increase its 30-179 day deposits by $10 million. This is more than the $8.33 million increase in its deposits with maturities of 4 years and over. However, other cases can be constructed in which the combination of shifts in deposits to short and long maturities that keep required reserves unchanged involve greater shifts to long maturities than to short maturities. Therefore, the effect of the recent reserve requirement change on the average maturity of time deposits for the type of banks represented in Table A-I is uncertain.

The FOMC in 1975: Announcing Monetary Targets

NANCY JIANAKOPLOS

MONETARY policy in 1975 was directed at aiding economic recovery from the most severe recession in the post-World War II years without rekindling the fires of inflation. As in recent years, the Federal Open Market Committee pursued short-run objectives of monetary policy formulated in terms of both an interest rate and money growth rate targets.[1] These dual objectives were pursued through open market operations — that is, the buying and selling of U. S. Government and Federal agency securities and bankers' acceptances.[2]

As 1975 began, the prospects for a renewal in economic growth were dim. The year 1974 had closed with economic activity plummeting, unemployment high, and prices increasing at a double-digit rate. Faced with this situation Congress gave particular attention to the formulation of monetary policy as a tool of economic recovery. Congressional interest resulted in passage of a Concurrent Resolution, which called for the adoption and public disclosure of long-run target growth ranges for monetary aggregates by the FOMC. In addition, Congress called for the initiation of quarterly consultations on monetary policy between Congressional Committees and the Board of Governors of the Federal Reserve System.

Monetary developments during 1975 occurred amid other significant economic developments. The economy continued to adjust to shocks experienced in 1973 and 1974. These shocks included the sharp rise in the cost of energy, crop failures, price controls, and the implementation of environmental, safety, and consumer protection programs.[3] Congress approved tax cuts and rebates along with special Social Security payments designed to revive the lagging economy. In addition, Treasury operations to finance the resultant $80 billion deficit were expected to have a stimulative impact on the economy.

This review of monetary policy in 1975 begins with a consideration of various approaches to monetary policy that were put forward as appropriate for dealing with economic conditions in early 1975. The short-run implementation of monetary policy by the FOMC with respect to both its stated policy goals and its operating targets will be reviewed next. Finally, a major constraint on monetary policy actions will be discussed.

MONETARY POLICY PRESCRIPTIONS

The appropriate course for monetary policy in 1975 was widely discussed. Most economists seemed to concur that monetary restraint in late 1974 had been excessive and, in part, responsible for the deepening of the recession. For example, Paul Samuelson charged that "if we do go into a depression, the Fed will justly bear much of the blame."[4] Milton Friedman declared that "From June 1974 to January 1975, M_1 has grown at the average rate of 1.1% per year. This has surely contributed to the recent deepening of recession."[5]

---

[1]Throughout this article the Federal Open Market Committee will be referred to as either the "Committee" or the "FOMC".

[2]The other tools of monetary policy are not controlled by the FOMC. Reserve requirements are set by the Board of Governors of the Federal Reserve System. Discount rates are established by the Boards of Directors of the twelve regional Federal Reserve Banks.

[3]See Norman N. Bowsher, "1975 — Year of Economic Turnaround," this *Review* (January 1976), pp. 2-8.

[4]Paul A. Samuelson, "A Burns Depression?" *Newsweek*, March 3, 1975, p. 63.

[5]U. S. Congress, Senate, Committee on Banking, Housing and Urban Affairs, *Monetary Policy Oversight*, 94th Cong., 1st sess., February 25 and 26, 1975, p. 59.

Prescriptions for monetary policy in 1975 were far ranging, but can be broadly divided into three approaches. One school of thought holds that steady, moderate, monetary growth was the appropriate policy. Milton Friedman expressed this long-held view before the Senate Banking Committee: "I believe that we need stability in monetary growth, not wide fluctuations from one side to the other. . . . For M_1, 3% to 5%, or even the broader 2% to 6% earlier specified by the Joint Economic Committee is about right."[6] He further stated that the Federal Reserve could not achieve steady growth of the money stock *"if it insists on operating as it now does by controlling an interest rate such as the Federal Funds rate."*[7] Arthur Burns, chairman of the FOMC, explicitly rejected this approach:

> There is a school of thought that holds that the Federal Reserve need pay no attention to interest rates, that the only thing that matters is how this or that monetary aggregate is behaving. We at the Federal Reserve cannot afford the luxury of any such mechanical rule. As the Nation's central bank, we have a vital role to play as the lender of last resort. It is our duty to avert liquidity or banking crises. It is our duty to protect the integrity of both the domestic value of the dollar and its foreign-exchange value. In discharging these functions, we at times need to set aside temporarily our objectives with regard to the monetary aggregates.
>
> In particular, we pay close attention to interest rates because of their profound effects on the workings of the economy.[8]

Other analysts of monetary policy focused attention exclusively on interest rates. Franco Modigliani, professor of economics at the Massachusetts Institute of Technology, recommended this course before the Joint Economic Committee in February:

> I think the mistakes of last year came from the fact that the Fed was looking at the money supply instead of looking at what really bites the economy. No one, no one except a few fools perhaps on Wall Street are directly affected by the money supply, but people do pay higher interest rates, people do have to pay higher mortgage rates, and that is where monetary policy bites, not through the change of the money supply.[9]

A third policy approach supported a rapid expansion of the money stock to stimulate economic recovery — a discretionary policy focused on the monetary aggregates. First National City Bank of New York expressed this view:

> This year is going to be bad enough as it is without a perverse monetary policy. And in the current environment, anything less than 8% growth is likely to be perverse. An 8% floor sounds rather expansive, but given the slack in the economy, it is unlikely to rekindle inflationary fires within the next two years. An easing back in monetary expansion below 8% would be appropriate in 1976 and further in 1977 to damp down inflation over the longer run.[10]

Joining the widespread public attention being given to the appropriate course of monetary policy in 1975 were several committees of Congress. Both the Senate and House Banking Committees held hearings on the conduct of monetary policy. In light of the concern over the state of the economy in general, and monetary policy in particular, House Concurrent Resolution 133 was passed on March 24, 1975 expressing the view of Congress as to the appropriate course of monetary policy during 1975. The resolution did not impose binding prescriptions, but expressed the Congress's desire for the Board of Governors and the FOMC to:

> (1) encourage lower long term interest rates and expansion in the monetary and credit aggregates appropriate to facilitating prompt economic recovery, and
>
> (2) maintain long run growth of the monetary and credit aggregates commensurate with the economy's long run potential to increase production, so as to promote effectively the goals of maximum employment, stable prices, and moderate long term interest rates.[11]

The resolution called for the Board of Governors to consult with Congressional Committees quarterly as to its "objectives and plans with respect to the ranges of growth or diminution of monetary and credit aggregates in the upcoming twelve months."[12]

Pursuant to this resolution Chairman Burns met with Committees of Congress on May 1, July 24, and November 4 to discuss the condition of the national

---

[6]Ibid., pp. 59-60.

[7]Ibid., p. 60.

[8]"Statements to Congress," Federal Reserve *Bulletin* (February 1975), p. 64.

[9]U. S. Congress, Joint Economic Committee, *The 1975 Economic Report of the President*, 94th Cong., 1st sess., February 5, 6, 7, and 14, 1975, p. 542.

[10]"Scotching the recession — the missing monetary factors," First National City Bank *Economic Week*, January 20, 1975, p. 2.

[11]U. S. Congress, Senate, Committee on Banking, Housing and Urban Affairs, *First Meeting on the Conduct of Monetary Policy*, 94th Cong., 1st sess., April 29 and 30; and May 1, 1975, p. 3.

[12]Ibid. Chairman Burns testified before the Senate and House Banking Committees in alternate quarters during the remainder of 1975.

economy and the course of monetary policy.[13] Departing from tradition, Chairman Burns announced long-term target ranges for the growth of monetary and credit aggregates at the May hearings (see Chart I):

> The Federal Reserve System is presently seeking a moderate rate of expansion in the monetary and credit aggregates. We believe that the course we are pursuing will promote an increase in M_1 of between 5 and 7½ per cent over the 12 months from March 1975 to March 1976. . . .
>
> A growth rate of M_1 in the range of 5 to 7½ per cent would, we believe, be accompanied by higher rates of increase in the other major monetary and credit aggregates — ranging from 8½ to 10½ per cent for M_2, 10 to 12 per cent for M_3, and 6½ to 9½ per cent for the credit proxy.[14]

In announcing the long-run target growth, Chairman Burns cautioned that the appropriate growth ranges depended upon the underlying economic conditions. And, as the economic conditions changed, the targeted growth ranges might have to be modified in a month or two.

At the July hearings Chairman Burns announced that the target ranges had been modified slightly to apply from second quarter 1975 to second quarter 1976, rather than from March to March. The change from a monthly to a quarterly base was made "because a 3-month average is less subject to erratic movements than is a single-month base."[15] The effect of moving the base period forward, while retaining the original growth range, was to accept, rather than to attempt to offset, a faster rate of monetary growth during the second quarter than had been implicit in the original 12-month target. Testifying before the Senate Budget Committee in September, Chairman Burns discussed the appropriateness of the target ranges:

> These growth ranges are appropriate under current conditions, when the economy is struggling with widespread unemployment of labor and industrial capital. However, these growth ranges are on the generous side by historical standards, and our economy would have little or no chance of regaining general price stability if they were maintained indefinitely. Even so, the Federal Reserve System has frequently been urged to raise its present target rates for the money supply. We have resisted these suggestions because, in our judgment, such a policy would soon lead to accelerated inflation and thereby frustrate the process of economic recovery.[16]

At the November hearings Chairman Burns again announced changes in the long-run money growth targets. The applicable time span had been set by the FOMC at third quarter 1975 to third quarter 1976. The growth ranges for M_2 and M_3 were widened to 7½ to 10½ percent and 9 to 12 percent, respectively. Chairman Burns commented on the consequences of these changes in his statement to the Congressional Committee as follows: "This updating of the base, I should note, implies a slightly higher level of money balances a year from now than would be the case if the second-quarter base were retained."[17]

In considering the implementation of these long-run targets since their announcement in May, Chairman Burns stated in November that ". . . growth of the monetary aggregates has been broadly in line with the ranges we adopted earlier. However, month-to-month and quarter-to-quarter changes in the aggregates have been very large, reflecting unusual factors influencing the public's demand for money."[18] Additional explanation of the short-run swings in the growth of the aggregates outside the long-run target ranges had been offered by Chairman Burns in October as well:

> Month-to-month changes in the monetary aggregates have deviated this year from the longer-run target ranges, and they can be expected to do so in the future. Since the demands of the public for money are subject to rather wide short-term variations, efforts by the Federal Reserve to maintain a constant growth rate of the money supply could lead to sharp swings in interest rates and risk damage to financial markets and the economy.[19]

IMPLEMENTATION OF MONETARY POLICY

The FOMC, whose organization and operating procedures are outlined on p. 12, met each month in 1975 to review the results of their previous decisions and decide on the future course of monetary policy. Summaries of the goals and operating objectives adopted at each meeting, as well as a record of dissenting votes, are presented in Exhibit I on pp. 16-17.

---

[13] "Statements to Congress," Federal Reserve *Bulletin* (May 1975), p. 282; (August 1975), p. 491; (November 1975), p. 744.

[14] "Statements to Congress," Federal Reserve *Bulletin* (May 1975), p. 286.

[15] Ibid. (August 1975), p. 495.

[16] Ibid. (October 1975), p. 627.

[17] Ibid. (November 1975), p. 747.

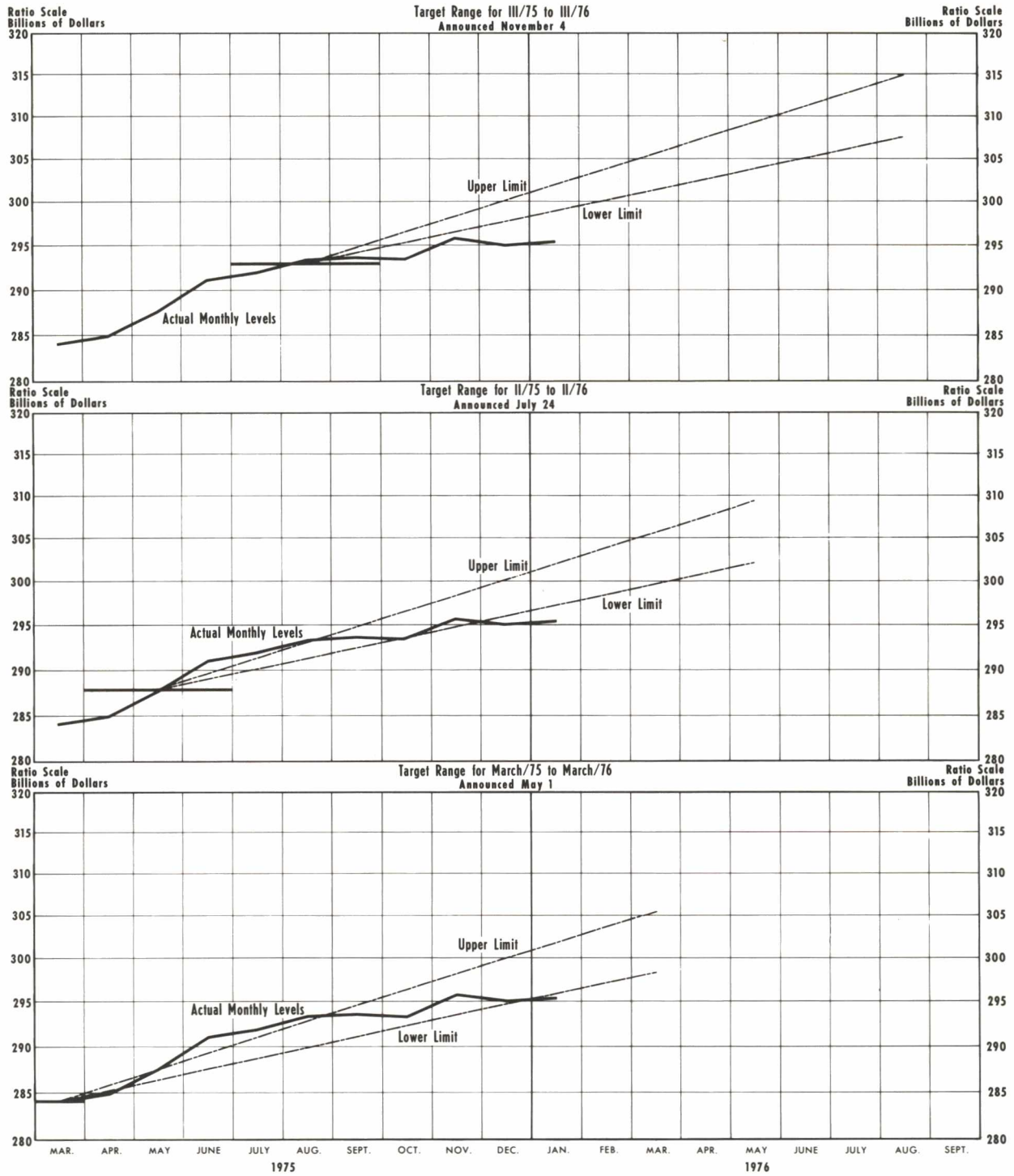
[18] Ibid.

[19] Ibid. (October 1975), p. 627.

Chart I

Targeted Versus Actual M_1 Growth Using Base Periods Announced During 1975 [1]

Seasonally Adjusted



Note: The target ranges and M_1 levels are based on the most current money stock data.

[1] On three occassions during 1975, Chairman of the Federal Reserve Board, Arthur F. Burns, testified before Congressional Committees regarding the intended growth of M_1. On each occassion, the range of intended M_1 growth was 5 to 7.5 percent, but the period over which this growth was to be achieved was shifted with each testimony.

Organization of the Committee in 1975

The Federal Open Market Committee (FOMC) consists of the seven members of the Federal Reserve Board of Governors and five of the twelve Federal Reserve Bank Presidents. The Chairman of the Board of Governors is also, by tradition, Chairman of the Committee. The President of the New York Federal Reserve Bank is a permanent member of the Committee and also, by tradition, its Vice Chairman. All other Federal Reserve Bank Presidents attend the meetings and present their views, but votes may be cast by only the four Presidents who are members of the Committee. These four memberships rotate among Bank Presidents and are held for one-year terms beginning March 1.

Members of the Board of Governors in 1975 included Chairman Arthur F. Burns, Vice Chairman George W. Mitchell, Jeffrey M. Bucher, Philip E. Coldwell, Robert C. Holland, John E. Sheehan and Henry C. Wallich. On July 14, Philip C. Jackson, Jr., succeeded John E. Sheehan, who resigned effective June 1. In addition to Alfred Hayes, President of the Federal Reserve Bank of New York, the following Presidents served on the Committee during January and February 1975: Robert P. Black (Richmond), George H. Clay (Kansas City), Monroe Kimbrel (Atlanta) and Willis J. Winn (Cleveland). Beginning in March the four rotating positions were filled by: Ernest T. Baughman (Dallas), David P. Eastburn (Philadelphia), Bruce K. MacLaury (Minneapolis), and Robert P. Mayo (Chicago). Effective August 1 Paul A. Volcker succeeded Alfred Hayes as President of the Federal Reserve Bank of New York.

The Committee met regularly once each month during 1975 to discuss economic trends and to decide upon the future course of open market operations. During each meeting, a directive was issued to the Federal Reserve Bank of New York stating the general economic goals of the Committee and providing general guidelines as to how the Manager of the System Open Market Account[1] at the New York Federal Reserve Bank should conduct open market operations to achieve these goals. Each directive contained a short review of economic data considered and the general economic goals sought by the Committee. The last paragraph gave operating instructions to the Account Manager. These instructions were stated in terms of bank reserve and money market conditions which were considered consistent with the achievement of desired growth rates of monetary aggregates. Special factors, such as Treasury financing operations, were also taken into account. As in previous years, occasional telephone or telegram consultations were held between regular meetings.

The decisions on the exact timing and amount of daily buying and selling of securities in fulfilling the Committee's directive are the responsibility of the System Open Market Account Manager at the Trading Desk of the New York Bank. Each morning, the Account Manager and his staff decide on a plan for open market operations to be undertaken that day. In developing this plan, money and credit market conditions and aggregate targets desired by the Committee are considered, as well as other factors which may be of concern at that time.[2] Each morning, in a conference call, the Account Manager informs one voting President and staff members of the Board of Governors about present market conditions and open market operations which he proposes to execute that day. Other members of the Committee are informed of the daily program by wire summary.

A summary of the Committee's actions is presented to the public in the "Record of Policy Actions" of the Federal Open Market Committee. Effective March 24, 1975, the "Record" was released about 45 days after each meeting. Soon after it is released, the "Record" appears in the Federal Reserve *Bulletin* and, in addition, the entire year of "Records" are published in the Annual Report of the Board of Governors.

[1]The Manager of the System Open Market Account may be referred to as the "Account Manager", and the Trading Desk of the New York Federal Reserve Bank as the "Desk."

[2]Aggregate targets were generally specified in terms of the growth rates of M_1 (currency and demand deposits), M_2 (M_1 plus time deposits other than large certificates of deposit), and M_3 (M_2 plus deposits at nonbank thrift institutions).

At each of the monthly meetings of the FOMC in 1975, the Committee reviewed the long-run target ranges for the monetary aggregates, which were mentioned earlier in this article. In addition, two-month tolerance ranges considered consistent with the longer-run objectives of the Committee were specified for the growth of M_1, M_2, and reserves available to support private nonbank deposits (RPDs). These short-run tolerance ranges for M_1 and M_2, and their actual growth rates over each period, are shown in Chart II.[20] Intermeeting tolerance ranges for the weekly average Federal funds rate were also established. These ranges and actual weekly average rates are shown in Chart III.

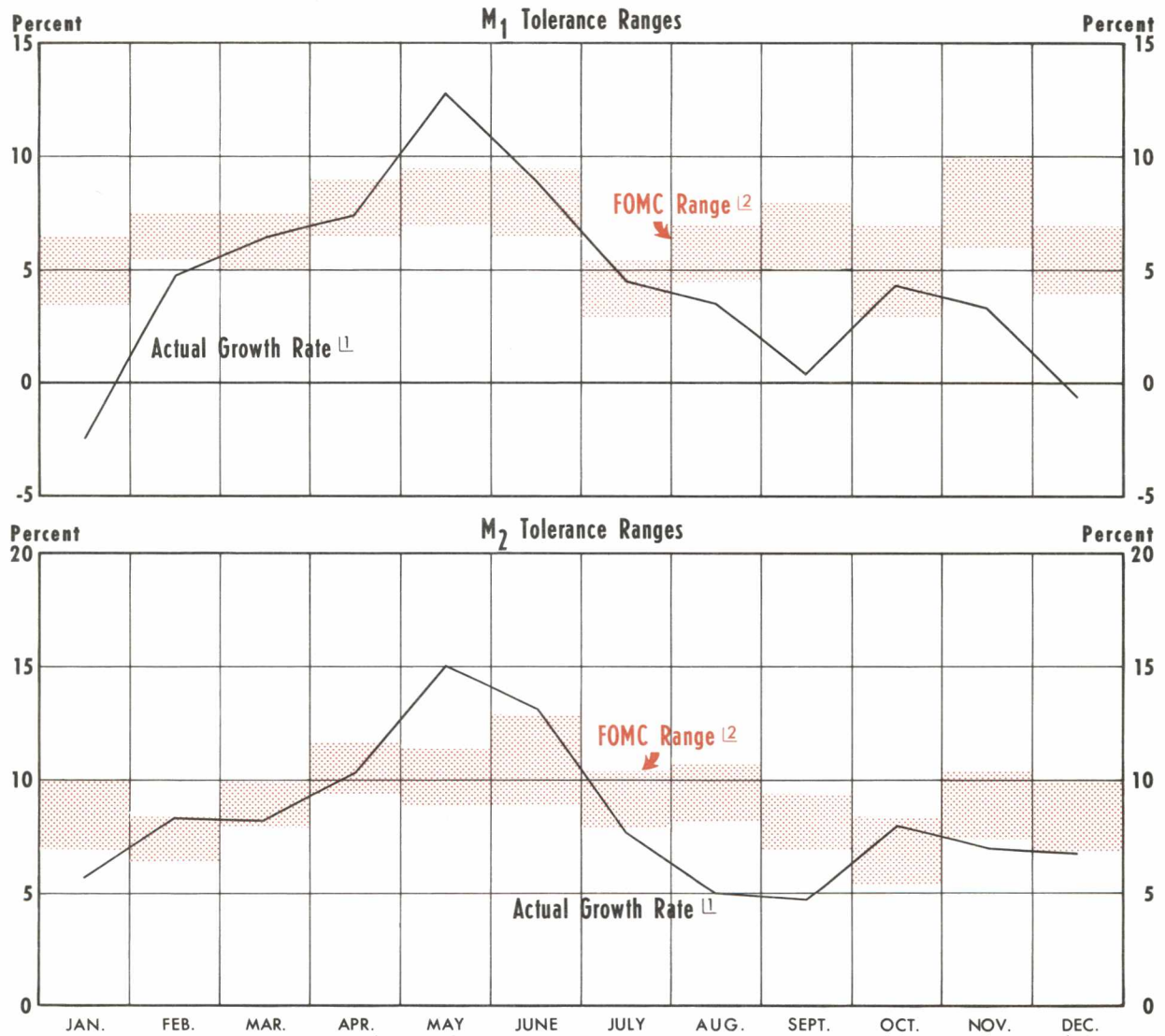
As Charts II and III indicate, the Manager of the System Open Market Account was much more suc-

[20]Throughout this article, unless otherwise stated, M_1 and M_2 data are the most recent series available after the January 1976 revisions. Because of discontinuities of the series, RPDs are omitted from the discussion presented here.

Chart II

FOMC Ranges of Tolerance for Monetary Aggregates

1975

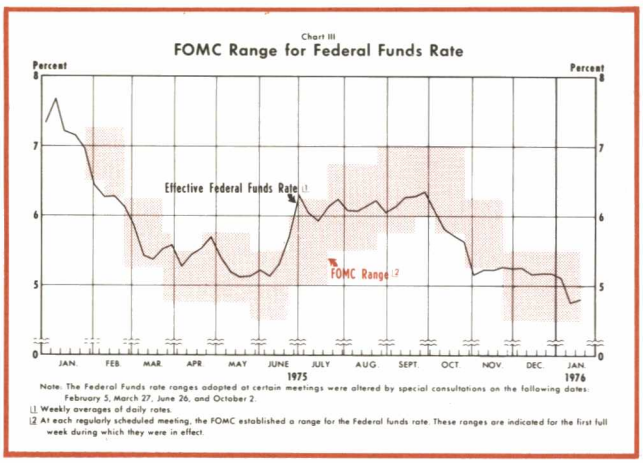


[1] The rates are two-month simple annual rates of change from the month prior to the meeting to the month following the meeting. Rates are based on the most current seasonally adjusted monthly data.

[2] The shaded areas are two-month tolerance ranges shown in the month that the ranges were adopted by the Federal Open Market Comittee. Ranges represent two-month simple annual rates of change from the month prior to the meeting to the month following the meeting.

cessful in achieving the interest rate targets than the monetary growth targets. The System attained the two-month money growth targets specified in the first half of 1975 more frequently than those specified during meetings held in the second half.

The aim of short-run monetary action appeared to be strongly expansionary in the first four months of 1975, when economic activity was contracting sharply, while during the recovery in the remainder of the year actions appeared to take on a more moderate stance. This is indicated by the operating instructions listed in Exhibit I. The following sections provide a detailed review of the data and analyses which the FOMC used in formulating short-run monetary policy



each month in 1975. The FOMC's short-run targets are examined in relation to the changes in the Federal funds rate and money growth rates which actually occurred.

January — April: Monetary Expansion

Staff projections for each of the FOMC meetings in January through April suggested declines in real economic activity through the first half of 1975 and moderation of price increases. By the March meeting, an upturn in economic activity later in the year was being predicted. During these four meetings the Committee's short-run policy was to cushion the recession and stimulate recovery, although by the March meeting the domestic policy directive no longer contained the clause directing action to cushion the recession. The Committee issued operating directives at the January through March meetings which were aimed at achieving interest rate and money growth rate targets. The directives specifically said that "the Committee seeks to achieve bank reserve and money market conditions *consistent* with more rapid growth in monetary aggregates over the months ahead than has occurred in recent months."[21] (emphasis added) Expansion of monetary aggregates was substantial in March and by April the target for the aggregates was qualified as "somewhat more rapid growth."

Over this four-month period the short-term target ranges for the Federal funds rate were never wider than one percentage point. The target growth ranges for the aggregates, on the other hand, were specified to be as wide as 3 percentage points, but never narrower than 2 percentage points.

Short-run target ranges were established at the January meeting in view of

> a staff analysis [which] suggested that — although M_1 was not expanding in January — the demand for money would pick up in February, in part as a result of the lagged effects of earlier declines in interest rates.

The Committee agreed that money market conditions would have to ease in the short run. The tolerance ranges for M_1 and M_2 for the January-February period were set at 3½ to 6½ percent and 7 to 10 percent, respectively. The Federal funds rate would be allowed to vary within a range of 6½ to 7¼ percent.

By February 5 it was evident that the growth of the monetary aggregates would be well below the lower limits of the tolerance ranges, suggesting that the adopted Federal funds target was too high relative to the desired growth rate of the monetary aggregates. On the Chairman's recommendation the lower limit of Federal funds rate range was reduced to 6¼ percent. Both M_1 and M_2 actually fell well below their January - February tolerance ranges.

At the February 19 meeting the FOMC agreed that further easing in money market conditions in the short run probably would be appropriate if M_1 were to grow at a rate consistent with the Committee's longer-run objectives for monetary growth. The tolerance range for M_1 was raised for the February-March period; however, the actual growth of M_1 fell below this range. The tolerance range for M_2 was lowered, although the Committee had called for further easing conditions in the February-March period. Given this lower range, M_2 grew at a rate near its upper limit. The Federal funds rate range, whose limits were set between 5¼ and 6¼ percent at the February meeting, was lower than that previously specified, and the average weekly rate remained within these limits during the intermeeting period.

Again at the March FOMC meeting, the Committee agreed that further easing of money market conditions would be necessary in view of analysis available to them which suggested that "the demand for money would be weak in the near term in association with the expected weakness in economic activity. . . ." The lower limit of the M_1 range was changed for the March-April period (decreased from 5½ to 5 percent), while the upper limit remained at 7 percent. The tolerance range for M_2 was raised and the Federal funds rate range was lowered for the intermeeting period. Three members of the FOMC dissented from this action believing that more aggressive easing ac-

[21] Unless stated otherwise all citations in the following section are taken from the Record of Policy Actions of the Federal Open Market Committee, Federal Reserve *Bulletin* (April 1975 - February 1976).

tions were called for — a higher upper limit for the aggregates and a lower limit for the Federal funds rate.

On March 27, in contrast with earlier analysis, data suggested that the growth rates of the aggregates were not as low as expected and would exceed the upper limits of the tolerance ranges, implying that the upper limit of the Federal funds rate range was now too low for achievement of the desired growth rate of the aggregates. In these circumstances the Federal funds rate would normally be allowed to rise to the upper limits of its range of tolerance — 5¾ percent. However, the Chairman recommended, and the members of the Committee — with one exception — concurred, that "in view of the weakness in the economy and of the sensitive conditions in financial markets, particularly the bond markets, the Manager be instructed to treat 5½ per cent as the approximate upper limit for the weekly average funds rate for the time being." Both M_1 and M_2 stayed within their March - April tolerance ranges.

At the April meeting the staff analysis suggested that the aggregates would temporarily grow at relatively rapid rates in the April - May period because of the tax rebates scheduled to begin in May. The ranges of tolerance for both M_1 and M_2 were raised and the range for the Federal funds rate was widened by raising the upper limit to 5¾ percent. The growth of the aggregates and the weekly average Federal funds rate stayed within the tolerance ranges established at the April meeting.

Viewing the January through April period in retrospect, it is apparent that in only one out of four cases did the growth of both M_1 and M_2 fall outside the two-month tolerance ranges specified at the FOMC meetings. In the case of the deviation, action was taken subsequent to the regular January meeting to attempt to correct the expected short-fall in both aggregates, but the action proved to be insufficient. FOMC operating instructions in this period called for more rapid growth of the aggregates. Evidence indicates that the growth rates of the aggregates did increase, on balance.

Accompanying the FOMC's policy of monetary expansion during this period was the use of other tools of monetary policy. The discount rate charged by each of the Federal Reserve Banks, which was 7¾ percent at the beginning of the year, was lowered in January, February, and again in March when it was set at 6¼ percent at all twelve Federal Reserve Banks. The Board of Governors announced a reduction in reserve requirements on net demand deposits in January which was estimated to release $1.1 billion of reserves. This reduction was designed "to permit further gradual improvement in bank liquidity and to facilitate moderate growth in the monetary aggregates."[22]

May through July: Fiscal Considerations

At meetings from May through July the FOMC gave special attention to the expected effects of fiscal operations in the formulation of monetary policy. The tax rebates and social security payments were expected to increase temporarily the growth rates of the aggregates during the period.

In May the Committee decided that in order "to allow for the expected temporary bulge in money holdings . . . relatively rapid growth in M_1 and M_2 over the May - June period — at annual rates within ranges of tolerance of 7 to 9½ per cent and 9 to 11½ per cent, respectively — would be acceptable." The Federal funds rate range was lowered to 4½ to 5½ percent. Members of the Committee were concerned that "upward pressures on interest rates would be particularly undesirable at present, in light of the sensitive state of financial markets and of uncertainties with respect to the timing and strength of the economic recovery that now appeared to be in process of developing." Taking this into consideration, the directive issued by the Committee in May relegated the growth ranges of the aggregates to a *proviso* clause, putting more emphasis on money market conditions (short-term market interest rates or, specifically, the Federal funds rate):

> the Committee seeks to maintain about the prevailing money market conditions over the period immediately ahead, *provided that* monetary aggregates generally appear to be growing within currently acceptable short-run ranges of tolerance. (emphasis added)

The aggregates M_1 and M_2 both exceeded the upper limits of their May - June tolerance range — M_1 increasing at a 12.8 percent annual rate and M_2 at a 15 percent annual rate. The Federal funds rate stayed within its tolerance range during the intermeeting period.

At the June meeting the Committee decided some short-run firming action might be appropriate in view of the rapid growth of the monetary aggregates in the previous period, and the continuing effects of tax re-

[22] "Announcements", Federal Reserve *Bulletin* (January 1975), p. 51.

EXHIBIT I

Date of FOMC Meeting	Policy Consensus	Operating Instructions	Dissents
January 20-21	. . . while resisting inflationary pressures and working toward equilibrium in the country's balance of payments, to foster financial conditions conducive to cushioning recessionary tendencies and stimulating economic recovery.	. . . while taking account of the forthcoming Treasury financing, developments in domestic and international financial markets, and the Board's action on reserve requirements, the Committee seeks to achieve bank reserve and money market conditions consistent with more rapid growth in monetary aggregates over the months ahead than has occurred in recent months.	None Absent and not voting: Mr. Hayes. (Mr. Debs voted as alternate for Mr. Hayes.)
February 19	. . . to foster financial conditions conductive to cushioning recessionary tendencies and stimulating economic recovery, while resisting inflationary pressures and working toward equilibrium in the country's balance of payments.	. . . while taking account of developments in domestic and international financial markets, the Committee seeks to achieve bank reserve and money market conditions consistent with more rapid growth in monetary aggregates over the months ahead than has occurred in recent months.	None Absent and not voting: Mr. Sheehan.
March 18	. . . to foster financial conditions conducive to stimulating economic recovery, while resisting inflationary pressures and working toward equilibrium in the country's balance of payments.	No Change	Messrs. Bucher, Eastburn, and Sheehan dissented from this action because they believed that the economic situation and outlook together with recent slow growth in the monetary aggregates called for more aggressive efforts in the near term to achieve the Committee's longer-run objectives for the aggregates.
April 14-15	No Change	. . . while taking account of the forthcoming Treasury financing and of developments in domestic and international financial markets, the Committee seeks to achieve bank reserve and money market conditions consistent with somewhat more rapid growth in monetary aggregates over the months ahead than has occurred on average in recent months.	Mr. Eastburn: While he believed that firmer money market conditions might prove to be necessary later on in the year, he thought any such firming would be inappropriate at this time, given the sensitive state of financial markets, the continued weakness in the economy, and his preference for seeking more rapid growth in the monetary aggregates in the near term than would be desirable over the longer run. Absent and not voting: Messrs. Bucher and Sheehan.
May 20	No Change	. . . while taking account of developments in domestic and international financial markets, the Committee seeks to maintain about the prevailing money market conditions over the period immediately ahead, provided that monetary aggregates generally appear to be growing within currently acceptable short-run ranges of tolerance.	None Absent and not voting: Mr. Sheehan.
June 16-17	No Change	. . . while taking account of developments in domestic and international financial markets, the Committee seeks to achieve bank reserve and money market conditions consistent with moderate growth in monetary aggregates over the months ahead.	Messrs. Bucher and Coldwell dissented from this action because they believed that a tightening in money market conditions and the associated increase in short-term interest rates would be premature at this time. . . . Absent and not voting: Mr. Hayes. (Mr. Debs voted as alternate for Mr. Hayes.)

July 15	No Change	. . . while taking account of the forthcoming Treasury financing and of developments in domestic and international financial markets, the Committee seeks to maintain about the prevailing bank reserve and money market conditions over the period immediately ahead, provided that growth in monetary aggregates appears to be slowing substantially from the bulge during the second quarter.	Mr. Holland . . . preferred to maintain bank reserve and money market conditions in the inter-meeting period closer to those now prevailing, in the expectation that by the next meeting the unwinding of the recent bulge in monetary aggregates caused by unusual Treasury payments would have proceeded far enough to permit monetary policy decisions to be related more closely to underlying trends in the aggregates. Absent and not voting: Messrs. Hayes and Mitchell. (Mr. Debs voted as alternate for Mr. Hayes.)
August 19	. . . to foster financial conditions conducive to stimulating economic recovery, while resisting inflationary pressures and contributing to a sustainable pattern of international transactions.	. . . while taking account of developments in domestic and international financial markets, the Committee seeks to achieve bank reserve and money market conditions consistent with moderate growth in monetary aggregates over the months ahead.	None
September 16	No Change	No Change	None
October 21	. . . to foster financial conditions that will encourage continued economic recovery, while resisting inflationary pressures and contributing to a sustainable pattern of international transactions.	No Change	None Absent and not voting: Mr. Bucher.
November 18	No Change	. . . while taking more than usual account of developments in domestic and international financial markets, the Committee seeks to achieve bank reserve and money market conditions consistent with moderate growth in monetary aggregates over the months ahead.	Messrs. Volcker and Jackson dissented from this action because they thought prevailing money market conditions should be maintained for the time being, in part because of the current uncertainties about the short-run relationship between monetary growth and interest rates. Mr. Eastburn dissented because he believed that the System should be more aggressive in supplying reserves in order to compensate for recent short-falls in the rate of monetary expansion from the Committee's longer-run growth ranges.
December 16	No Change	. . . while taking account of developments in domestic and international financial markets, the Committee seeks to maintain prevailing bank reserve and money market conditions over the period immediately ahead, provided that monetary aggregates appear to be growing at about the rates currently expected.	None Absent and not voting: Mr. Bucher.

bates and one-time payments to social security recipients in the second half of June. A higher Federal funds range was specified. The June-July tolerance ranges for M_1 and M_2 were not very different from the ranges specified at the May meeting. The lower limit of the M_1 tolerance range was lowered by ½ percentage point while the upper limit of the M_2 tolerance range was raised by ½ percentage point. Two members of the Committee dissented from these actions because they believed the tightening of money market conditions would be premature.

On June 26, as it appeared that the aggregates would exceed the upper limits of their tolerance ranges and the Federal funds rate would approach its upper limit, Chairman Burns recommended, "that the upper limit of the funds rate constraint be raised to 6¼ per cent, on the understanding that the additional leeway would be used only in the event that another week's data confirmed excessive strength in the monetary aggregates." Three members of the Committee did not concur with the Chairman's recommendation. The aggregate M_1 remained within its June-July range, but M_2 exceeded the upper limits of its tolerance range. The Federal funds rate deviated slightly from its range following the June 26 modification.

At the July meeting staff analysis stated that "growth in monetary aggregates would slow considerably in July from the extremely rapid pace in May and June associated with the Federal income tax rebates and social security payments." The FOMC decided again to put the growth of the aggregates in a *proviso* clause in the July directive, specifying that,

> the Committee seeks to maintain about the prevailing bank reserve and money market conditions over the period immediately ahead, *provided that* growth in monetary aggregates appears to be slowing substantially from the bulge during the second quarter. (emphasis added)

The tolerance ranges for M_1 and M_2 were lowered for the July - August period and the Federal funds rate range was raised, with limits set at 5½ and 6¾ percent. The aggregate M_2 fell below the lower limit of its tolerance range while M_1 grew near the midpoint of its range and the Federal funds rate remained within its tolerance range during the intermeeting period.

Growth of both M_1 and M_2 only once exceeded the limits of the two-month tolerance ranges specified at the three FOMC meetings in the period from May through July.

August — December: Moderation

Staff projections of output and prices were modified somewhat as time progressed from the August to the December FOMC meeting. In August and September, projections suggested strong expansion of output in the fourth quarter and a somewhat more rapid rate of price increase in the third and fourth quarters. By October, however, the projections suggested less rapid expansion in output during the fourth than in the third quarter, and further moderate growth in the first half of 1976. Additionally, the projections available at the October meeting suggested that price increases through mid-1976, although still rapid, would be below the rate in third quarter 1975. At the November and December meetings staff projections indicated a slowing in the rate of price increase through the first half of 1976. The desire for short-run rapid growth in the aggregates evidenced in Committee directives earlier in the year gave way to directives calling for ". . . bank reserve and money market conditions consistent with *moderate* growth in monetary aggregates over the months ahead." (emphasis added)

Short-run tolerance ranges established by the FOMC took on new characteristics in the August through December period. At several meetings the FOMC specified both inner and outer ranges of tolerance for the Federal funds rate. The outer ranges were as wide as 1¼ percentage points or as narrow as one percentage point. The new development, however, was the specification of inner ranges, areas within the outer ranges where the Committee desired to keep the Federal funds rate. For example, at the August meeting the outer range was established between 5¾ and 7 percent. The inner range was set between 6⅛ and 6¼ percent — a very narrow target. In fact, at the December meeting the inner range was not even a range, but a specific level at which the Committee wished to stabilize the Federal funds rate "unless rates of growth in the monetary aggregates appeared to be deviating significantly from the midpoints of their specified ranges." During this period the width of the two-month tolerance ranges for growth of the aggregates were rather broad, varying from 2½ to 4 percentage points.

At the August meeting the Committee decided that moderate growth of the aggregates would be appropriate short-run policy. In the course of the Committee's discussion, it was suggested that

> financial markets had overreacted to the minor tightening in bank reserve and money market conditions

> that had occurred over the past 2 months; that financial markets in general were unsettled, in part because of the financial problems of New York City and the possible repercussions of those problems; and that interest rates were high for this stage of the business cycle.

The tolerance range for M_1 was raised to 4½ to 7 percent for the August-September period, an upward movement from the 3 to 5½ percent range established at the previous meeting. The upper and lower limits of the tolerance range for M_2 were also raised, but only by ¼ percentage point at each end. The new range was set between 8¼ and 10¾ percent. The Federal funds rate range was raised and made subject to the provision "that operations would not be directed toward establishing reserve conditions consistent with a movement in the rate above or below the current 6⅛ to 6¼ per cent area unless it appeared that in the August - September period growth in the monetary aggregates would be substantially stronger or weaker than now expected."

On September 5, "the available data suggested that in the August-September period M_1 would grow at a rate in the lower part of the range of tolerance that had been specified by the Committee and that M_2 would grow at a rate just below the lower limits of its range." To lower the Federal funds range outside the narrow range established, however, was viewed as inappropriate: "In view of the likelihood of substantial strengthening in demands for money and credit over coming months, it appeared that a decline in the Federal funds rate at this time might have to be reversed shortly — a sequence that could seriously compound uncertainties in financial markets." The Chairman recommended and members concurred that "the Manager be instructed to continue to maintain reserve conditions consistent with a Federal funds rate in the 6⅛ to 6¼ per cent area, while leaning toward the lower figure." The growth of both M_1 and M_2 fell below the lower limits of the tolerance ranges in the August - September period as the preliminary data had suggested, while the Federal funds rate remained within its outer range during the entire intermeeting period and within the inner range in two of the four weeks.

A moderate growth in the aggregates was again specified as the appropriate two-month policy at the September meeting in view of ". . . indications that economic activity was now on the increase and of the likelihood that expansion in nominal GNP over coming quarters would be associated with considerable strengthening in the demand for money and credit." The tolerance range for M_1 was raised, but that for M_2 was lowered. The lower limit of the Federal funds rate range was raised slightly. The upper limit remained at 7 percent on the condition "that if developments with respect to the aggregates suggested the need to move the Federal funds rate above 6¾ per cent, open market operations toward that end would not be undertaken until after the Chairman had consulted with the Committee."

While concern at the September FOMC meeting had been centered on the upper limit of the Federal funds range, on October 2 the Chairman recommended reduction of the lower limit of the Federal funds rate range to 5¾ percent in view of the slow growth of the aggregates, a course of action he had recommended against in the previous month because the circumstances were believed to be only temporary. Over the September-October period M_1 and M_2 again fell well below the lower limits of the tolerance range, suggesting that the Federal funds range had not been lowered far enough. The Federal funds rate deviated slightly from its range near the end of the intermeeting period.

At the October meeting some members

> expressed doubt concerning the strength of recovery in economic activity over the quarters immediately ahead, in part because of the possible repercussions of New York's financial problems and because of the relatively high levels of market interest rates prevailing at this early stage of the recovery. It was noted, moreover, that inflation remained a serious problem.

The Committee again decided that moderate growth of the aggregates was the appropriate policy for the next two-month period. Tolerance ranges for M_1 and M_2 were lowered for the October - November period and the Federal funds rate range was lowered also. The Federal funds rate range was specified with the condition that "unless new data suggested that growth in the monetary aggregates in the October - November period would exceed the rates now expected, operations would be directed toward moving the Federal funds rate down to 5½ per cent by the end of the statement week following this meeting." Both M_1 and M_2 stayed within their tolerance ranges in the October - November period. The Federal funds rate remained near the lower limits of its range in the intermeeting period.

During October the Board of Governors announced a reserve requirement change which would "help to meet the seasonal need for bank reserves over the coming weeks and to facilitate moderate growth in the monetary aggregates."

Staff analysis at the November FOMC meeting suggested that ". . . in view of the projected expansion in GNP, M_1 was likely to grow substanially faster over the months ahead than it had over the immediately preceding months." Committee members expressed differing views over which of the dual operating targets, interest rates or money growth, should be the primary focus of attention. Some contended that ". . . changing relationships tended to make monetary growth rates unreliable guides to monetary policy at present." Others, "who preferred to continue to base operating decisions in the period immediately ahead primarily on the behavior of the monetary aggregates, expressed concern about their sluggish growth over recent months."

The November directive issued by the FOMC called for moderate growth of the aggregates ". . . while taking more than usual account of developments in domestic and international financial markets. . . ." The tolerance ranges for M_1 and M_2 were raised substantially. The limits of the range for M_1 were set at 6 and 10 percent, compared to the 3 to 7 percent range established at the previous meeting. Likewise, the M_2 range was set at 7½ to10½ percent, much higher than the 5½ to 8½ percent range set for the previous two-month period. The Federal funds rate target was specified as a range somewhat lower than during the previous period; however, System operations were to be directed at hitting the midpoint of that range (5 percent). During the November - December period the growth of both M_1 and M_2 fell below the lower limit of their tolerance ranges. In contrast, the Federal funds rate remained within its 4½ to 5½ percent range.

The Board of Governors announced a change in Regulations D and Q effective on November 10. This change permitted corporations, partnerships, and other profit-making organizations to maintain savings accounts at member banks subject to a $150,000 ceiling on the size of the accounts. In light of this and other developments, staff analysis at the December FOMC meeting provided technical advice about the use of monetary measures:

> . . . in the period immediately ahead growth in the demand for money would be constrained by continuation of the shift in business deposits from demand accounts to savings accounts in response to the recent changes in regulations. Because the magnitude and duration of the shift were highly uncertain, however, estimates of the effects on M_1 were subject to a large margin of error. It was also noted that projections of monetary growth for the month of December were more uncertain than those for other months because many business and financial institutions customarily made adjustments to cash and debt positions for purposes of year-end statements.

Members of the Committee again were somewhat divided over which of the operating targets should receive more emphasis — money market conditions or monetary aggregates. The target ranges for M_1 and M_2 were lowered for the December - January period.[23] Operations were to be directed at maintaining the Federal funds rate at 5¼ percent, its current level, unless the aggregates deviated significantly from the midpoints of their ranges. If necessary the Federal funds rate would be allowed to vary between 4½ and 5½ percent.

By January 12, 1976, "the available data suggested that in the December-January period both M_1 and M_2 would grow at rates below the lower limits of the ranges of tolerance that had been specified by the Committee."

> The significance of the apparent weakness in the aggregates was highly uncertain, because of the effects of the recent introduction of business savings accounts at commercial banks and because the revised seasonal adjustment factors employed were still under review. The problems of seasonal adjustment were particularly acute for the months of December and January. For these technical reasons, and in view of more favorable recent economic statistics — including the latest data on employment and retail sales — Chairman Burns recommended that the Manager be instructed to hold the weekly average Federal funds rate at the approximate level of 4¾ per cent until the Committee's next meeting. All members of the Committee, with the exceptions of Messrs. Eastburn and MacLaury, concurred in the Chairman's recommendation.

The reported data later indicated that both M_1 M_2 grew at rates below the lower limits of the target range, while the Federal funds rate remained within its range during the intermeeting period.

The aims of short-run monetary actions in the August to December period were stated in terms of a moderate position (see Exhibit I). However, tolerance ranges for the monetary aggregates established to achieve these aims were not successfully attained during much of this period. Both M_1 and M_2 grew at rates below the limits of their two-month tolerance ranges in four out of five cases in the August to December period. Failure of the monetary aggregates to grow within the desired ranges in the November-December and December-January periods correspond-

[23] These targets were formulated taking into account the new seasonal factors which were to be published in January.

ed with the special attention given to money market conditions in the November directive. In addition, data which became available after the August and December meetings, as cited above from the "Record of Policy Actions," gave advance indications that the aggregates were growing below or at the low end of their tolerance ranges. On these two occasions Chairman Burns recommended against lowering the Federal funds rate range for reasons that have previously been mentioned. Following the September FOMC meeting, steps were taken to reduce the lower limit of the Federal funds rate range by ¼ percent, when data available subsequent to the meeting indicated that the aggregates would grow below the lower limits of their tolerance ranges. However, these steps were not enough, since later data indicated that both M_1 and M_2 fell below the September-October tolerance ranges specified by the Committee.

A CONSTRAINT ON MONETARY POLICY ACTIONS

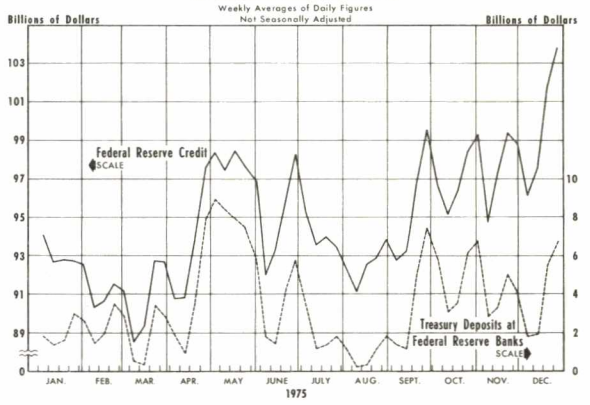
The year began with concerns about the implication for money growth of a projected Federal deficit of over $80 billion. If the Federal Reserve were to monetize even 15 percent of the deficit — much less than they had on average since 1965 — a 15 percent rate of growth for M_1 was implied.[24] As the year progressed, however, it became evident that private credit demands were extremely weak, allowing a greater portion of the Government's debt to be purchased by the private sector without raising interest rates. The portion of the debt monetized was considerably less than at first was expected.

Thus the financing of the deficit did not confront the Federal Reserve with the choice between excessive expansion in the money supply or substantial increases in interest rates. However, the sheer volume of Treasury operations did result in a number of complications for Federal Reserve policy. Responding to pressure from Congress, the Treasury sought to minimize its noninterest earning deposits at commercial banks, and sought, instead, to keep a larger percentage of its deposits at Federal Reserve Banks. The consequences of this action were pointed out by Under Secretary of the Treasury Edwin H. Yeo:

> While this action of reducing balances [at commercial banks] has resulted in a reasonable equilibrium between the value of balances and the value of services, it has been accomplished at the expense of seriously complicating the Federal Reserve System's

[24]Susan R. Roesch, "The Monetary — Fiscal Mix Through Mid-1976," this *Review* (August 1975), pp. 2-7.

Chart IV
Federal Reserve Credit and Treasury Deposits at Federal Reserve Banks
Weekly Averages of Daily Figures
Not Seasonally Adjusted



management of bank reserves and other monetary aggregates. . . What has happened is that the swings in the Treasury's cash balance at the Federal Reserve Banks have forced the Federal Reserve System to drastically increase its open market operations in order to nullify the impact of the swings on bank reserves. This has created confusion in the market as to which Federal Reserve actions are to offset swings in Treasury cash and which are to carry out monetary policy.[25]

As Chart IV indicates the changes in Federal Reserve holdings of Government securities closely parallel the changes in Treasury balances at Federal Reserve Banks. These two items have offsetting effects on bank reserves. Increases in Federal Reserve holdings of Government securities increase bank reserves, while increases in Treasury deposits at Federal Reserve Banks decrease bank reserves.

Not only did the necessity of offsetting Treasury actions complicate the implementation of monetary policy, but the size of Treasury operations resulting from the tremendous deficit added further to the problems. On two occasions the size of open market operations required to offset Treasury operations made it necessary for the Manager to request increases in the limits on changes in holdings of U. S. Government and Federal agency securities (April 30 and October 3). On two other occasions the Manager requested increases in the ceiling on Federal Reserve holdings of short-term certificates of indebtedness purchased from the Treasury (March 10 and August 6). This was necessary to allow the Treasury to borrow from the Federal Reserve when its cash balances ran low.

[25]"Statement of the Honorable Edwin H. Yeo, III, Under Secretary of the Treasury for Monetary Affairs, before the Subcommittee on Domestic Monetary Policy of the House Committee on Banking, Currency and Housing," The Department of the Treasury *News*, September 25, 1975.

SUMMARY AND CONCLUSION

Monetary policy in 1975 did achieve the longer-run policy goals set forth by the FOMC in its January directive: ". . . to foster financial conditions conducive to cushioning recessionary tendencies and stimulating economic recovery." The recession "bottomed-out" and economic activity rebounded during 1975. In addition, the renewal of economic activity has been achieved, so far, without an acceleration in the rate of inflation.

Directives issued by the FOMC indicated that the short-run aims of monetary actions were expansionary in the first four months of 1975 and more moderate during the remainder of the year. These short-run aims were formulated in terms of tolerance ranges for the Federal funds rate and growth rates for monetary aggregates. If these aims are evaluated with respect to the attainment of Federal funds rate levels within specified ranges, the FOMC was extremely successful in achieving its short-run aims. On the other hand, the FOMC was less successful in attaining the growth of the monetary aggregates within their desired ranges. In six of the twelve cases, the growth rates of *both* M_1 and M_2 were outside their tolerance ranges — above the ranges in one instance and below the ranges on five occasions.

Among the most significant developments regarding the implementation of monetary policy during 1975 were those which centered around the relative importance of the interest rate and money growth rate targets. While the money growth ranges were generally two or three percentage points in width at the beginning of the year, by the end of the year they tended to be three or four percentage points in width. In contrast, the Federal funds rate ranges at the end of the year actually consisted of two ranges — an outer range (generally one percentage point in width) and a narrower inner range (¼ percentage point or narrower). Institutional changes, which allowed businesses to establish savings accounts at commercial banks, and problems relating to seasonal fluctuations caused some members of the FOMC at the end of 1975 to question the relevance of M_1 data and to pay more attention to money market conditions in the implementation of monetary policy.

The formulation and implementation of monetary policy received wider attention in 1975 than in previous years. Congressional concern over monetary policy was expressed in House Concurrent Resolution 133 and in subsequent quarterly consultations between Chairman Burns and the Congressional Committees. In response to Congressional interest, the FOMC began to formulate long-term targets for the monetary aggregates and shortened the disclosure period of the FOMC "Record of Policy Actions" from 90 to 45 days. While the new long-term targets, and much of the public discussion of monetary policy in 1975, centered on the growth of the monetary aggregates, the FOMC pursued operating procedures specified in terms of both aggregates and money market conditions. Although attention was given to the aggregates, the record shows that the concern of the FOMC was directed primarily at money market conditions.

WORKING PAPERS

Working Papers 2-18 are available at a cost of $1.00 per copy.* To order, please send check or money order, made payable to the Federal Reserve Bank of St. Louis, to the following address:

Research Department
Federal Reserve Bank of St. Louis
P. O. Box 442
St. Louis, Mo. 63166

Number	Title of Working Paper	Release Date
2	Chapter on Agribusiness Prepared for American Institute of Banking Textbook *Agricultural Credit*	Aug. 1967
3	Monetary Policy and the Business Cycle in Post-war Japan (Revised)	April 1968
4	The Influence of Fiscal and Monetary Actions on Aggregate Demand: A Quantitative Appraisal (Revised)	March 1969
5	The Development of Explanatory Economic Hypotheses for Monetary Management	Nov. 1968
6	A Model of the Markets for Consumer Instalment Credit and New Automobiles	Jan. 1969
7	A Summary of the Brunner-Meltzer Non-Linear Money Supply Hypothesis (Revised)	May 1969
8	The Market For Deposit-Type Financial Assets	March 1969
9	Impact of Changing Conditions on Life Insurance Companies	March 1969
10	Adjustments of Selected Markets in Tight Money Periods	June 1969
11	A Study of Money Stock Control	July 1969
12	Empirical Test on the Effect of Changes in Money Supply in Developing Economies	May 1970
13	Historical Analysis of the "Crowding Out" of Private Expenditures by Fiscal Policy Actions	January 1971
14	Money Stock Control and Its Implications for Monetary Policy: Technical Appendices	October 1971
15	The Influence of Current and Potential Competition on a Commercial Bank's Operating Efficiency	January 1972
16	Commercial Banking in Metropolitan Areas: A Study of the Chicago SMSA	August 1972
17	The Effect of Market Expectations on Employment, Wages, and Prices	August 1973
18	Deposit Relationships and Bank Portfolio Selection	Sept. 1974

*Working Paper No. 1 is available in our Reprint Series as Reprint No. 24, "The Three Approaches to Money Stock Analysis."