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# Monetary Policy: A Letter (II)

By Milton Friedman

*The Business Review of November/December 1973 carried a letter from Federal Reserve Board Chairman Arthur F. Burns to Senator William Proxmire of Wisconsin on the subject of monetary policy. To round out this discussion, the Review is reprinting a letter from Professor Milton Friedman of the University of Chicago on the same subject.*

The Honorable William Proxmire  
Joint Economic Committee  
United States Senate  
Washington, D.C. 20510

Dear Senator Proxmire:

On September 17, 1973, you asked the Chairman of the Board of Governors of the Federal Reserve System to comment on certain published criticisms of monetary policy. On November 6, 1973, the Chairman replied on behalf of the System. This Reply has been widely publicized by the Federal Reserve System. It was reprinted in the **Federal Reserve Bulletin** (November, 1973) and in at least five of the separate Federal Reserve Bank **Reviews**.

The Reply makes many valid points. Yet, taken as a whole, it evades rather than answers the criticisms. It appears to exonerate the Federal Reserve System from any appreciable responsibility for the current inflation, yet a

close reading reveals that it does not do so, and other evidence, to which the Reply does not refer, establishes a strong case that the Fed has contributed to inflation. The Reply appears to attribute admitted errors in monetary policy to forces outside the Fed, yet the difficulties in controlling and measuring the money supply are largely of the Fed's own making.

The essence of the System's answer to the criticisms is contained in three sentences, one dealing with the Fed's responsibility for the 1937 inflation; the other two, with the problem of controlling and measuring the money supply. I shall discuss each in turn.

## Responsibility for Inflation

**"The severe rate of inflation that we have experienced in 1973 cannot responsibly be attributed to monetary management"** (emphasis added).

As written, this sentence is unexceptionable. Delete the word "severe," and the sentence is indefensible.

The Reply correctly cites a number of special factors that made the inflation in 1973 more severe than could have been expected

from prior monetary growth alone—the world-wide economic boom, ecological impediments to investment, escalating farm prices, energy shortages. These factors may well explain why consumer prices rose by 8 per cent in 1973 (fourth quarter 1972 to fourth quarter 1973) instead of, say, by 6 per cent. But they do not explain why inflation in 1973 would have been as high as 6 per cent in their absence. They do not explain why consumer prices rose more than 25 per cent in the five years from 1968 to 1973.

The Reply recognizes that “the effects of stabilization policies occur gradually over time” and that “it is never safe to rely on just one concept of money.” Yet, the Reply presents statistical data on the growth of money or income or prices for only 1972 and 1973, and for only one of the three monetary concepts it refers to, namely  $M_1$  (currency plus demand deposits), the one that had the lowest rate of growth. On the basis of the evidence in the Reply, there is no way to evaluate the longer-term policies of the Fed, or to compare current monetary policy with earlier policy, or one concept of money with another.

From calendar year 1970 to calendar year 1973,  $M_1$  grew at the

annual rate of 6.9 per cent; in the preceding decade, from 1960 to 1970, at 4.2 per cent. More striking yet, the rate of growth from 1970 to 1973 was higher than for any other three-year period since the end of World War II.

The other monetary concepts tell the same story. From 1970 to 1973,  $M_2$  ( $M_1$  plus commercial bank time deposits other than large C.D.'s) grew at the annual rate of 10.5 per cent; from 1960 to 1970, at 6.7 per cent. From 1970 to 1973,  $M_3$  ( $M_2$  plus deposits at non-bank thrift institutions) grew at the annual rate of 12.0 per cent; from 1960 to 1970, at 7.2 per cent. For both  $M_2$  and  $M_3$ , the rates of growth from 1970 to 1973 are higher than for any other three-year period since World War II.

As the accompanying chart demonstrates, prices show the same pattern as monetary growth except for the Korean War inflation. In the early 1960's, consumer prices rose at a rate of 1 to 2 per cent per year; from 1970 to 1973, at an average rate of 4.6 per cent; currently, they are rising at a rate of not far from 10 per cent. The accelerated rise in the quantity of money has clearly been reflected, after some delay, in a similar accelerated rise in prices.

However limited may be the Fed's ability to control monetary aggregates from quarter to quarter or even year to year, the monetary acceleration depicted in the chart, which extended over more than a decade, could not have occurred without the Fed's acquiescence—to put it mildly. And however loose may be the year-to-year relation between monetary growth and inflation, the acceleration in the rate of inflation over the past decade could not have occurred without the prior monetary acceleration.

Whatever therefore may be the verdict on the short-run relations to which the Reply restricts itself, the Fed's long run policies have played a major role in producing our present inflation.

There is much evidence on the shorter-term as well as the longer-term relations. Studies for the United States and many other countries reveal highly consistent patterns. A substantial change in the rate of monetary growth which is sustained for more than a few months tends to be followed some six or nine months later by a change in the same direction in the rate of growth of total dollar spending. To begin with, most of the change in spending is reflected in output and employment. Typically, though not always, it takes an-

Table I: **Money and Prices**

Dates for M <sub>1</sub> , M <sub>2</sub> , M <sub>3</sub>	Annual Per Cent Rates of Growth from First Quarter to First Quarter of Indicated Years				Dates for Consumer Prices
	M <sub>1</sub>	M <sub>2</sub>	M <sub>3</sub>	Consumer Prices	
1959 to 1961	0.8	2.5	4.6	1.1	1961 to 1963
1961 to 1963	2.4	5.9	7.6	1.3	1963 to 1965
1963 to 1965	4.1	6.9	8.3	2.7	1965 to 1967
1965 to 1967	3.7	7.2	6.7	4.2	1967 to 1969
1967 to 1969	7.3	9.4	8.8	5.5	1969 to 1971
1969 to 1971	4.8	6.3	6.4	3.9	1971 to 1973
1971 to 1973	7.2	10.4	12.6	[9.1]*	1973 to

\*First quarter 1973 to fourth quarter 1973.

other year to 18 months before the change in monetary growth is reflected in prices. On the average, therefore, it takes something like two years for a higher or lower rate of monetary growth to be reflected in a higher or lower rate of inflation.

Table I illustrates this relation between monetary growth and prices. It shows rates of change for three monetary aggregates and for consumer prices over two-year spans measured from the first quarter of the corresponding years. The average delay in the effect of monetary change on prices is allowed for by matching each biennium for prices with the prior biennium for money. Clearly, on the average, prices reflect the behavior of money two years earlier.

To avoid misunderstanding, let me stress that, as the table illustrates, this is an **average** relationship, not a precise relationship that can be expected to hold in exactly the same way in every month or year or even decade. As the Reply properly stresses, many factors affect the course of prices other than changes in the quantity of money. Over short periods, they may sometimes be more important. But the Federal Reserve and the Federal Reserve alone has the responsibility for the quantity of money; it does not have the responsibility, and certainly not sole responsibility, for the other factors that affect inflation. And the record is unmistakably clear that, over the past three years taken as a whole,

the Federal Reserve System has exercised that responsibility in a way that has exacerbated inflation.

This conclusion holds not only for the three years as a whole but also for each year separately, as Table II shows. The one encouraging feature is the slightly lower rate of growth of M<sub>2</sub> and M<sub>3</sub> from 1972 to 1973 than in the earlier two years. But the tapering off is mild and it is not clear that it is continuing. More important, even these lower rates are far too high. Steady growth of M<sub>2</sub> at 9 or 10 per cent would lead to an inflation of about 6 or 7 per cent per year. To bring inflation down to 3 per cent, let alone to zero, the rate of growth of M<sub>2</sub> must be reduced to something like 5 to 7 per cent.

Table II: **Recent Monetary Growth Rates**

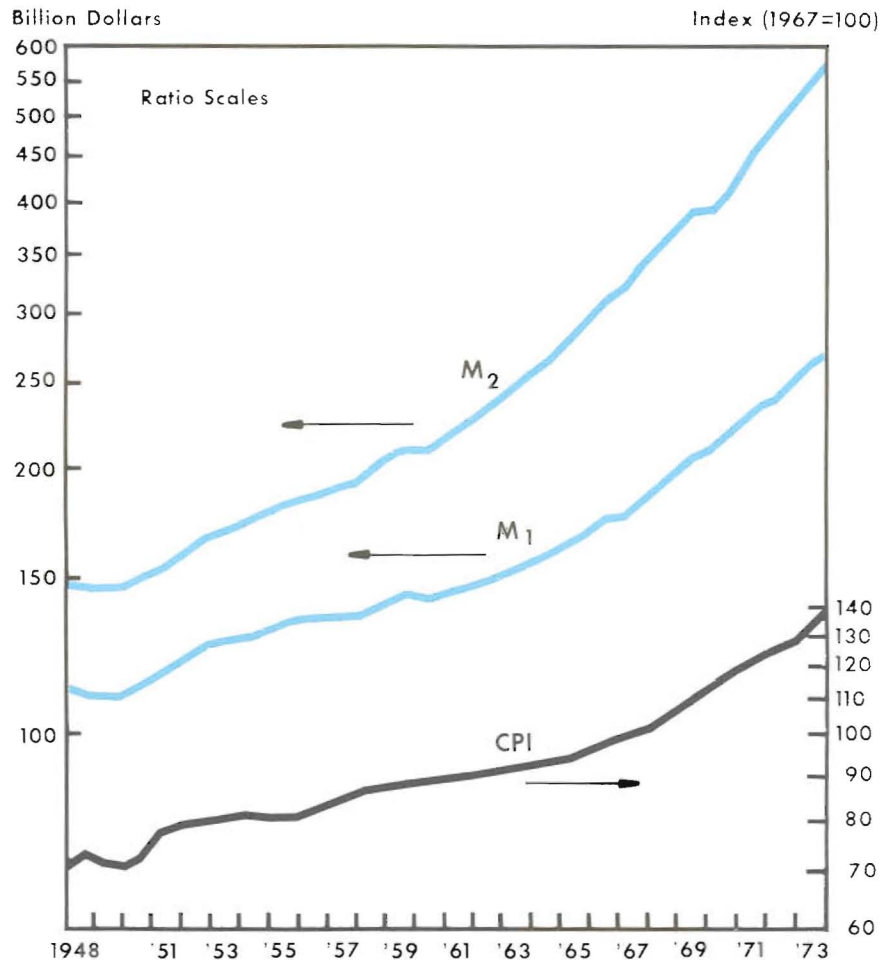
Calendar Year	Annual Per Cent Rate of Growth		
	M <sub>1</sub>	M <sub>2</sub>	M <sub>3</sub>
1970-1971	7.0	11.8	12.8
1971-1972	6.4	10.2	12.5
1972-1973	7.4	9.5	10.6

## Controlling and Measuring

**“The conduct of monetary policy could be improved if steps were taken to increase the precision with which the money supply can be controlled by the Federal Reserve. Part of the present control problem stems from statistical inadequacies”** (emphasis added).

Again these sentences from the Reply are literally correct, but they give not the slightest indication that the difficulties of controlling and measuring the money supply are predominantly of the Fed’s own making. The only specific problems that the Reply mentions are the “paucity of data on deposits at nonmember banks” and the fact that “non-member banks are not subject to the same reserve requirements as are Federal Reserve Members.”

Non-member deposits do raise problems in measuring and controlling the money supply, but they are minor compared to other factors. The Reply’s emphasis on them is understandable on other grounds. Almost since it was established in 1914, the Fed has been anxious to bring all commercial banks into the System, and has been worried about the defection of banks from member to non-member status. It has



**Prices tend to reflect the behavior of the money supply two years earlier**

therefore seized every occasion, such as the Reply provides, to stress the desirability of requiring all banks to be members of the System or at least subject to the same reserve requirements as member banks.

**Control.** Non-member banks raise a minor problem with respect to control. Their reserve ratios do differ from those of member banks. But non-member banks hold only one-quarter of all deposits, this fraction tends to change rather predictably, and changes in it can be monitored and offset by open market operations.

A far more important problem with respect to control is the lagged reserve requirement that was introduced by the Fed in 1968. This change has not worked as it was expected to. Instead, by introducing additional delay between Federal Reserve open market operations and the money supply, it has appreciably reduced "the precision with which the money supply can be controlled by the Federal Reserve." Other measures taken by the Fed have had the same effect. In an article on this subject published recently, George Kaufman, long an economist with the Federal Reserve System, concluded, "by increasing the complexity of the money multiplier, proliferating

rate ceilings on different types of deposits, and encouraging banks, albeit unintentionally, to search out non-deposit sources of funds, the Federal Reserve has increased its own difficulty in controlling the stock of money. . . . To the extent the increased difficulty supports the long voiced contention of some Federal Reserve officials that they are unable to control the stock of money even if they so wished, the actions truly represent a self-fulfilling prophecy."

Even more basic is the procedure used by the Open Market Desk of the New York Federal Reserve Bank in carrying out the directives of the Open Market Committee. These directives have increasingly been stated in terms of desired changes in monetary aggregates rather than in money-market conditions. However, the Desk has not adapted its procedure to the new objective. Instead, it tries to use money-market conditions (that is, interest rates) as an indirect device to control monetary aggregates. Many students of the subject believe that this technique is inefficient. Money-market conditions are affected by many forces other than the Fed's operations. As a result, the Desk cannot control money-market conditions very accurately and cannot predict accurately what

changes in money-market conditions are required to produce the desired change in monetary aggregates.

An alternative procedure would be to operate directly on high-powered money, which the Fed can control to a high degree of precision. Many of us believe that the changes in high-powered money required to produce the desired change in monetary aggregates can be estimated tolerably closely even now. They could be estimated with still greater precision if the Fed were to rationalize the structure of reserve requirements.

**Measurement.** Repeatedly, in the past few years, the Fed's statisticians have retrospectively revised estimates of monetary aggregates, sometimes, as in December 1972, by very substantial amounts.

The one source of measurement error mentioned in the Reply is the unavailability of data on non-member banks. This is a source of error because non-member banks report deposit data on only two, or sometimes four, dates a year. The resulting error in estimates for intervening or subsequent dates has sometimes been sizable, but mostly it has accounted for a minor part of

the statistical revisions. In any event, this source of error can be reduced drastically by sampling and other devices which the Fed could undertake on its own without additional legislation.

More important sources of error are seasonal adjustment procedures and the estimation and treatment of cash items, non-deposit liabilities, and foreign held deposits.

It has long seemed to me little short of scandalous that the money supply figures should require such substantial and frequent revision. The Fed is itself the primary source of data required to measure the money supply; it can get additional data it may need; it has a large and highly qualified research staff. Yet for years it has failed to undertake the research effort necessary to correct known defects in its money supply series.\*

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\*On January 31, 1974, after this comment had been drafted, the Board of Governors of the Federal Reserve System announced "the formation of a special committee of prominent academic experts to review concepts, procedures and methodology involved in estimating the money supply and other monetary aggregates." I have agreed to serve as a member of this committee.

### **Conclusion**

For more than a decade, monetary growth has been accelerating. It has been higher in the past three years than in any other three-year period since the end of World War II. Inflation has also accelerated over the past decade. It too has been higher in the past three years than in any other three-year period since 1947. Economic theory and empirical evidence combine to establish a strong presumption that the acceleration in monetary growth is largely responsible for the acceleration in inflation. Nothing in the Reply of the Chairman of the Federal Reserve System to your letter contradicts or even questions that conclusion. And nothing in that Reply denies that the Federal Reserve System had the power to prevent the sharp acceleration in monetary growth.

I recognize, of course, that there are now, and have been in the past, strong political pressures on the Fed to continue rapid monetary growth. Once inflation has proceeded as far as it already has, it will, as the Reply says, take some time to eliminate it. Moreover there is literally no way to end inflation that will not involve

a temporary, though perhaps fairly protracted, period of low economic growth and relatively high unemployment. Avoidance of the earlier excessive monetary growth would have had far less costly consequences for the community than cutting monetary growth down to an appropriate level will now have. But the damage has been done. The longer we wait, the harder it will be. And there is no other way to stop inflation.

The only justification for the Fed's vaunted independence is to enable it to take measures that are wise for the long-run even if not popular in the short-run. That is why it is so discouraging to have the Reply consist almost entirely of a denial of responsibility for inflation and an attempt to place the blame elsewhere.

If the Fed does not explain to the public the nature of our problem and the costs involved in ending inflation; if it does not take the lead in imposing the temporarily unpopular measures required, who will?

Sincerely yours,  
Milton Friedman  
Professor of Economics