

# ECONOMIC COMMENTARY

In February, the Chairman of the Federal Reserve's Board of Governors made the annual announcement of the Federal Open Market Committee's (FOMC) current monetary growth targets. The Federal Reserve began announcing annual targets in 1975 in response to House Concurrent Resolution 133, and the practice was refined and formalized in the Federal Reserve Reform Act of 1977 and in the Full Employment and Balanced Growth Act of 1978 (better known as the Humphrey-Hawkins Act).

This legislation requires a representative (usually the Chairman) of the Federal Reserve to appear before Congressional banking committees twice each year. In July the Federal Reserve's monetary targets for the current year are reviewed, and the preliminary objectives for the following year are discussed. The February hearings include a review of the Federal Reserve's performance in the previous year and a formal announcement of the targets for the current year.

In the decade that has passed since the Federal Reserve began to announce its monetary targets, little has changed in the target-setting and reporting procedures, but we have seen a dramatic shift in policy emphasis and outcome. Before 1979, monetary growth had persistently exceeded target ranges, and inflation and inflationary expectations were rising. Since 1979, however, the Federal Reserve has sought to restore price stability by reducing the annual growth rate of money over a number of years.

Although the selection of appropriate target ranges during a period of financial deregulation has been problematic at times, the disinflationary policy of the post-1979 period has been very successful. The Chairman's recent testimony suggests that the FOMC's monetary targets for 1985 remain consistent with this anti-inflationary emphasis.

But even after five years of successful disinflationary policy, many still watch the current behavior of the Federal Reserve for clues to its policy priorities. No institutional changes have been made to assure the public that a noninflationary policy will be pursued beyond the current year, so the Federal Reserve must always seek credibility on the basis of each year's targets. This places an inordinate emphasis on money growth in a single year, suggesting that a multi-year targeting horizon might improve the present policy reporting arrangements.

## The Equation of Exchange and Monetary Targets

The Equation of Exchange provides a framework for evaluating the relationship between monetary targets and the broader economic goals of Federal Reserve policymakers. The Equation of Exchange relates the level of prices and economic

## The 1985 Humphrey-Hawkins Testimony

By Michael R. Pakko

activity to the supply of money in the economy:  $MV = PQ$ . In this form, the money supply ( $M$ ) times the income velocity of money ( $V$ ) is equal to the price level ( $P$ ) times real output ( $Q$ ). Velocity is defined by the equation as the ratio of nominal output to money, and can be thought of as a measure of the turnover rate of money in the economy.

**Table 1 Monetary Targets in 1984 and 1985**

Annual percent change,  
fourth quarter over fourth quarter

Aggregate	1984 Targets	1984 Actual	1985 Targets
M1	4 to 8	5.2	4 to 7
M2	6 to 9	7.7	6 to 9
M3	6 to 9	10.4	6 to 9.5

SOURCE: Board of Governors of the Federal Reserve System.

In the form of growth rates, the equation can be approximated as  $m + v = p + q$ , where the lower case letters indicate rates of change for the variables. Since economic policy makers are primarily interested in economic growth and inflation (price level changes), this form is appropriate for evaluating policy.

While monetary growth may affect real economic growth in the short-run, it is generally agreed that, within reasonable limits, these short-term effects are transitory. Average real growth over longer periods is independent of short-run money supply fluctuations. Inflation, on the

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*The views expressed herein are those of the author and not necessarily those of the Federal Reserve Bank of Cleveland or of the Board of Governors of the Federal Reserve System.*

other hand, is closely related to monetary growth over the long run. To deal with it, monetary policy makers should seek to achieve long-term money supply growth that encourages the expectation of price stability.

Such an approach has, in fact, been a cornerstone of the Fed's monetary policy in recent years. It was reiterated by Chairman Paul Volcker in his recent Humphrey-Hawkins testimony before the Senate when he said, "Prospects for sustained growth and productivity over time rest importantly on success in achieving and maintaining an environment of greater stability of prices and financial markets."<sup>1</sup>

### A Decade of Monetary Aggregate Targeting

The ten years that have passed since the Federal Reserve began announcing its



annual monetary targets in 1975 consists of two distinct sub-periods. In the late 1970s, the growth of M1 tended to exceed the FOMC's target ranges. As chart 1 illustrates, the money growth overshoots of 1977-79 were reinforced by the Federal Reserve's practice of basing its annual targets on the money supply level from the fourth quarter of the previous year. This practice, which has come to be known as

'base drift,' caused current target ranges to incorporate the target misses of the previous year. In the case of the 1977-79 period, base drift allowed money growth overshoots to accumulate, compounding the inflationary effects of the yearly excesses.

By the fall of 1979, the persistent excess growth of money and an accelerating inflation rate had eroded the credibility of the Federal Reserve's monetary targeting policies. In October 1979, the Federal Reserve announced a number of actions that were intended to provide better control over money growth in order to assure the public that announced targets would be met. Since that time, the Federal Reserve's stated objectives have emphasized the role of monetary restraint in bringing down the rate of inflation. This policy has apparently been very successful, as the rate of inflation has fallen from over 10 percent in 1980 to less than 4 percent in 1983 and 1984.

The annual values for the variables in the Equation of Exchange shown in table 2 illustrate the acceleration of monetary growth that accompanied rising inflation from 1975 to 1979. However, the deceleration of money supply growth in the post-1979 period is obscured by the unusual behavior of velocity in 1982 and 1983. In those years, the effects of financial deregulation, decelerating inflation, and declining nominal interest rates distorted the money-income relationship, resulting in velocity behavior that was unusual by postwar standards.

When monetary growth rates in the post-1979 period are compared with changes in velocity, the Federal Reserve's restraint is more apparent. Chart 2 compares the deviation of velocity from its trend rate of growth (measured as a 15-year moving average rate) with deviations of monetary growth from the midpoint of its original target range. An examination of chart 2 shows that the apparently high monetary growth rates in 1982 and 1983 were offset by the unusual velocity declines in those two years.

In addition, an analysis of money growth rates in 1982 and 1983 should include a recognition of the negative base drift

inherited from 1981. When the effects of velocity growth and M1 growth deviations are considered together with the negative 1981 base drift, monetary policy in 1982 and 1983 appears much less expansionary than suggested by the annual monetary growth rates alone, and much more consistent with an anti-inflation strategy.

In 1984, velocity growth appeared to be returning toward more normal behavior.

**Table 2 Equation of Exchange**

Annual percent change,  
fourth quarter over fourth quarter

	M1 growth	+ Velocity growth	= Infla- tion	+ Growth in real output
1975	5.0	4.8	7.7	2.2
1976	6.1	3.0	4.7	4.4
1977	8.1	3.8	6.1	5.7
1978	8.2	6.0	8.5	5.8
1979	7.5	2.1	8.2	1.4
1980	7.5	1.7	10.2	-0.8
1981	5.1	5.3	8.9	1.6
1982	8.7	-5.6	4.3	-1.5
1983	10.4	0.0	3.8	6.3
1984	5.2	4.1	3.6	5.7

NOTE: The additive relationship may not hold, due to the inexact nature of this representation.

SOURCES: Board of Governors of the Federal Reserve System; and U.S. Department of Commerce.

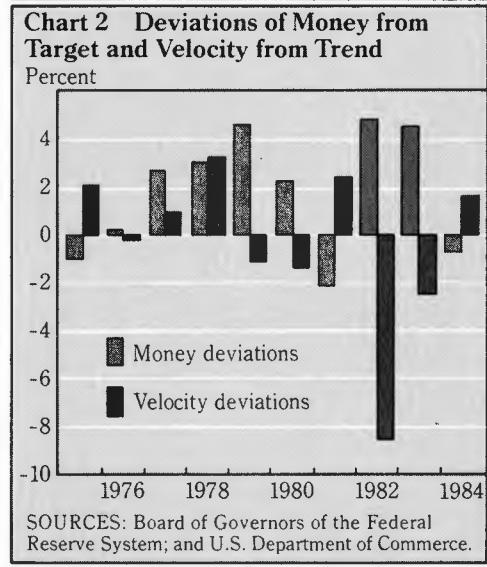
Chairman Volcker explained that, although the growth rate of velocity was above its long-run trend, it was "...broadly in line with cyclical experience in the past, taking into account both the pattern of interest rate movements and income growth." With velocity closer to trend than in 1982 and 1983, the FOMC held M1 growth to near the midpoint of its target range.

For 1985, the FOMC expects that velocity growth will continue to be consistent with past experience, as indicated by the economic assumptions of FOMC members shown in table 3. The FOMC expects that real growth will continue to increase at a moderate pace, and that

1. This and all subsequent quotations are excerpts from "Statement by Paul A. Volcker, Chairman, Board of Governors of the Federal Reserve System, before the Committee on Banking, Housing, and Urban Affairs, U.S. Senate, February 20, 1985," *Federal Reserve Bulletin*, vol. 71, no. 4 (April 1985), pp. 211-24.

inflation will remain below 4 percent. Given the target range for M1, these assumptions imply a velocity growth rate of between 1 percent and 3 percent.

In his remarks, Chairman Volcker gave a more specific assessment of the FOMC's velocity expectations: "The annual target ranges for M1 and M2 assume that trends in velocity are returning to a more normal and predictable pattern. However, there is some analysis that suggests the trend of velocity over time may be a little lower than the trend of 3 percent or so characteristic of much of the postwar period, when interest rates were trending higher. Should developments during 1985 tend to confirm that somewhat lower velocity growth, and provided that inflationary pressures remain subdued, the Committee anticipates that those aggregates might end the year in the upper part of their ranges. The lower part of the M1 range would be consistent with greater cyclical growth in velocity than now thought likely."



This statement provides a base on which to build expectations of FOMC behavior in 1985. As new information about price trends, business activity, and velocity is revealed, the FOMC may adjust monetary growth rates accordingly. The testimony suggests that whether the FOMC aims above or below the midpoint of the M1 growth range will depend, in part, on whether velocity proves to be below or above the FOMC's expectations.

### The Challenges Faced in 1985

In addition to some continued uncertainty regarding the behavior of velocity growth, there are other economic concerns that will challenge the FOMC's anti-inflation strategy in 1985. Chairman Volcker's comments before Congress suggest, however, that the Federal Reserve intends to

The unprecedented strength of the dollar in foreign-exchange markets, and the resulting international trade deficit, is a related problem. The shortage of domestic savings in relation to borrowing demands has produced a massive redirection of U.S. direct investment and bank lending — from foreign assets to domestic assets and markets. This imbalance has reduced the

**Table 3 Economic Assumptions for 1985**

Annual percent change, fourth quarter over fourth quarter  
FOMC<sup>a</sup>

	Range	Central tendency	Administration
Nominal GNP	7 to 8.5	7.5 to 8	8.5
Real GNP	3.25 to 4.25	3.25 to 4	4.0
Implicit deflator for GNP	3 to 4.75	3.5 to 4	4.3
M1	4 to 7	-----	6.4
Implied velocity <sup>b</sup>	1 to 3		1.9

a. Forecasts of FOMC members and other Federal Reserve Bank presidents.

b. Author's construction.

SOURCES: Board of Governors of the Federal Reserve System; and Council of Economic Advisors.

continue its emphasis on progress against inflation and to resist pressures to boost monetary growth.

The fundamental problem confronting the Federal Reserve's monetary policy in 1985 is the imbalance between the demand for credit and the supply of domestic savings. The combination of growing private sector credit demands and continuing government deficit financing requirements is straining credit supplies, tending to put upward pressure on interest rates. It is possible that these pressures will diminish support for long-term anti-inflation objectives in favor of direct attention to interest rates.

The Federal Reserve's position on resisting interest-rate pressures, however, is that such a policy would be self-defeating. As Chairman Volcker explained, "To create money beyond that needed to sustain orderly growth would be to invite renewed inflation — damaging incentives to save in the process...the only constructive alternative is to attack the problem from the other side of the ledger by reducing the federal deficit."

supply of dollars in foreign-exchange markets and pushed up the exchange value of the dollar. The dollar's appreciation has helped to restrain inflation by keeping import prices low, but it has also put pressure on the exporting and import-competing sectors of the economy.

As in the case of rising interest rates, the trade deficit and the exchange value of the dollar are issues that could generate support for accelerated monetary growth. But the Chairman's remarks on this issue were as forceful as those regarding the budget deficit and domestic interest rates: "No doubt *bad* monetary policy could drive the dollar down — a monetary policy that aroused inflationary expectations, undermined confidence, and drove away foreign capital."

### Beyond 1985: The Second Decade of Target Announcements

Chairman Volcker's statements make it clear that the FOMC intends to continue the fight against inflation, and that the monetary targets have been set within the context of that objective. But because these pressures exist, and because the

public cannot be sure of the FOMC's policies beyond the present year, the Federal Reserve is particularly vulnerable to a loss of credibility if the monetary growth target ranges are exceeded in 1985.

The experience of the late 1970s has shown us that, while a single year of excessive monetary growth may not lead to accelerating inflation, the effects of one year's above-target growth are compounded when the target for the next year is set. Because money growth targets are announced only one year at a time, many are justifiably wary of the extended effects of a money overshoot. Thus, the possibility of base drift causes the public to over-emphasize a single year's money stock growth.

There are a number of ways in which the monetary targeting strategy could be extended to encompass a multi-year perspective, ranging from a fixed money growth rule to a commitment to base each year's target ranges on the midpoint of the previous year's range. While it is beyond the scope of this paper to analyze or even describe all the alternatives, it would be desirable for the Federal Reserve to formulate a method for expressing its

long-term policy intentions without losing the ability to alter specific paths should changing circumstances warrant their adjustment. It is important that an innovation be found that enhances the Federal Reserve's long-term credibility without sacrificing its flexibility.

### Continuing Progress Toward Price Stability

While the FOMC's expectations do not indicate any further reduction in the inflation rate in 1985, the assumption of an unchanging inflation rate during a cyclical expansion would ordinarily be considered optimistic. In the conventional macroeconomic view, prices tend to rise as an economic expansion continues and as capacity constraints are approached. However, the behavior of prices thus far in the recovery has been surprising, and it is not inconceivable that we may see a further decline in inflation in 1985.

Chairman Volcker sounded this note of optimism on the inflation outlook: "The public at large seems to sense a greater degree of control over inflation than for many a year — and I sense some chance of further progress toward price stability this year, even as the economy grows."

But while the Federal Reserve has established and maintained credibility in its fight against inflation in recent years, there has been no structural change in its procedures for setting monetary targets since the inflationary period of the late 1970s. It is important to view the inflationary effects of monetary growth in a multi-year context, but the experience of the 1970s, and the absence of a longer-term framework of objectives, make the annual monetary targets seem more important than they deserve to be.

Market participants may believe that the FOMC intends to keep inflationary pressures subdued and monetary growth under control in 1985, but there may be many reasons for money growth either to exceed or to fall short of the target ranges. If that occurs, many may fear that policy has changed.

Perhaps the time has come, after a decade of experience under annual monetary targets, to seek a broad-based consensus on the objectives of monetary policy that would allow the Federal Reserve to commit to a longer-term perspective in announcing its intentions.

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