

# Recent M1 Growth and Its Implications

By J. A. Cacy

The nation's narrowly defined money supply, M1, expanded very rapidly throughout most of 1985. Consisting mainly of currency and checkable deposits, M1 is the nation's basic supply of money available for the day-to-day conduct of economic transactions. For this reason, its behavior is closely monitored by market participants, Federal Reserve officials, and economists both inside and outside the Federal Reserve System.

Some of these observers say that the recent rapid growth in M1 will lead to a near-term sharp pickup in economic activity. Some also contend that the rapid growth is laying a foundation for the reemergence of double-digit inflation experienced by the United States during the late 1970s and early 1980s. These observers want the Federal Reserve to take steps immediately to bring about a slowdown in the M1 growth rate. Other observers argue,

however, that the erratic behavior of M1 velocity in recent years has greatly reduced M1's usefulness as a policy guide and indicator of future economic developments. While these observers would probably welcome slower monetary growth, they do not want the Federal Reserve to tighten monetary policy in an effort to reduce M1's growth rate.

In light of these concerns and divergent views about the recent behavior of M1, this article analyzes the implications of this behavior for inflation, the economy, and monetary policy.

The idea that rapid monetary growth may affect both economic activity and the rate of inflation is one of the major tenets of monetary theory. According to theory, an increase in the supply of money creates an imbalance between the amount of money people have available and the amount they want to keep on hand. People respond to the imbalance either by increasing their spending on goods and services or by buying financial assets. The latter tends to lower interest rates, which will stimulate spending on goods and services. In

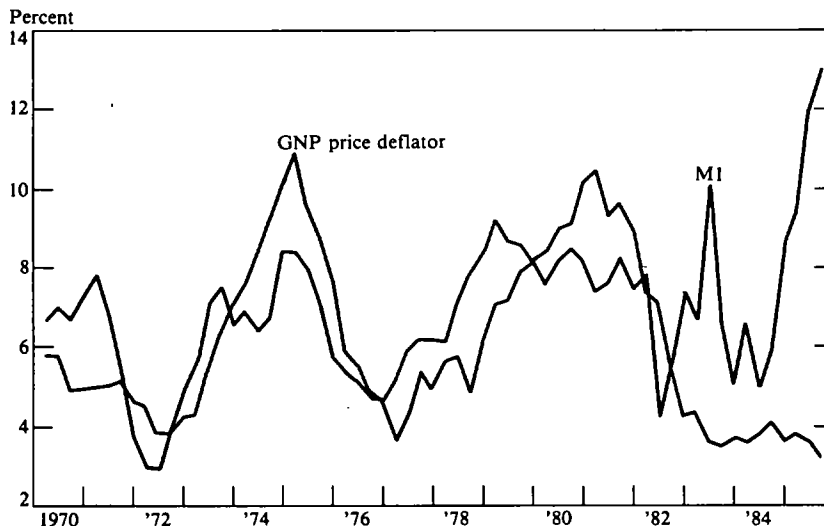
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### CHART 1

#### Growth rates of M1 and GNP price deflator

(Percent change from year earlier, with M1 lagged eight quarters)



this way, rapid monetary growth tends to stimulate greater spending on and production of goods and services. However, if the money supply increases more rapidly than the economy's ability to produce goods and services, demand will begin to outstrip supply and create upward pressure on prices. In this way, rapid monetary growth leads to inflation. Thus, economic theory indicates that rapid monetary growth may both stimulate economic activity and lead to rapid inflation.

The theoretical proposition that rapid monetary growth leads to rapid inflation is supported, to some extent, by historical experience. Chart 1 plots the growth rate of M1 against inflation, as measured by the growth rate of the GNP price deflator. Because M1's impact on inflation occurs over a relatively long time span, the chart allows for a two-year or eight-quarter time lag between changes in the M1 growth rate and corresponding changes

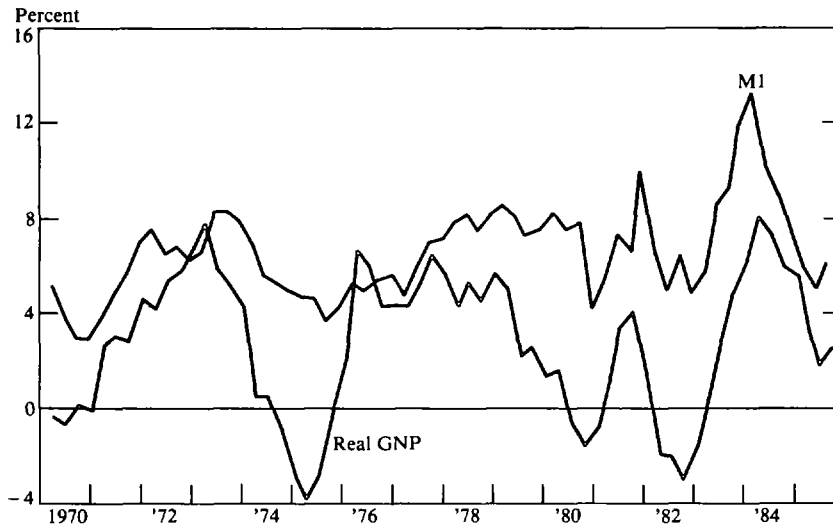
in the rate of inflation. The chart shows that the relationship between M1 and inflation was fairly close in the 1970s. Inflation and M1 growth rose and fell together in the first half of the decade and a reacceleration in M1 growth in the last half of the 1970s was again accompanied by an upward movement in inflation.

During the 1980s, however, the relationship between M1 and inflation began to break down. As suggested by Chart 1, while the growth rate of the narrowly defined money supply has been erratic in recent years, M1 has grown more rapidly in the 1980s than it did in the last half of the 1970s. Unlike the late 1970s, though, the rapid M1 growth of the 1980s has not been accompanied by high inflation. Inflation declined sharply in the early 1980s and has remained at a relatively low level since that time. With M1 growing rapidly and erratically and inflation remaining

## CHART 2

### Growth rates of M1 and real GNP

(Percent change from year earlier, with M1 lagged eight quarters)



low and stable, it is evident that the strong linkage between M1 and inflation of the 1970s has faded in the 1980s.

What about the relationship between M1 and the economy? Did a close relationship exist in the 1970s? If so, has it also broken down in the 1980s? To help answer these questions, Chart 2 plots the growth rate of M1 against the economic growth rate, as measured by the growth rate of real GNP. Because M1's impact on the economy occurs over a relatively short time span, the chart allows for a two-quarter time lag between changes in the M1 growth rate and corresponding changes in the economic growth rate. Chart 2 shows a fairly close relationship during the 1970s between M1 and the economy. Moreover, unlike the relationship between M1 and inflation, the linkage between M1 and real GNP has held up fairly well in the 1980s. Thus, for example, the 1982-83 spurt in M1 growth was accompanied by a spurt in real GNP growth,

and the subsequent drop in M1 growth was accompanied by a drop in real GNP growth. A close examination of the chart, however, shows that the linkage between M1 and real GNP has changed in one respect. M1 has grown faster relative to real GNP growth in the 1980s than in the 1970s. Thus, in this important respect, the relationship between M1 and real GNP has suffered a partial breakdown.

What has caused this partial breakdown in the relationship between M1 and the economy, as well as the more serious breakdown in the linkage between M1 and inflation? The breakdown's source lies in a dramatic shift in the behavior of M1's turnover or velocity.

M1 velocity is an important factor affecting both relationships. This can be seen by Table 1, which sets out one of the fundamental equations economists use to analyze the impact of money on the economy. The equation states that the growth rate of M1 plus the

**TABLE 1**  
**Relationship between money supply,**  
**velocity, inflation, and the economy**

Growth Rate of Money Supply	+	Growth Rate of Velocity	=	Economic Growth Rate	+	Rate of Inflation
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growth rate of velocity is equal to the economic growth rate plus the rate of inflation. As this equation shows, if there is no change in the growth rate of velocity, an increase in the growth rate of M1 will be accompanied by either an increase in the economic growth rate or a rise in the rate of inflation.<sup>1</sup> However, these relationships hold only if the growth rate of velocity remains constant. If the velocity growth rate varies, then the linkages will be weakened or destroyed. For example, if an increase in the M1 growth rate is accompanied by a decline in velocity, M1's impact on the economy and inflation will be offset, at least in part. As it turns out, velocity has tended to decline in recent years. As shown by Chart 3, velocity trended upward throughout the 1970s, but has declined in the 1980s. This decline in velocity is the reason that the rapid M1 growth of the 1980s has not been accompanied by rapid inflation and that M1 growth has been unusually rapid relative to the growth of the economy.

This discussion of the relationship between the money supply, velocity, the economy, and inflation can be summarized by looking at Table 2, which provides the growth rates of these variables over different periods. The breakdown in the linkage between M1 and inflation is most clearly seen by comparing the

<sup>1</sup> More precisely, if the growth rate of velocity remains constant, an increase in the growth rate of M1 will be accompanied by an increase in the sum of the economic growth rate plus rate of inflation.

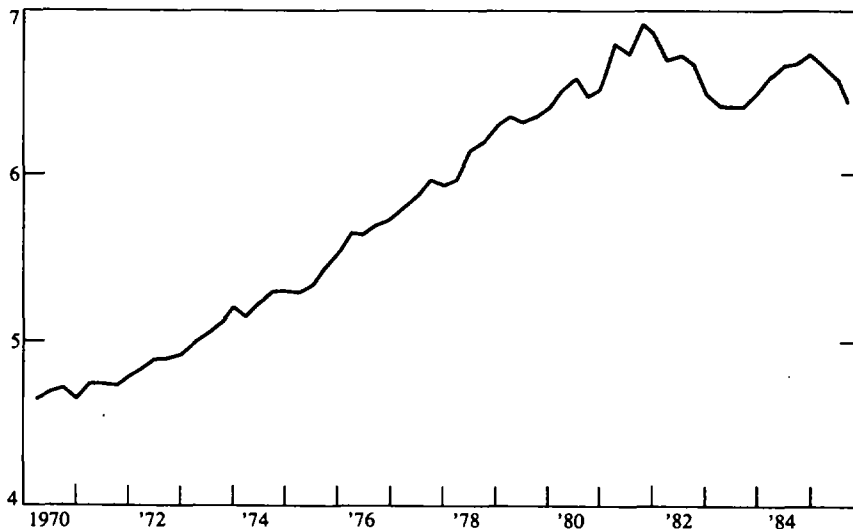
period since mid-1982 with the last half of the 1970s. As shown in the table, M1 grew at an annual rate of 9.0 percent in the 1982-85 period, noticeably higher than the 7.0 percent growth rate of the second half of the 1970s. However, the rate of inflation was only 3.5 percent in the 1982-85 period, sharply lower than the 7.0 percent of the 1974-79 period.

The partial breakdown in the relationship between M1 and real GNP is less obvious but evident nevertheless. As shown in Table 2, M1's growth rate was higher relative to that of real GNP in the 1982-85 period than in the late 1970s. In the post-1982 period, M1's growth rate exceeded real GNP's by 5.5 percentage points (that is, 9.0 minus 3.5), compared with 3.1 percentage points (that is, 7.0 minus 3.9) in the earlier period.

The role played by velocity in the breakdown in these relationships is also evident by the figures in the table. Velocity declined at an annual rate of -1.4 percent during the 1982-85 period, in contrast with an increase at a rate of 3.9 percent in the late 1970s. Thus, the decline in the growth rate of velocity since mid-1982 has, on balance, more than offset the impact on real GNP and inflation of the higher growth in M1.

A number of reasons can be advanced to explain the behavior of velocity in the 1980s, including financial innovation and deregulation, declining interest rates, disinflation, and perhaps increased uncertainty about the financial system. While these explanations appear reasonable, economists have not been able to

**CHART 3**  
**M1 velocity**



**TABLE 2**  
**Growth rates of M1, velocity, real GNP, and the real GNP deflator**

	<u>M1</u>	<u>Velocity</u>	<u>Real GNP</u>	<u>Real GNP Deflator</u>
First Half of 1970s (1969:Q4-1974:Q4)	6.1	2.6	2.5	6.2
Second Half of 1970s (1974:Q4-1979:Q4)	7.0	3.9	3.9	7.0
First Half of 1980s (1979:Q4-1985:Q3)	7.7	0.1	2.2	5.6
Since Mid-1982 (1982:Q2-1985:Q3)	9.0	-1.4	4.1	3.5

model velocity very well in recent years. Its behavior has been unpredictable, making it difficult to determine the appropriate monetary growth rate and what any particular growth rate implies for the economy and inflation.

In conclusion, what can be said about the implications of M1's recent rapid growth for the economy, inflation, and monetary policy?

With regard to the economy, experience both in the 1970s and the 1980s suggests that an acceleration in the growth rate of M1 is followed in the short run by a pickup in economic activity. And, the improvement in the economy in the second half of 1985—which followed the sharp rise in M1's growth rate—shows that the linkage between M1 and real

GNP remains at least partially intact.

With regard to inflation, experience in the 1980s does not support the proposition that the recent rapid M1 growth will lead to an acceleration of inflation in the period ahead.

Finally, the implications of the recent rapid growth in M1 for current monetary policy are difficult to identify precisely. On the one hand, experience in the 1980s would seem to suggest that, since rapid M1 growth is not inflationary and is needed for economic

growth, it should be welcomed rather than feared and avoided. On the other hand, experience over a longer period, as well as economic theory, suggests that the potential inflationary implications of rapid M1 growth cannot be ignored by monetary policymakers. Thus, monetary policy actions will no doubt continue to be aimed, in part, toward bringing about moderate M1 growth in order to support balanced noninflationary growth in the economy.