PANEL

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As I listen to this debate, and it seems to have gone on for a long time, I notice that people take various positions. One is that Milton Friedman is completely wrong; another is that Friedman is almost completely wrong. A third is that there is a grain of truth to what Friedman says, but it is not very important; and, therefore, fiscal policy matters far more than the so-called monetarists say. Always, there is a subtle suggestion that some of us know a great deal more about the way in which the economic system operates than we have time to tell. If the argument and evidence could be presented, everyone could see that there is a considerable amount of evidence available showing the sizable effect of fiscal policy operations and supporting some very detailed econometric model of the economy.

Now, I haven't seen that evidence, and I would like to see it. I do know that last November, at the University of Michigan forecasting conference, the forecast of the Michigan econometric model for the first quarter of 1969 was that GNP would increase by \$4.4 billion. At about the same time, the Wharton econometric forecasting unit predicted a \$5.2 billion rise in first quarter GNP and a \$7.4 billion rise in second quarter GNP. We now know that these predicted changes, made only six weeks before the start of the quarter, missed from 2/3 to 3/4 of the actual change. We will soon know that the second quarter GNP changes predicted by those models are considerably less than 50 percent of the actual second quarter change. Moreover, the econometric models forecast larger changes in the second and third quarters than in the first quarter, contrary to the pattern that we can now expect.

You may also recall that a year ago Arthur Okun, then Chairman of Council of Economic Advisers, warned us of the dangers of "fiscal overkill"; talked about the threat of a downturn in the third and fourth quarter of last year as if it were almost a certainty; and argued that the surtax and the prospective reduction in expenditures were likely to push the economy into a recession. These predictions, like the predictions of the Wharton and Michigan models, proved incorrect. The last few years have shown that it is very difficult to forecast GNP a year in advance until we know what the Federal Reserve is

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going to do about the quantity of money. In periods like 1961 to 1965 or 1964, when the quantity of money grows at a relatively steady rate, it is easier to make accurate GNP forecasts. In periods when there are large gyrations in the stock of money, it is difficult to forecast by using models that ignore changes in the stock of money or minimize their effects. And, I believe, that piece of evidence is buttressed by the demonstrated superior predictive performance of the Andersen-Jordan model. Small and unimportant as these two facts may seem in isolation, they are two of the more important facts we have obtained from recent experiences.

If these facts were isolated, we might dismiss them or leave to the model builders to search for the source of their errors. The determinants of GNP and its components are not so well known that large forecasting errors are remarkable; and GNP predictions are not so precise that occasional large errors are either unexpected, or noteworthy. Recent errors, however, are part of a continuing sequence and follow closely the sizable errors in forecasting made in recent years by econometric models that minimize the effect of changes in money.

Reason for Forecasting Errors

There is at least one important common element in the models that make for large forecasting errors. The Wharton and Michigan model builders share a common disdain for any possible influence that might be exercised by changes in the quantity of money. Professor Suits, a principal contributor to the Michigan model, has expressed his view that the neglect of changes in money has no important consequences for his model. Mr. Okun takes a similar position. He writes that the effect of monetary policy is given by the change in market interest rates. A rise in market interest rates is judged to be contractive, and a fall in interest rates is called expansive. The 1969 report of the Council of Economic Advisors, written when Okun was chairman, repeatedly takes that position and states it in terms that are too clear to be misinterpreted.

I believe that the position is incorrect, and that the cause of the error is that market interest rates are an unreliable indicator of monetary policy. That statement doesn't mean that changes in interest rates are independent of fiscal policy or real variables, and it doesn't deny that the demand for money depends on interest rates. Samuelson and Tobin raise the latter point repeatedly and force me THE ROLE OF MONEY . . .

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to confess my ignorance publicly. How do you get from the fact on which we all agree—that the demand for money depends on interest rates—to the conclusion that interest rates are a reliable indicator of monetary policy?

In fact, we know very little about the determinants of short-term changes in market rates. By using interest rate changes to judge the content of current monetary policy, we are very likely to be misled. The closer the economy is to full employment, the more we are likely to be misled.

Of several different errors underlying the incorrect notion that levels or changes in the market interest rates are solely, or mainly, the result of monetary policy, two errors seem to me to be most important. One is the failure to distinguish between credit and money. Most of the changes in market interest rates that we observe are the result of activities taking place on the credit market, not on the theoretical "money market" of economic analysis. The second is the failure to distinguish between changes in interest rates that result from changes in productivity and thrift, and changes that result from inflation. The latter distinction, the distinction between nominal and real magnitudes, is one of the oldest in economics, but it has been neglected in policy discussions and in many econometric models. To understand the effect of change in money on economic activity, both distinctions have to be kept in mind: the distinction between credit and money, and the distinction between real and nominal values.

Two Opposing Views

An understanding of monetary policy, of the role of money as an indicator, and of the difference between the effects of changes in credit and money can be obtained by contrasting two frameworks. In one view, monetary and fiscal policies are seen as the means by which the public sector offsets instability in the economy resulting from changes that occur in the private sector. Fluctuations in prices and output are seen as the result primarily of real forces and changes mainly in attitude or outlook that raise or lower investment, thereby raising or lowering the nominal value of income, market interest rates, and the demand for money. The task of monetary policy, in this framework, is to offset undesired changes in interest rates caused by the unforeseen changes in investment. The task of fiscal policy is to offset the unforeseen changes in the private expenditure and maintain expenditures at the full employment level.

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Monetary policy is called "restrictive" if market rates are permitted to rise; "permissive" if market rates are prevented from rising; and "coordinated" if the balance of payments is in deficit, and market rates are permitted to rise so as to attract an inflow of short-term capital from abroad. With this framework, it appears reasonable to accept interest rates as the main indicator of monetary policy. If the framework were correct, the decision might be more tenable although still not correct.

The alternative view—at least my view—does not deny that changes in market interest rates are partly the result of changes in attitude or changes in technology that shift private expenditures. The difference—and it is an important difference—is a difference of emphasis and interpretation. Not only are changes in private expenditure assigned a smaller role, but many of these so-called autonomous changes are viewed as a delayed response to past monetary and fiscal policies.

The effect of a monetary or fiscal policy is not limited to the initial change in interest rates. An expansive monetary policy raises the monetary base, stocks of money and bank credit, and initially lowers market interest rates. The expansion of money increases expenditure, increases the amount of borrowing, and reduces the amount of existing securities that individuals and bankers wish to hold at prevailing market interest rates. These changes in borrowing and in desired holdings of securities reverse the initial decline in interest rates; market rates rise until the stock of existing securities is reabsorbed into portfolios, and the banks offer the volume of loans that the public desires. If expansive operations continue, expenditures, borrowing, and interest rates rise to levels above those in the starting equilibrium. Later, prices rise under the impact of increases in the quantity of money, further reducing the desired holdings of bonds and other fixed coupon securities, and increasing desired borrowing. A rise in holdings of currency relative to demand deposits adds to the forces raising interest rates on the credit market.

In this interpretation, the effect of monetary (or fiscal policy) is not limited to the initial effect. The response to a maintained change in policy includes the effects on the credit market, the acceleration and deceleration of prices, and ultimately, if policy makers persist, the changes in attitudes and particularly in anticipations of inflation or deflation. These changes, however, are regarded as reliable consequences of maintaining an expansive or contractive monetary policy, just as much to be expected as the initial effect. THE ROLE OF MONEY . . .

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It is the temporary changes in the level of interest rates observed on the credit market that frequently mislead monetary policy makers into believing their policy is restrictive when it is expansive. Large changes in the growth rate of money become a main source of instability precisely because the credit market and price effects dominate the initial effect of monetary policy in an economy close to full employment. Misled by the change in market interest rates—or their interpretation of the change—the Federal Reserve permits or forces the stock of money to grow at too high or too low a rate for too long a time. Excessive expansion and contraction of money becomes the main cause of the fluctuations in output and of inflation or deflation. Inappropriate public policies, not changes in private expenditures, become the main cause of instability.

A portion of the second interpretation has now been accepted by the principal spokesman of the Federal Reserve System. In his March 25th statement to the Senate Banking Committee, Chairman Martin said:

I do not mean to argue that the interest rate developments in recent years have had no relation to monetary policy. We know that, in the short run, expansive monetary policies tend to reduce interest rates and restrictive monetary policy to raise them. But in the long run, in a full employment economy, expansive monetary policies foster greater inflation and encourage borrowers to make even larger demands on the credit markets. Over the long run, therefore, expansive monetary policies may not lower interest rates; in fact, they may raise them appreciably. This is the clear lesson of history that has been reconfirmed by the experience of the past several years.

With that statement, Chairman Martin abandoned the framework that has guided Federal Reserve policy through most of its history and has been responsible for major errors in policy. Recognition that interest rates generally rise fastest under the impact of monetary expansion—that the credit market effects dominate short-term changes in interest rates—is probably the single most important step toward an understanding of the role of money that has been taken in the entire history of the Federal Reserve System.

If we develop our analysis and concentrate on improving our understanding of money and of the differences between money and credit, rather than on the issue of whether Milton Friedman is wholly right or wholly wrong, we will have more progress to report next time we meet. Thank you.

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