

Monetary Growth Objectives

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Recently, there has been considerable interest in monetary aggregate growth in relation to the monetary growth objectives adopted by the Federal Open Market Committee (FOMC).¹ This article reviews the FOMC's success in achieving its monetary growth objectives since first publicly announcing its longer-run monetary aggregate growth ranges in May 1975. To make such an assessment, it is necessary to first distinguish between the FOMC's longer-run and short-run monetary growth intentions. To accomplish this, we begin with a "primer" on the monetary policy process. Its aim is to convey broadly how the process works without delving extensively into either the theoretical underpinnings or technical details, both of which

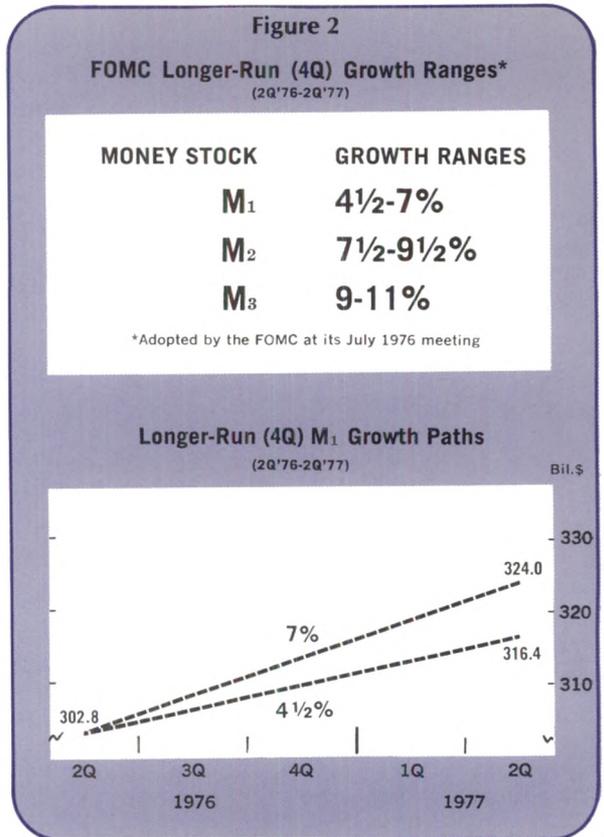
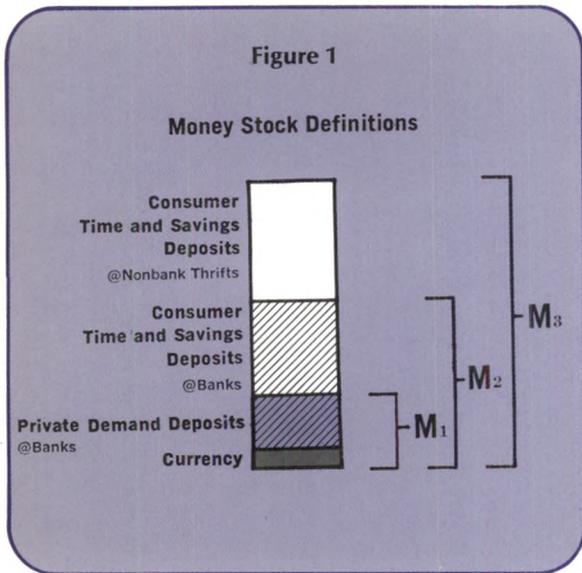
have been covered in other Federal Reserve publications.² This primer, just as any other, runs the danger of making a complicated and sophisticated process seem much simpler and more mechanical than it really is. Monetary policy involves much more than simply tracking monetary aggregate growth, although that is a very important part of the process. An abstraction from many of the difficulties and subtleties is made so that the basic process is more understandable.

LONGER-RUN STRATEGY

This examination of the monetary policy process begins with the Fed's longer-run

¹The 12-member FOMC consists of the seven members of the System's Board of Governors, the president of the Federal Reserve Bank of New York and four other regional Reserve Bank presidents on a rotating basis. The seven nonvoting Reserve Bank presidents participate fully in FOMC discussions.

²For more technical descriptions of the monetary policy process, see Raymond E. Lombra and Raymond G. Torto, "The Strategy of Monetary Policy," *Economic Review*, Federal Reserve Bank of Richmond, September/October 1975; William Poole, "The Making of Monetary Policy: Description and Analysis," *New England Economic Review*, Federal Reserve Bank of Boston, March/April 1975; "Numerical Specifications of Financial Variables and their Role in Monetary Policy," *Federal Reserve Bulletin*, May 1974, pp. 333-37.



strategy for monetary growth. Since May 1975, in accordance with House Concurrent Resolution 133, Chairman Burns has been testifying quarterly to Congress about the longer-run monetary growth ranges adopted by the FOMC for the period four quarters ahead. At approximate quarterly intervals, therefore, the FOMC reviews its longer-run monetary growth ranges in light of interim economic and financial developments. The Committee is aided in its discussion by staff projections of the likely differential effects of alternative monetary growth paths on the rates of unemployment, inflation and real economic growth four to six quarters into the future. After thorough deliberation, during which any FOMC member may question the staff's projections and put forth his own, specific longer-run monetary and credit growth objectives are adopted. The selected growth ranges reflect the FOMC's best assessment of the ranges most consistent at that time with the nation's broad economic goals of price stability, low unemployment and sustained real economic growth. The monetary and credit objectives are expressed as percentage growth rate ranges for the M₁, M₂ and M₃ definitions of the nation's money stock

and for the bank credit proxy for the upcoming four-quarter period. (See Figure 1 for definitions of M₁, M₂, M₃.)

The top box in Figure 2 shows the longer-run monetary growth ranges adopted by the FOMC at its July 1976 meeting for the second quarter of 1976 to the second quarter of 1977 period. The M₁ range was set at 4½ to 7 percent; M₂ at 7½ to 9½ percent; M₃ at 9 to 11 percent; and the bank credit proxy at 5 to 8 percent, all based on their second-quarter 1976 averages. The bottom panel in Figure 2 illustrates the growth range for M₁ with a "growth ray." The upper path represents a 7-percent growth, and the lower path a 4½-percent growth in M₁ from its second-quarter 1976 average of \$303 billion (the apex of the ray). The FOMC expected actual growth of M₁ to fall somewhere between the upper and lower growth paths, implying that the level of M₁ should average somewhere between \$316 billion and

\$324 billion in the second quarter of 1977. Similar growth rays are constructed for M_2 , M_3 and the bank credit proxy.

SHORT-RUN STRATEGY

Having selected a set of longer-run monetary objectives thought to be consistent with its broad economic goals, the FOMC must then develop short-run operating instructions for the Open Market Trading Desk, located at the Federal Reserve Bank of New York. These instructions are designed to achieve the Committee's longer-run monetary growth ranges with a minimum of short-run interest rate variability. Meeting each month, the FOMC reviews recent economic and financial developments, both domestically and internationally. The Committee also considers the likely influence of transitory factors, such as Treasury cash management behavior, on near-term monetary growth and the current levels of M_1 and M_2 relative to their respective longer-run growth paths. The FOMC discusses several alternative short-run M_1 and M_2 growth ranges, each consistent with the ultimate attainment of the Committee's longer-run growth objectives for M_1 and M_2 , but following different near-term growth patterns. Combining judgmental evaluations with econometric estimates of the past relationship between monetary aggregate growth and money market conditions, the Committee's staff estimates a federal funds rate range it believes is consistent with each alternative set of M_1 and M_2 short-run growth ranges. At the conclusion of these discussions, the FOMC selects a preferred set of short-run M_1 and M_2 growth ranges, often somewhat different from the alternative short-run monetary growth ranges presented by its staff. The short-run growth ranges are expressed as two-month average growth bands covering the month of the meeting and the following month. The FOMC then directs the Desk Manager to conduct open market operations aimed at maintaining the Federal funds rate within the range associated with the selected set of short-run M_1 and M_2 growth ranges³. If it subsequently becomes apparent that the short-run monetary growth and Federal

funds rate ranges are turning out to be inconsistent, the Desk Manager notifies the Committee Chairman. If an intermeeting change in the funds rate range seems necessary, the Chairman will resolve the question with other FOMC members in a special telephone conference or by telegram. Intermeeting adjustments of this type occur infrequently.

FOMC DIRECTIVE

The Fed funds rate is the "handle" the FOMC uses to try to achieve its short-run monetary growth targets. The Desk will ordinarily be directed to hold the funds rate near its prevailing level so long as M_1 and M_2 are projected by the staff to grow within their specified two-month ranges. If, as the intermeeting period progresses, the projected M_1 and M_2 growth rates appear to move above (below) the upper (lower) ends of their respective two-month tolerance ranges, the Desk would ordinarily adjust reserve availability consistent with pushing the funds rate toward the upper (lower) end of its target range. However, the FOMC may instruct the Desk to maintain the prevailing funds rate even when projected monetary growth is outside its short-run growth range if (1) the Committee prefers to give priority to money market conditions or (2) the Committee questions the accuracy of the two-month M_1 and M_2 projections and prefers to wait for more confirming data on monetary growth.

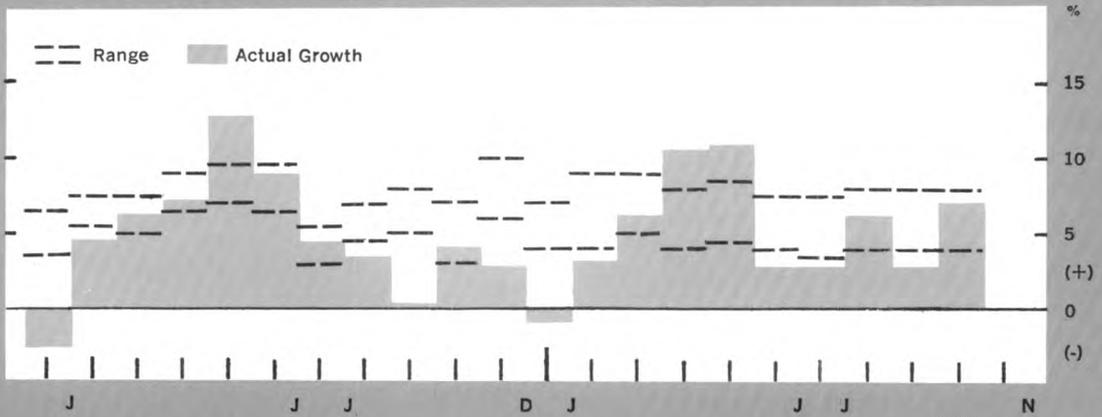
Desk open market operations—primarily purchases or sales of U. S. government securities—affect the amount of reserves available to the banking system and, thereby, influence movements in the Federal funds rate. Other policy tools, such as reserve requirement ratios and the discount rate, are available and are used occasionally, but open market operations provide the most flexible and frequently used means for implementing policy.

An example illustrates how this process

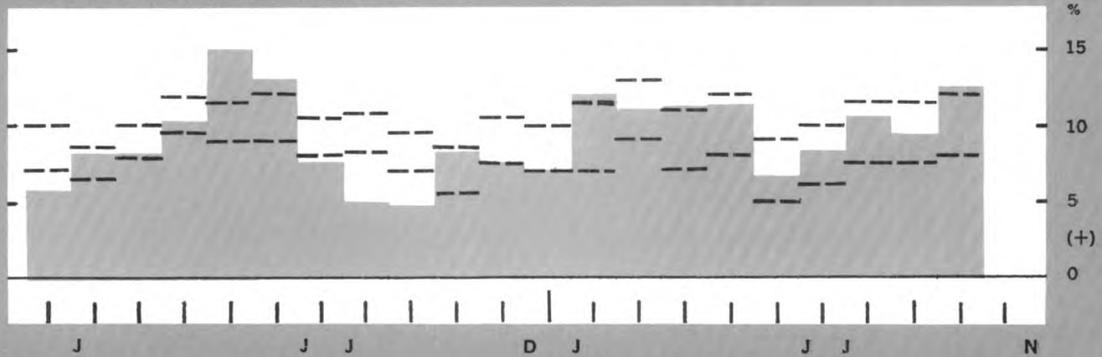
³As an example, at the September 1976 meeting, the FOMC specified that M_1 should grow between 4 and 8 percent and M_2 between 8 and 12 percent at an annual rate in the September-October period. A funds rate between 4³/₄ and 5¹/₂ percent in the intermeeting period was considered to be consistent with those short-run monetary growth bands.

Figure 3

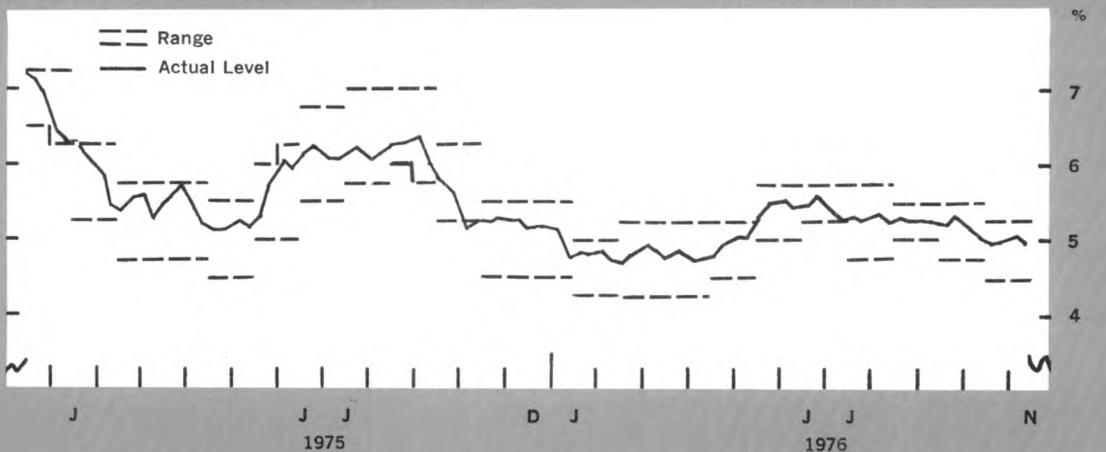
FOMC Short-Run (2-Mo.) M₁ Ranges



FOMC Short-Run (2-Mo.) M₂ Ranges



FOMC Short-Run Fed Funds Ranges



works. Assume that M₁ and M₂ are projected to grow within their respective two-month tolerance ranges and the Desk is instructed to maintain the funds rate at about its prevailing level. If other factors, such as

changes in float or U. S. Treasury cash balances, are draining reserves from the banking system and putting upward pressure on the funds rate, the Desk would buy U. S. government securities from U. S. government securities dealers,

a so-called open market *purchase*.⁴ The Fed normally pays for the securities with immediately available funds, which the selling bond dealer deposits in his bank, increasing the bank's reserves and, in turn, reserves in the commercial banking system. This mitigates the reserve drain from other sources and helps relieve the upward pressure on the funds rate. In the opposite case, where changes in these other factors are supplying reserves to the banking system and putting downward pressure on the funds rate, the Desk would *sell* U. S. government securities to the dealers, a so-called open market *sale*.⁵ When each dealer pays for his acquired securities, this decreases the dealer's bank's reserves and thus decreases reserves in the commercial banking system. This helps offset the reserves supplied by other factors and tends to relieve the downward pressure on the Fed funds rate.

SHORT-RUN GROWTH RANGES

The top panel in Figure 3 illustrates the actual growth in M_1 and its short-run (two-month) growth bands specified by the FOMC since early 1975. The height of each vertical bar represents the annualized two-month growth in M_1 during the two months in which that bar is centered. The dashed horizontal lines illustrate the upper- and lower-tolerance boundaries set by the FOMC for each two-month period. The middle panel shows similar information for M_2 . These charts clearly show that the Fed has had some difficulty achieving its two-month monetary growth ranges. In the 21 two-month periods since the beginning of 1975, M_1 and M_2 growth fell within their respective ranges only eight and 12 times, respectively. The Fed has undershot its short-run M_1 range in 10 of the other 13 bimonthly periods, while the nine other two-month periods for M_2 are nearly evenly split between

over- and undershoots. The Desk's success has been much greater in achieving the FOMC's Federal funds rate range, as the bottom panel in Figure 3 clearly shows. Almost without exception, the weekly average Fed funds rate has been within its tolerance range since the beginning of 1975.

Although the Desk has consistently achieved the FOMC's prescribed funds rate range, monetary growth has more often than not been outside the FOMC's short-run ranges. These monetary-growth misses have at least two different causes. First, the FOMC and Desk Manager must act on preliminary money stock data available to them at the time. Subsequent data revisions and benchmarks sometimes change the M_1 and M_2 growth rates, causing them to fall outside their respective short-run ranges. Second, and more importantly, the relationship between the Fed funds rate and monetary growth is not precise over periods as short as two months. Other factors influencing monetary growth, such as the national income growth and Treasury cash balances, shift erratically during such a short period of time. Additionally, changes in the Fed funds rate are generally thought to affect growth in M_1 and M_2 with a lag that runs beyond the two-month control period. Closer short-run control could probably be exercised over monetary growth if the FOMC were willing to tolerate larger and more erratic intermeeting movements in the Fed funds rate by establishing a wider range of tolerance for it. However, the greater variation in the Fed funds rate would likely contribute to greater interest rate variability in other financial markets as well, in conflict with the FOMC's desire to avoid widely fluctuating money and capital market conditions in the short-run.

LONGER-RUN GROWTH RANGES

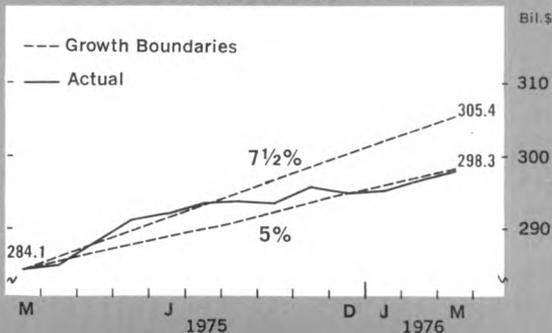
The method used here to assess the degree to which the Federal Reserve has achieved its longer-run monetary objectives is to compare the levels of M_1 , M_2 and M_3 to those implied by their respective upper and lower growth paths at the *end* of the period to which those growth ranges apply. This allows an assessment to be made only after each period ends and thus the discussion is limited to the first three

⁴The Desk often buys U. S. government securities under the condition that the dealers agree to buy the securities back within a short time period. Such an arrangement is referred to as a Repurchase Agreement (RP). It has the advantage of temporarily supplying reserves to the banking system when the Fed feels those reserves are needed for only a short period of time.

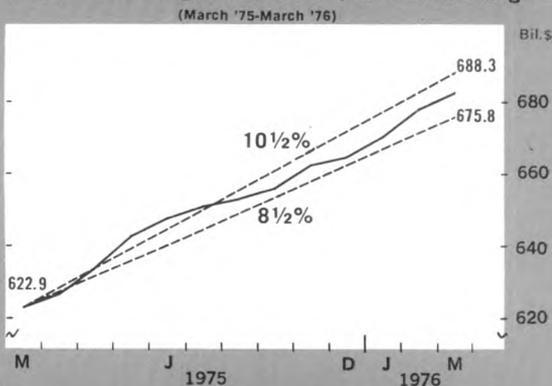
⁵If the Desk agrees to buy the securities back from the dealers after a short period of time, this transaction is referred to as a matched sale-purchase transaction.

Figure 4

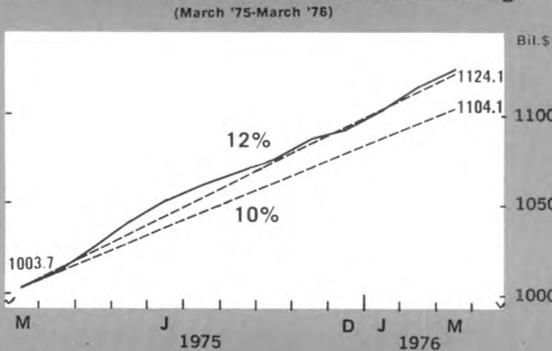
Initial FOMC Longer-Run (12-Mo.) M₁ Growth Range
(March '75-March '76)



Initial FOMC Longer-Run (12-Mo.) M₂ Growth Range
(March '75-March '76)



Initial FOMC Longer-Run (12-Mo.) M₃ Growth Range
(March '75-March '76)



sets of longer-run monetary objectives adopted by the FOMC. One drawback of this approach is that it does not take explicit account of the interim growth path of the monetary aggregates between the beginning and end of each period. However, tentative evidence suggests that fairly large monthly or quarterly deviations from the longer-run objectives do no significant harm to the economy, if monetary growth over perhaps a four-quarter period averages out within the FOMC's growth ranges. While the assessment here gives greater emphasis to end-of-period levels compared to those levels implied by the FOMC's upper and lower growth paths, the "growth ray" diagram outlined earlier is used to illustrate the interim pattern of monetary aggregate growth.

At its April 1975 meeting, the FOMC adopted initial longer-run (12-month) growth ranges of 5 to 7 1/2 percent for M₁, 8 1/2 to 10 1/2 percent for M₂, and 10 to 12 percent for M₃, based on their March 1975 levels. Figure 4 shows the March 1975 to March 1976 growth of M₁ (top panel), M₂ (middle panel) and M₃ (bottom panel) in relation to their respective longer-run "growth rays." Despite fluctuations in the month-to-month growth rates during this period, the March 1976 level of M₁ was nearly equal to that called for by its lower path; the March 1976 level of M₂ was at the midpoint of its longer-run growth range; and the March 1976 level of M₃ was just slightly above that consistent with its upper growth path.

At its July 1975 meeting, the FOMC considered the economic situation essentially unchanged from several months earlier and, therefore, maintained the 5- to 7 1/2, 8 1/2- to 10 1/2- and 10- to 12-percent longer-run ranges for M₁, M₂ and M₃, respectively. However, the base period was changed to the second quarter of 1975, instead of the final month of the base quarter. At its October 1975 meeting, the FOMC again retained a 5- to 7 1/2-percent range for M₁ and moved its base period ahead to the third quarter of 1975. Both the M₂ and M₃ longer-run growth ranges were widened by a one-percentage-point reduction in the lower end and were also based on the third quarter of 1975. These adjustments were made because a rise in market interest rates from heavy Treasury borrowings was expected to moderate savings inflows to depository institutions.

Figure 5 shows the actual quarterly average

growth of M_1 , M_2 and M_3 relative to their respective longer-run ranges for the second quarter 1975-second quarter 1976 (2Q '75-'76) and third quarter 1975-third quarter 1976 (3Q '75-'76) periods. The top panel shows M_1 averaged \$302.8 billion in the second quarter of 1976, within but very near the lower end of its range. In the third quarter of 1976, M_1 averaged \$305.9 billion, about \$1½ billion below the level consistent with the lower end of its longer-run growth range. In other words, M_1 grew by 4½ percent in the 3Q '75-'76 period, slightly less than its 5-percent lower growth rate. The middle panel of Figure 5 indicates that M_2 equaled \$695.0 billion in the second quarter and \$710.9 billion in the third quarter of 1976. This means that M_2 grew 9½ percent in the 2Q '75-'76 period, at the midpoint of its growth range. M_2 grew at a rate slightly above the midpoint of its growth range in the 3Q '75-'76 period. This panel clearly shows second and third quarter 1976 levels of M_2 comfortably within the FOMC's longer-run growth ranges. The bottom panel of Figure 5 shows that the second and third quarter 1976 levels of M_3 were about equal to the levels consistent with the upper ends of the Committee's longer-run growth ranges. That is, M_3 grew by 12 and 11½ percent in the 2Q '75-'76 and 3Q '75-'76 periods, respectively, at the upper limits of the Committee's desired longer-run growth ranges⁶.

An overall assessment of the System's performance in attaining its monetary objectives is complicated by the existence of multiple monetary aggregate growth ranges and multiple time periods to which those ranges apply. However, the results suggest that the FOMC basically achieved its first three sets of publicly announced longer-run monetary growth objectives. ■

⁶At the time of this writing, the FOMC has adopted three other sets of longer-run monetary growth ranges, in every case moving the base period forward one quarter, for time periods not yet ended. Interim comparisons of M_1 , M_2 and M_3 growth relative to their respective longer-run "growth rays" suggest the same pattern noted above: M_1 growth has been about equal to its lower growth rate, M_2 growth has remained within, but toward the upper end of, its growth range and M_3 growth has been at the top of its growth range.

