Monetary Policy and the M2 Target

by Susan A. Black and William T. Gavin

Historically, the monetary targets have been used both as a way to signal intentions about long-term policy goals and as a guide for short-term policy actions. The Federal Reserve has never relied solely on the monetary targets to guide policy in the near term, however. The amount of emphasis has varied, and as policymakers have become more concerned about inflation and later falling as evidence mounted that money demand was becoming unpredictable. From late 1984 until the summer of 1989, M2 was the Federal Reserve’s primary monetary target, but apparently little attention was paid to it as a near-term guide for policy. M2 targets may still be important, however, as a signal of long-term policy intentions.

In 1985 and 1986, the Federal Reserve set a target range for M2 of 6 to 9 percent. The target range was lowered each succeeding year until July 1989, when the preliminary targets were chosen for 1990 (see table 1). Members of the Federal Open Market Committee (FOMC), the central bank’s policymaking arm, have often referred to this deliberate lowering of the monetary target ranges as a signal of the Federal Reserve’s long-term policy objective to gradually lower inflation.

This Economic Commentary reviews the use of the M2 target in recent years and discusses the long-term stance of monetary policy in 1989. We also explain why leaving the target for M2 unchanged for the coming year may still be consistent with continued disinflation.

As 1989 comes to an end, the levels of nominal GNP and the M2 aggregate seem to be in balance, as M2 growth has slowed to a 4 to 5 percent range in the past three years. The Federal Reserve’s tentative target range for M2 growth in 1990 permits ample opportunity for the inflation rate to decline in the next few years.

Since 1984, the FOMC has not placed strong reliance on monetary targets in early warning signals about when to change its policy stance. In fact, the deviation of M2 from the midpoint of its target range has been a contrary indicator of policy actions for most of the last five years. Figure 1 shows the monthly deviations of M2 from the midpoint of its target range, plotted with the monthly changes in the federal funds rate and the discount rate.

M2 grew very rapidly: 8.9 percent in 1985 and 9.4 percent in 1986. The aggregate was well above the midpoint of its target range in these years, yet the Federal Reserve relied heavily on monetary targets to guide policy. Since 1984, the FOMC has not placed strong reliance on monetary targets in early warning signals about when to change its policy stance. In fact, the deviation of M2 from the midpoint of its target range has been a contrary indicator of policy actions for most of the last five years.

Figure 1 shows the monthly deviations of M2 from the midpoint of its target range, plotted with the monthly changes in the federal funds rate and the discount rate. M2 grew very rapidly: 8.9 percent in 1985 and 9.4 percent in 1986. The aggregate was well above the midpoint of its target range throughout 1985 and 1986, yet the federal funds rate and the discount rate declined throughout the period.

In 1987 and 1988, the patterns were reversed. M2 growth slowed to 4.0 percent in 1987 and grew 5.2 percent in 1988. M2 was below the midpoint of its target range in these years, yet the federal funds rate and the discount rate rose steadily.

Since 1982, the official target for open market operations has been the level of seasonal plus adjustment borrowing by banks at the discount window. At a given discount rate, the lower the borrowing target, the easier the monetary policy. Again, except for some technical adjustments in 1985, the relationship between changes in the borrowing target and deviations of M2 from its midpoint shows that the Federal Reserve did not base its policy actions solely on the M2 target. The borrowing target was generally lowered when M2 was indicating rapid monetary expansion, and it was raised when M2 was growing below the midpoint of its target range.

BULK RATE
U.S. Postage Paid
Cleveland, OH
Permit No. 385

Federal Reserve Bank of Cleveland
Research Department
P.O. Box 6387
Cleveland, OH 44101

Address Correction Requested:
Please send corrected mailing label to the above address.

Material may be reprinted provided that the source is credited. Please send copies of reprinted materials to the editor.

Notes
2. The federal funds rate is indirectly, but closely, linked to the Federal Reserve System through its behavior of the federal funds rate and the discount rate. See Robert F. Engle and C.W.J. Granger, "Cointegration and Error Correction: Representation, Estimation and Testing," Econometrica, March 1987, pp. 255-76. It is well known that the Federal Reserve targets most liquid assets held by large asset holders.
5. The FOMC will reconsider its tentative 1990 target ranges at its February 1990 meeting. M2 growth has been averaging nearly 7 percent for the past few months and is expected to continue growing that rapidly. For the FOMC to maintain M2 growth along a disinflationary track, a tightening of monetary policy would be necessary to constrain M2 to its midpoint. Whether additional factors become relevant and compel the FOMC to overtake the signal from M2 remains to be seen.
In every instance between December 1984 and June 1989, the M2 aggregate was above the midpoint of its target range when the FOMC decided to ease policy and was below the midpoint when it decided to tighten the money supply. Clearly, M2 did not play an important role as a short-term guide for policy.

In a break with this pattern, the FOMC's easing in the summer of 1989 was attributed partly to the slow growth in the monetary aggregates. Federal Reserve Chairman Alan Greenspan stated, "While the monetary aggregates may not be preeminent on this list (of economic and financial indicators), they always receive careful consideration in our policy decisions. This is especially true when they exhibit unusual strength or weakness relative to past patterns and relative to our announced ranges. Thus, the very sluggish growth in M2 for the year to date was an important influence in the decision to ease policy in June and July."

This statement suggests that money growth must show extreme behavior for an extended period before it becomes an overriding consideration for policy. However, the extremely high money growth rates in 1985 and 1986 did not induce the FOMC to tighten policy. Rather, as long as current data showed moderate inflation and spending, the FOMC allowed money growth to accelerate. When inflation began to rise in 1987, the rapid money growth was brought to an abrupt halt.

By the summer of 1989, monetary growth had been steady flat for six months. Both inflation and aggregate spending had begun to slow. Even now, we do not know how important slow M2 growth per se was in the decision to ease policy at midyear. Was M2 used as an explanation for policy actions because it happened to move in tandem with the reports of weakening economic activity and peak inflation, or as a basis for policy actions because of its long-term empirical links with inflation and income growth?

### Table 1: M2 Targets and Growth Rates (Percent)

<table>
<thead>
<tr>
<th>Year</th>
<th>Target Range</th>
<th>Actual Growth</th>
<th>Year</th>
<th>Target Range</th>
<th>Actual Growth</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>6 to 9</td>
<td>8.9</td>
<td>1988</td>
<td>4 to 8</td>
<td>5.2</td>
</tr>
<tr>
<td>1986</td>
<td>6 to 9</td>
<td>9.4</td>
<td>1989</td>
<td>3 to 7</td>
<td>4.0‡</td>
</tr>
<tr>
<td>1987</td>
<td>5.5 to 8.5</td>
<td>4.0</td>
<td>1990</td>
<td>3 to 7</td>
<td>3.0</td>
</tr>
</tbody>
</table>

- Target ranges are specified for growth from the fourth-quarter average in the previous year to the fourth-quarter average in the target year.
- Tentative range specified in the July 1989 Monetary-Hawkins testimony.

SOURCE: Board of Governors of the Federal Reserve System, Monetary Policy Alternatives, various years.

### Figure 1: Percent of M2

| FEDERAL FUNDS RATE | DISCOUNT RATE |

![Graph showing Federal Funds Rate and Discount Rate]

SOURCE: Board of Governors of the Federal Reserve System.

### Figure 2: Nominal GNP and the Monetary Aggregates

<table>
<thead>
<tr>
<th>Year</th>
<th>M2</th>
<th>GNP</th>
</tr>
</thead>
<tbody>
<tr>
<td>1959</td>
<td>45.0</td>
<td>7.5</td>
</tr>
<tr>
<td>1960</td>
<td>47.5</td>
<td>8.0</td>
</tr>
<tr>
<td>1961</td>
<td>49.0</td>
<td>8.5</td>
</tr>
<tr>
<td>1962</td>
<td>50.5</td>
<td>9.0</td>
</tr>
</tbody>
</table>

SOURCE: Board of Governors of the Federal Reserve System.

The M2 Target as a Long-Term Indicator

The quantity theory of money states that, over the long run, prices will rise in proportion with the rise in the money supply. According to this theory, the government's supply of money is the most important determinant of the price level. The theory does not deny that many other factors may shift the price level. It does say, however, that a doubling of the money stock should eventually lead to a doubling of the price level.

This one-for-one ratio assumes that output and technology in the payments system remain unchanged. If output is growing, then some monetary growth is needed just to keep the price level from rising. One way to take account of this real output growth is to examine the relationship between money and nominal GNP. In an economy such as ours, with growing output and a long-run income-elasticity of money equal to unity, the quantity theory predicts that nominal GNP will rise in proportion with the rise in the money supply.

Changes in monetary institutions can also affect this one-for-one ratio. As people have developed ways to economize on cash balances, from credit cards for households to sophisticated cash managers for corporate treasurers, the ratio of transaction balances to nominal GNP has fallen. This falling trend was halted when banks and savings and loan associations began to pay interest on checking accounts.

Overall, changing monetary institutions have had more effects on some monetary aggregates than on others. A growing body of work suggests that M2, among the official monetary aggregates, is the measure of the money supply that most closely conforms to the predictions of the quantity theory.

Figure 2 illustrates that M2, alone among the aggregates, shares a common trend with nominal GNP. To achieve price stability, the Federal Reserve must reduce the trend in M2 so that it matches the trend growth in the real economy. By examining trends in M2 and nominal GNP, we can form an estimate of the current long-run policy stance or the implied inflation trend.

M2 grew by 4 percent in 1987 and by 5.2 percent in 1988. This year, growth will most likely be between 4 and 5 percent. This three-year growth pattern was needed to prevent an acceleration of inflation following the extremely rapid monetary growth in 1985 and 1986. The levels of nominal GNP and M2 seem to be in a kind of balance as 1989 comes to an end (see figure 2). Historical relationships would suggest that continued growth in the 4 to 5 percent range (the midpoint of the target range for 1990) implies an inflation tendency of about 1 to 2 percent. Actual inflation has been averaging about...