"Lessons from the 1979–82 Monetary Policy Experiment"
by Milton Friedman
American Economic Review 74, May 1984, pp. 397-400
© American Economic Association

A "monetary policy experiment" *was* conducted from October 1979 to the summer of 1982, but many commentators have misinterpreted its character and have drawn the wrong conclusions from the evidence it generated. They have termed it a "monetarist policy" and have interpreted the results as a failure of monetarism.

Though the Federal Reserve System's rhetoric was "monetarist," the actual policy that it followed was antimonetarist (see my 1983 article). And the evidence generated by the experiment strongly supports rather than contradicts the propositions that recommend a monetarist policy.

In its October 6, 1979 announcement that initiated the experiment, the Fed described its changed procedures as designed "to support the objective of containing growth in the monetary aggregates." That is indeed a monetarist objective. However, a monetarist policy involves not only targeting monetary aggregates, but also—as a major and central element—achieving a steady and predictable rate of growth in whatever monetary aggregate is targeted. By this essential criterion, the experiment was antimonetarist: as Table 1 shows, the volatility of monetary growth during the experiment was about three times as high as earlier. Indeed, monetary volatility was higher during the three years of the experiment than in any earlier three-year period since at least the end of World War II.[1] The purely rhetorical character of monetary targeting is clear also from the Fed's failure to hit its targets. M1 was outside the target range in six out of ten quarters, and this despite the generous width of the range between the lower and upper growth rate targets plus an annual shifting of the base to which the target growth rates were applied.

TABLE 1—STANDARD DEVIATION OF QUARTER-TO-QUARTER RATES OF MONETARY GROWTH

Ten Quarters:	M1	Adjusted Monetary Base
Prior to October 1979	1.59	.94
After October 1979	5.64	2.71

Many monetarists believe that slowing monetary growth will reduce inflation more promptly and at a smaller cost in terms of reduced output and higher inflation if it is announced in advance than if the slowing is not anticipated. However, their belief depends on the pre-announced slowing of monetary growth being widely believed by the relevant economic agents. Such belief was not widely present, even in October 1979, when the new policy was first announced. And the wide gyrations in monetary growth rates in subsequent months rapidly disillusioned any naive agents who initially accepted the Fed's rhetoric as a guarantee of steady and predictable

monetary growth. Since there was no credible pre-announced slowing, it could not have had any of the effects attributed to such a slowing by some monetarists. Similarly, the failure of the policy to achieve such effects cannot be regarded as contradicting monetarist predictions.

The real experiment was in the operating procedures adopted—the use of nonborrowed reserves as the instrument. In effect, that meant a reversion to the "free reserves" approach of the 1920's. Combined with lagged reserve requirements, the new approach produced enhanced volatility in monetary growth, and, as a consequence, in both interest rates and economic activity. As a citizen, I deplore the results, which, as I have argued elsewhere (1983), included imposing a much higher cost for the achieved reduction of inflation than was necessary. As a scientist, I am delighted to have the unintentional experimental evidence on the effect of sharp swings over short periods in the rate of monetary growth.

These sharp swings provide some evidence on two monetarist propositions: first, that different monetary aggregates move together; second, that movements in monetary aggregates produce corresponding movements in nominal income.

I. Different Monetary Aggregates

In judging the evidence on claims by monetarists that different monetary aggregates move together, it is important not to be confused by labels. The aggregates as currently defined do not correspond to the aggregates with respect to which those claims were made. They were made primarily with respect to $M1$ and $M2$ as then defined. The current aggregate labeled $M2$ is a much broader aggregate than the earlier $M2$. Indeed it is nearly identical, both conceptually and numerically, with the aggregate that Anna Schwartz and I labeled $M4$ in our *Monetary Statistics.*[2] The current $M1$ is conceptually, though in the earlier years not numerically, closer to the aggregate we labeled $M2$ rather than to our $M1$ because, like our $M2$, it includes deposits bearing interest.[3] The current aggregate that is conceptually closest to the earlier $M1$ is the monetary base.

Few if any monetarists ever recommended the use of such broad aggregates as the current $M2$ or $M3$ as monetary targets—certainly, this one did not. The closest current approximations to the aggregates they recommended are therefore the current $M1$ and the monetary base.[4]

For the five years, 1978 to 1982, the correlation between the fourth-quarter to fourth-quarter rates of growth of $M1$ and the base adjusted for reserve requirement changes is .89; of $M1$ and the unadjusted base, .63. On the other hand, the correlation of $M1$ and $M2$ is .34; of $M1$ and $M3$, .17; of $M2$ and $M3$, .17.

II. Money and Income

The asserted relation between movements in a monetary aggregate and nominal income that is relevant to current policy is about cyclical effects. In judging this proposition, a year is too long a time unit to use, especially for the period from 1980 to 1983, since it has been characterized by a succession of abnormally short cyclical phases: a six-month contraction in 1980, followed by a twelve-month expansion and then a sixteen-month contraction, interrupted by a one-quarter revival. Monetarists attribute this result to the corresponding abnormally short and exceptionally volatile gyrations in monetary growth. Moreover, monetarists have typically concluded that the

lag of the rate of change of nominal income behind the rate of change of $M1$ is about six months on the average, in general ranging from three to nine months.

Figure 1 plots the quarter-to-quarter rates of change of $M1$ and of GNP one quarter later for the period of the "monetary policy experiment." From 1981 on, the relation is extraordinarily close—indeed, instead of being less close than during the earlier years, it is considerably closer. For 1980, there are significant discrepancies, almost surely attributable to President Carter's imposition and subsequent removal of credit controls. The correlation between the two series is .46 for the period as a whole; .71, eliminating the quarters affected by the credit controls.
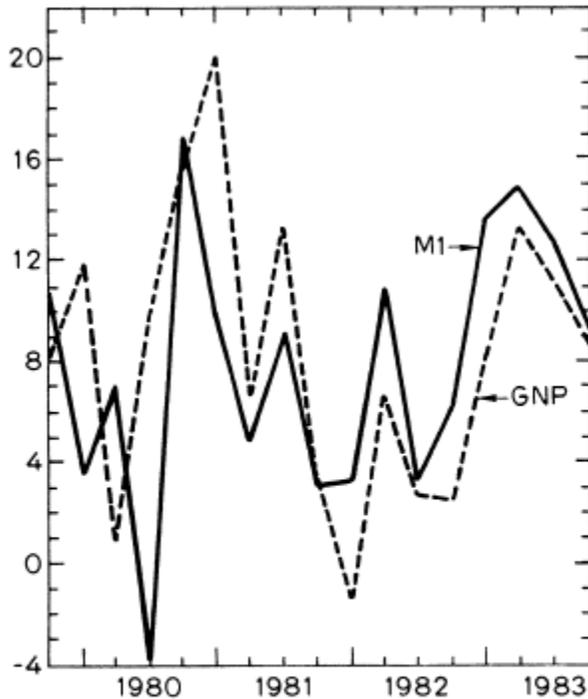

FIGURE 1. QUARTER-TO-QUARTER RATE OF CHANGE
OF $M1$ AND GNP ONE QUARTER LATER

Note: Periods for: $M1$, 79:3–83:3; GNP, 79:4–83:4

Two things are notable about the relation between money and income in these years: first, the lag is both shorter on the average and less variable than in earlier years, second, the relation is unusually close. I believe that both are a consequence of the exceptionally large fluctuations in $M1$ growth. The effect was to enhance the importance of the monetary changes relative to the numerous other factors affecting nominal income and thereby to speed up and render more consistent the reaction.[5]

The close relation between money and nominal income is brought out in a different way in Table 2, which distinguishes the successive periods of rapid and slow growth in $M1$. The one-to-one relation between ups and downs in $M1$ growth and in GNP growth one quarter later is striking. There is a similar one-to-one relation between ups and downs in $M1$ and in the monetary base.

TABLE 2—SWINGS IN *M*1 AND NOMINAL *GNP* ONE QUARTER LATER, QUARTERLY DATA, 1979:1 TO 1983:4

Period for *M*1	Number of Quarters	Annual Rate of Change			
		Monetary Base	*M*1	*GNP* One Quarter Later	Period for *GNP*
78:4 to 79:4	4	8.2	7.4	10.2	79:1 to 80:1
79:4 to 80:2	2	6.4	1.5	5.2	80:1 to 80:3
80:2 to 81:2	4	7.8	10.1	13.9	80:3 to 81:3
81:2 to 81:4	2	3.3	3.2	1.1	81:3 to 82:1
81:4 to 82:1	1	9.6	11.0	6.6	82:1 to 82:2
82:1 to 82:3	2	7.3	4.7	2.6	82:2 to 82:4
82:3 to 83:3	4	9.3	12.6	10.3	82:4 to 83:4

III. Money and Inflation

The long-period evidence suggests that inflation has much inertia and that the lag between money and inflation is of the order of two years. Table 3 shows that this relation has held in recent years as well. There is a one-to-one relation between movements in monetary growth, and in the *GNP* deflator two years later over successive two-year periods since 1971. The decline in inflation from 1979–81 to 1981–83 was decidedly larger than might have been expected from the decline in monetary growth. I attribute that not to a pre-announced slowing of monetary growth, but rather to the exceptional volatility of monetary growth, which increased the degree of perceived uncertainty and thereby increased the demand for money.

TABLE 3—RATES OF CHANGE IN MONEY AND IN INFLATION EIGHT QUARTERS LATER

Period for Money	Annual Rate of Change Over Eight Quarters		Period for Deflator
	*M*1	Deflator Eight Quarters Later	
71:3 to 73:3	6.9	7.4	73:3 to 75:3
73:3 to 75:3	5.1	5.5	75:3 to 77:3
75:3 to 77:3	6.4	8.2	77:3 to 79:3
77:3 to 79:3	8.5	9.2	79:3 to 81:3
79:3 to 81:3	6.2	4.8	81:3 to 83:3
81:3 to 83:3	9.2	(?)	

The increased rate of monetary growth in the 1981–83 biennium suggests that we have passed the trough in inflation and that inflation will be decidedly higher from 1983 to 1985 than it was from 1981 to 1983.

IV. Money and Real Economic Growth

The inertia in inflation and the lengthy lag between monetary change and inflation mean, of course, that the short-run influence of money on nominal income will be reflected primarily in movements in real income. And that is the case for the period under consideration. The correlation between quarter-to-quarter rates of change of *M*1 and real *GNP* one quarter later is .54 for the whole period covered by Figure 1, and .86 excluding the quarters affected by credit controls. These correlations are even higher than those for nominal income, though that has generally not been the case in the past.

Again, I attribute this result to the larger amplitude and shorter duration of the recent swings in monetary growth.

V. Conclusion

The evidence generated by the misinterpreted monetary policy experiment of 1979 to 1982 is entirely consistent with the empirical conclusions about the relation between money, income, and prices that monetarists have drawn from earlier evidence. If anything, the recent evidence strengthens the case for a policy of steady predictable monetary growth. Of course, evidence for three years and a single country cannot add much to evidence provided by studies covering more than a century of experience and many countries. But the particular three years do contribute disproportionately precisely because the policy actually followed deviated so widely from the policy recommended by monetarists.

References

Friedman, Milton, "Monetarism in Rhetoric and in Practice," *Bank of Japan Monetary and Economic Studies,* October 1983, *1,* 1–14.

———, "Has the Fed Changed Course?" *Newsweek,* October 22, 1979, p. 39.

—— and Schwartz, Anna J., *Monetary Statistics of the United States,* New York: Columbia University Press for the National Bureau of Economic Research, 1970.

Notes

[1]The failure of the Fed to follow a monetarist policy is not surprising. If at the outset of the experiment, each member of the Board of Governors had been asked, "Are you now, or have you ever been, a monetarist?" not a single one would have answered "yes." In a column commenting on the October 6, 1979 announcement of the change in policy, I wrote that "those of us who have long favored such a change have repeatedly licked our wounds when we mistakenly interpreted earlier Fed statements as portending a change in operating procedures. I hope this time will be different—but remain skeptical until performance matches pronouncements" (1979, p. 39).

[2]For example, for January 1960, our estimate of $M4$ is $297.4 billion; the Federal Reserve Board's estimate of the current $M2$, $298.2 billion; our estimate of our $M2$, $208.9 billion (see our study, 1970, p. 47). For January 1983, I estimate the counterpart to the earlier $M2$ to have been $1012.3 billion, whereas the Fed's estimate of the current $M2$ is $2176.1 billion, or more than twice as large.

[3]In the earlier years, before the introduction of checkable deposits that paid interest, the current $M1$ was numerically the same as our $M1$, which included only non-interest-bearing assets. For example, for January 1960, the Federal Reserve Board's estimate of the current $M1$ is $141 billion; our estimate of $M1$ is $141.7 billion (Friedman-Schwartz, p. 47). However, for January 1983, I estimate the closest counterpart to the earlier $M1$ to have been $373.7 billion, whereas the Fed's estimate of the current $M1$ is $482.1 billion.

[4]Or a reconstruction of the equivalent of the earlier $M2$, something that I have not attempted.

[5]For longer periods, annual data do provide relevant evidence on the relation between $M1$ and nominal income. For the 111 years from 1871 to 1981, the contemporaneous correlation between rates of change of $M1$ and nominal income is .72; for the 24 years from 1960 to 1983, it is .75, and rises to .86 if the *GNP* data are for a year ending one quarter later than the $M1$ data.

10/1/12