

SHADOW OPEN MARKET COMMITTEE

Policy Statement and Position Papers

September 14, 1973

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2. Remarks Prepared for Annual Meeting of National Association of Business Economists – A. James Meigs, Argus Research Corporation
3. Prepared Statement for Hearing on Recurring Monetary and Credit Crises before the Committee on Banking and Currency, U. S. House of Representatives – A. James Meigs, Argus Research Corporation

MINUTES OF THE MEETING OF THE SHADOW OPEN MARKET COMMITTEE

September 14, 1973 - Argus Research Corporation
New York

The meeting was called to order at 10 A.M. Joseph Dorsey, President of Argus Research, welcomed us to Argus. He expressed the hope that the meeting would have a useful influence on economic policy in the United States, and he indicated personal enthusiasm for the idea. He noted, particularly, the benefits to be obtained by a combination of business and academic economists interacting on issues of economic policy and making statements about appropriate policy. Mr. Dorsey then left the meeting.

Allan Meltzer made a brief statement welcoming the members of the committee and the members of the press who had been invited to attend. He noted that recent economic policy had produced some of the poorest results in many years. Inflation is at the highest rate in peacetime history and shows no sign of ending. There is no inclination to discuss current policy or to deal with current problems. There are no discussions of alternative policies. Instead, the Federal Reserve, members of Congress, and members of the Administration try one ad hoc measure after another.

Members of the group had discussed, on many occasions, ways in which economists from business and academic life could try to improve the making of policy. Efforts have been made by members of the group to issue statements. The problem was, often, the statements were issued after the policies had been adopted. Many of us believe that by issuing statements in advance, repeatedly, we may have greater influence on the types of policies pursued.

Minutes of SOMC Meeting
September 14, 1973

Meltzer commented that the idea had been greeted enthusiastically by everyone approached. Only one person had declined an invitation to participate or be associated with the group.

Prior to the meeting members of the committee had been asked to prepare statements on aspects of interest to the entire committee. James Ford had prepared a forecast of economic policy. Wilson Schmidt had prepared a discussion of international and exchange rate influences on domestic economic activity. Robert Rasche had prepared an analysis of fiscal policy with some indications of future fiscal policy. Karl Brunner had prepared a discussion of monetary policy. James Meigs had prepared a discussion of money market conditions and interest rates. Allan Meltzer had prepared a first draft of the policy statement.

James Ford presented a forecast for the next six to twelve months. He indicated that 2-1/2% real growth and 4-1/2% rate of inflation seemed a reasonable prospect for 1974. He discussed some of the components of the forecast and some of the policy assumptions underlying the forecast. The money supply was expected to grow at approximately 6% during the period relative for the forecast. Price and wage controls were expected to remain for large corporations but, severe shortages were not anticipated.

A general discussion of the forecast followed. There was general agreement that real economic activity would decelerate in 1974. No one expected a recession, using the National Bureau definition of recession. Mr. Rasche indicated that the forecast coincided, approximately, with the Michigan and Wharton econometric models, although there was some disagreement about the rate of inflation. Mr. Wolman commented on the Argus forecast.

The committee agreed that deceleration from the results of the first half of 1973 would continue and that inflation could be expected to continue at the rate of 4 to 5% on the GNP deflator basis.

Wilson Schmidt discussed the balance of payments and the exchange rate problems. He indicated that from a monetary point of view, the balance of payments could not be expected to have any sizeable effect on the domestic economy during the next year. The most likely effect would be on the term structure of interest rates, if, as was expected, the dollar continued to rise in the exchange markets relative to other major currencies.

Mr. Schmidt then discussed the balance of payments composition from a structural or Keynesian point of view. He indicated some of the problems of forecasting the individual items and their interaction. He could not find any substantial contradiction with his overall view by looking at the structure of the balance of payments, so he concluded that the balance of payments would not play a large role in the domestic activity next year. Mr. Schmidt expressed some doubts that any important new agreements would be reached at the Nairobi meeting of the International Monetary Fund.

The committee discussed the general implications of Mr. Schmidt's presentation. Most agreed on the general nature of the outlook. They complimented Mr. Schmidt on the quality of his presentation in a difficult area.

A consensus emerged that with the current floating exchange rate, the international sector would not have a substantial impact on domestic economic policy in 1974.

Mr. Robert Rasche discussed fiscal policy. He gave a history of the past fiscal policy and some indications of the size of the deficits over the last few years. In the current fiscal year, the budget would be approximately in balance. Most of the studies that he had seen came to this conclusion. Several econometric models were in agreement on the general point, although not in agreement on the specific details. His best guess was that there would be a deficit of approximately 2.7 billion in the full employment budget for fiscal 1974 and a small deficit in the unified and national income accounts budgets. After July 1, 1974, there is to be an increase in social security benefits of 6%. In 1975 there will be a consumer price index accelerator on the social security payments. These will constitute large items at current rates of inflation.

The near-term outlook indicated that the Federal Reserve would not have to face the problem of financing large deficits.

Most members of the committee expressed a view similar to Mr. Rasche's.

The committee then turned to a discussion of what might be done if fiscal policy were changed. There was talk in the press of suggestions by Arthur Burns and others of a tax increase being requested of Congress. The precise form of a tax increase was not discussed, but the committee attempted to resolve the question of what should be done if fiscal policy became more or less expansive. No general conclusion was reached. A subcommittee consisting of Anna Schwartz, Robert Rasche and Tom Mayer was asked to discuss the question at lunch and to return with some statement.

The meeting adjourned for lunch at 12:10 p.m.

At 1:30 p.m., the meeting resumed. The subcommittee returned a statement expressing the view that monetary policy should not be adjusted if there is a change in the expected fiscal budget deficit or surplus. The committee did not discuss the recommendation at this time.

Mr. William Wolman now chaired the meeting. He called on Karl Brunner to discuss monetary policy. Mr. Brunner delivered some tables showing regressions between money and the monetary base for different time periods. He also included some relations between the monetary base and the money multiplier and between the money stock and the money multiplier. His regressions showed a close relation between the monetary base and the money stock using three month moving averages of percentage changes in the money stock and percentage changes in the base. No similar relationship between the base and the money multiplier was found.

Mr. Brunner commented that there was no problem, as had been reported from the Board of Governors, of gaining control of the money supply. The control of the money supply was not in question, and it had not been in question during the entire post-war period. Mr. Brunner then discussed prospects for the future. He indicated that there were now signs of a deceleration in the money stock. The money stock was growing somewhat less than the 6-1/2% average rate that had been maintained for the past two or three years. A general discussion of the recent performance of the Federal Reserve followed. Several members expressed the view that it was premature to conclude that the money stock deceleration would have a substantial effect on the real economy, an effect requiring modification of the forecast presented earlier in the day.

The committee then moved to a discussion of conditions in the money market. Mr. Meigs described the recent position of the money market and commented on the behavior of interest rates. He distributed a forecast prepared by Argus Research on short- and long-term rates. A general discussion of the interest rate forecast followed. Several members noted that a precise, detailed forecast of interest rates was not essential to our policy decision. The contrast to the Federal Reserve's procedures was mentioned.

The committee then moved to discuss a draft policy statement that had been prepared after telephone discussions with many of those at the meeting. Several comments and suggestions were made about the reorganization of the statement. A drafting committee consisting of Homer Jones, Anna Schwarts, Robert Rasche, James Ford, William Wolman and Allan Meltzer was given responsibility for carrying out the instructions of the committee.

The subcommittee prepared the following directive:

PREAMBLE

Many economists in business and in universities believe that economic policies could have been better in the past and can be better now. Almost as important, more accurate information can be given to the public about what can be -- and what cannot be -- achieved by current policies during the next six months and over longer periods.

A small group from banking, industry, and the universities who share these views plans to meet every six months to consider the same range of issues as the Federal Reserve's Open Market Committee and to issue statements on monetary policy. We also hope to encourage discussion of alternative policies, the likely consequences of current and alternative policies, the risks to be faced and the potential benefits.

At its first meeting, the group issued the following statement on Monetary Policy:

STATEMENT ON MONETARY POLICY

Market interest rates are currently at the highest levels in 100 years as a result of high rates of monetary expansion maintained for several years. Only by reducing the rate of inflation can we expect to reduce interest rates permanently.

We believe that the objective of monetary policy over the next year should be to reduce the rate of inflation. To accomplish this, the growth rate of money for the next six months should be at a steady rate of about 5½%. Because inflation will continue, laws and regulations that delay or prevent adjustment to inflation should be removed.

In the current circumstances, we have considered four options: (1) Reduce the growth rate of money sharply until unemployment starts to rise, then revert to a high growth rate in an attempt to promote a quick recovery; (2) Reduce the growth rate of money sharply, to three percent or less, and then maintain it until inflation ends; (3) Maintain the 6½% growth rate of money that has prevailed for three years; and (4) Reduce the growth rate of money gradually to a less inflationary or non-inflationary range.

OPTION 1

If monetary expansion were sharply reduced until inflation ended or fell substantially below current levels, we would experience the most severe recession of the postwar period. This policy, if maintained, would reduce inflation rapidly but at high short-term cost in real output and employment and high business failure rates.

Moreover, we are skeptical that inflation could be ended in the next twelve months even by a policy of zero monetary growth. Inflation has been maintained too long at current rates to be ended quickly. Unemployment would rise substantially. Monetary growth policy would be reversed and high rates of monetary expansion and inflation would ensue.

OPTION 2

Some urge a repetition of the monetary policies of 1966-67 and 1969-70. After a sharp reduction in monetary growth, a very low growth rate would be maintained until the inflation rate fell and unemployment rose. Then monetary growth would be restored to bring the recession to an end.

Such a policy would be an attempt at "fine tuning." Past attempts were followed, within a year, by rates of inflation as high or higher than before the attempt was made. We have no reason to believe that a policy of this kind would be more successful now. On the contrary, past failures make the attempt less likely to succeed because the belief that inflation will continue is more firmly held.

OPTION 3

Restoring or maintaining the growth rate of money at 6½% would mean accepting an inflation rate of about 4½% -- the average rate of the past five years -- as the norm. Labor rates, market rates of interest, rental prices and other contracts are now based on this

norm. Some of the cost of adjusting to this rate of inflation has been paid. The longer inflation continues at this rate, the more deeply rooted and more widespread becomes the belief that this rate has become the norm. The burden of trying to reduce or end inflation increases.

This option appeals to many. We have rejected this policy because it is based on a false presumption. The chances of achieving the goal of a steady rate of inflation are no better at 4½% than at lower rates. The long-term consequences for employment and prosperity are not improved by high rates of inflation.

OPTION 4

A policy of gradually reducing inflation can be initiated by lowering the average growth rate of money to 5½% for the next six months. In March, a further reduction in the growth rate may be appropriate. The amount of additional reduction would depend on the economic conditions prevailing in March and expected to prevail thereafter.

A policy of gradually reducing inflation runs the risk that the policy might be abandoned. Yet, looking back, it seems clear that had this policy been adopted and maintained in 1967 or in 1969, inflation would be lower and less well entrenched. Real growth would have been as good or better. Interest rates would be lower now.

There are costs of maintaining inflation and costs of ending

inflation, but there is no way to end inflation easily or without cost. Sharp and sudden swings between extremes, attempts to break expectations, false promises, ringing statements of commitment to anti-inflationary policy and controls have not succeeded during the past eight years. Less dramatic policies will cost less and will, perhaps, be more effective. They are unlikely to be less effective.

The vote on the directive was as follows:

Voting Yes:

Karl Brunner
Peter Crawford
James Ford
Homer Jones
Tom Mayer
A. James Meigs
Allan Meltzer
Robert Rasche
Wilson Schmidt
Anna Schwartz
William Wolman

Absent, but not voting: Beryl Sprinkel.

The meeting adjourned at 5:15 p.m.

A. James Meigs, Vice President and Economist
Argus Research Corporation

Remarks Prepared for
ANNUAL MEETING OF
NATIONAL ASSOCIATION OF BUSINESS ECONOMISTS

September 13, 1973

A MONETARIST VIEW OF THE OUTLOOK

Because this is to be a monetarist view I plan to base my remarks mainly on two of the contributions to the art of forecasting that can most fairly be attributed to monetarists. The first of these is the proposition that substantial changes in the rate of growth of the money stock cause fluctuations in business activity and changes in the price level. In fact, I will base my views on a more dogmatic version of the monetarist credo: Substantial changes of inflation rates and recessions important enough to win the National Bureau of Research seal of approval will not occur unless there are earlier changes in the rate of growth of the money stock in appropriate amounts and directions.

The second key monetarist proposition I plan to use is that anticipations of changes in the price level have important effects on market interest rates. We owe this one largely to Irving Fisher, who was a half century or more ahead of most of the Economics profession for most of his life.

The monetarist view, it seems to me should be be most useful on the following three questions:

- Will there be a recession in 1974?
- How much inflation will there be?
- What will interest rates do?

A RECESSION IN '74?

The critical signal of impending recession in the monetarists' book is a sharp reduction in rate of growth of the money stock over a period of two or three calendar quarters. A recession would begin two or three quarters after such a deceleration in money growth begins. To produce a recession for '74, therefore, the Federal Reserve would have to start working on it right away. In July and August the Fed did have some success in slowing growth of the money stock. So the third quarter may show considerably slower growth than did the second. This would be consistent with a Federal Reserve attempt to get back on a 6% year-to-year growth track after overshooting badly in the second quarter. However, I do not believe the monetary authorities want to risk pushing the economy into recession. Their forecasting models probably already are sounding caution signals.

I assume the authorities will be aiming for a 6% growth rate for M1, perhaps a little less, and that they will try to avoid running under that for longer than three or four months at a time. Their own research tells them that they can undershoot, or overshoot, their aggregate targets for as long as two quarters without having a significant impact on the growth of GNP. Given the widespread opinion in the land that the economy is now in a sensitive state, it seems unlikely to me that they would take a chance of using up all of the leeway for undershooting that their econometricians tell them they have. Furthermore, they have demonstrated since they took conscious control of the money supply in 1970 that it is easier for them to push on a string than to pull it. That is, they have found that it is easier

to get the money supply to grow than to slow it down, with their control methods. Consequently, they may aim for about 6%, but I think they will get about a 7% average growth rate in M_1 over the next several quarters. That should be enough to avert recession in '74.

There are two arguments against that conclusion, both of which have been used recently by Milton Friedman. The first of these is that business men and consumers will be so confused by Phase IV that they will want to become more liquid. The slowing of velocity, as they try to build up money balances, will then offset enough of the growth in the money stock to cause a recession. There was such a slowing of velocity for a short time after the first freeze was decreed in August 1971. However, businessmen and the public are more sophisticated about controls now. Although Phase IV will cost the economy some output through encouraging inefficiency, I believe we can count on the ingenuity of the American public and the flimsiness of the controls machinery to hold the damage below the critical point.

The second argument is based on the difference between nominal money balances -- book dollars, uncorrected for the effects of inflation on their purchasing power -- and real balances -- nominal balances adjusted for anticipated inflation. It can be argued that a 6% growth rate for nominal M_1 , with a 4% inflation rate, is equivalent to a 2% growth rate of M_1 when the price level is stable, or is expected to be

stable. This argument flows from the quantity theory of money, which is a theory of the demand for real balances. The theory says that people want to hold a particular amount of real purchasing power in the form of money and that how much they want to hold is related to their incomes, interest rates, price anticipations and their holdings of other forms of wealth. A rise in the inflation rate, with nominal M_1 growing at steady 6%-7% rate, therefore, would reduce the rate of growth of the real money stock. Again, Dr. Friedman believes, the slowing of velocity, as people try to maintain their desired real balances in the face of a rising inflation rate, might be enough to cause a recession.

There is little empirical evidence to go on in assessing this argument. What matters is how much inflation people expect. However, we have had only a brief experience with Americans behaving as if they expect inflation to continue. Most of that experience has been since 1965. The real-balance argument justifies expecting a slowing down in the rate of growth of real GNP next year, as my colleagues at Argus and I do. But there are possible offsets that I expect will combine to keep the slowdown from reaching the recession stage:

- Anticipated inflation may reduce the demand for real balances, encouraging people to get out of money and into other assets.
- The devaluation of the dollar has increased domestic and foreign demand for U. S. produced goods, services and capital assets.

- After having grown at an abnormally slow, 1.1%, annual rate between 1966 and 1971, income velocity accelerated in 1972. If velocity grows more nearly at its 3.5% 1950/1966 average annual rate in 1974, a 6% money growth rate would prove to be considerably more expansive than most money models now indicate.
- The Federal Reserve is so sensitive to the risk of recession that I believe any perceptible slowing in growth of real GNP will bring an increase in the growth rate of the money stock. This, I admit, violates my original money supply assumption, but I believe money growth is more likely to rise above the assumed target than to fall below it.

HOW MUCH INFLATION?

In forecasting the inflation rate for 1973, many forecasters, including those in government, were much impressed with special factors, such as the devaluation of the dollar, and the Russian wheat deal. These were expected to contribute to a short upward sprint in prices, after which the inflation rate would settle back about to the 2 1/2% to 3% that was the Administration's goal. There also was considerable optimism about the price-depressing effects of productivity growth and unused capacity. At Argus, we accepted the temporary spurt thesis, but expected the inflation rate to settle back to a new higher trend rate of 3 1/2% to 4%. We thought an increase in the inflation rate was inevitable, given a 6% average monetary growth rate for '71, '72, and '73.

The trend rate of growth of the money stock now appears to be closer to 7% than to 6%. During 1974, therefore, we expect the consumer price index to be moving toward a 5% to 5 1/2% trend rate of

inflation, after the effects of the dollar devaluation and the world food shortage fade away. Improvement in the food supply outlook may slow the rate of rise of the C.P.I. for a while, but its effects on the overall index will be temporary.

The familiar $MV=PT$ equation of exchange refers to equilibrium situations. We have much to learn about the dynamics of adjustment of prices as rates of growth of the money stock change. Nevertheless, simple observations of changes in annual averages of the money stock and prices can be instructive. From 1953 through 1964, for example, the money stock grew at a 2.0% annual rate and the CPI rose at a 1.4% rate. From 1964 through 1972 the money stock grew at a 5.5% annual rate, while the CPI rose at a 3.8% rate. A 3.5 percentage-point rise in the rate of monetary expansion was accompanied by a 2.4 percentage-point increase in the inflation rate. However, there is no reason to suppose that the inflation rate had fully adjusted by 1972 to the higher trend rate of monetary expansion. The 1970 recession had temporarily reversed the acceleration of price inflation. From 1969 to 1970, which was roughly five years after the acceleration of money growth began, the CPI rose 5.9%. A 3.5 percentage-point upward shift in the trend rate of money growth, thus was followed five years later by a 3.5 percentage-point inflation rate. Since then, monetary expansion has accelerated again.

To those who believe a 5% to 5 1/2% inflation rate is too high,

I suggest considering a few additional possibilities:

- The Federal Reserve may have shifted to a higher trend rate of money growth after the 1970 recession than the 5.5% prevailing over the entire 1964-72 period. Measured by quarterly averages, the money stock grew at about a 7% annual rate between the fourth quarter of 1970 and the second quarter of 1973. A 7% money growth rate is 5 percentage points higher than the 2% that earlier appeared consistent with a 1.4% average rate of rise in the CPI. That argues for a 6% inflation rate eventually, unless the Fed slows down its money machine.
- Some of the upward pressure on output and prices between 1965 and 1971 was dampened by a slowing of velocity. Velocity showed signs of returning to its old growth trend in 1972.
- Some U. S. inflation was exported to other countries between 1964 and 1971, as they absorbed dollars rather than letting their exchange rates change. The new regime of floating exchange rates, in effect, bottles up U. S. inflation in the United States.
- Not even a 1974 recession would make much difference to 1974 prices, although it would slow inflation in later years. Controls have taught businessmen never, or almost never, to reduce list prices. The 1967 and 1971 turnarounds in monetary policy have taught the general public that anti-inflation policies are bad politics and hence will not be followed very long. To achieve as much deceleration in the inflation rate as was achieved between 1970 and 1972, I believe, would require a more severe, or longer, recession than the one of 1970.

Finally, I do not believe direct controls will reduce inflation in 1974. In my opinion, the net result of adopting wage-price controls in 1971 was to make prices higher in 1974 than they would otherwise have been.

LOWER, OR HIGHER, INTEREST RATES?

The monetary influences discussed thus far suggest both downward and upward forces on interest rates in '74. First, the downward forces: A slowing in the rate of growth of real GNP will tend to reduce demand for credit. This should pull short rates, as represented by the 90-day Treasury bill rate, down to about 7.0% on a quarterly average basis in the first and second quarters. The effects on long rates will be much smaller, with the new-issue yield on Aa utilities coming down to about 8.1% in the same quarter.

I do not include an easing of monetary policy among the downward forces, for the simple reason that it was not tight Fed policies that drove rates up so high in 1973. The effort to slow growth of the money supply probably added several basis points to short rates in the third quarter, but the business boom, the resurgence of inflation, and the ill-starred effort to hold bank prime rates down were far more important.

Now the upward forces: The developing surge in business spending for plant and equipment and continuing strong demands for consumer durable goods and housing will be exerting a long-term upward force on the real rate, despite the temporary downward force of a business slowdown in early 1974. More important, lenders and borrowers will probably be revising upward their expectations of price inflation. This will limit the decline in short-term rates and could push long-term rates

higher than they were in 1973. Anyone who doubts the power of inflation expectations to push long rates up in the face of a business slowdown should remember 1970. Long rates peaked in the middle of that recession year.

To sum up, 1974 should be a good year in many respects. Output and employment will be high, in spite of a slowing in their rates of growth. Corporate profits will grow instead of collapsing as many forecasters now fear. Although agonizing over it, the public will adjust to inflation. A continuing uncertainty should support the demand for business economists.

**Prepared Statement of A. James Meigs,
Vice President and Economist, Argus Research Corporation
for
Hearings on Recurring Monetary and Credit Crises
before the
Committee on Banking and Currency
U.S. House of Representatives
September 11, 1973**

Reforms in the structure and regulation of financial institutions would be highly desirable. Financial institutions have been massively over-regulated since the 1930's. Consequently, relaxation of regulatory restraints that now limit competition among the various types of financial institutions should yield substantial benefits to the public.

However, the draft Staff Report of the Subcommittee on Domestic Finance is correct in saying that unless the Federal Reserve System is somehow induced to maintain a more stable monetary framework for the U.S. economy, financial reform cannot assure the flows of funds into housing, priority state and local government projects, and new and small businesses that this Committee and others would like to see. Nor can financial reform alone ameliorate the costs of instability in other important sectors of the economy. I believe that the current disarray and confusion in the securities markets, for example, also reflect the damaging effects of extraordinary and unnecessary instability of monetary policy, especially since 1964.

In this statement and in the appended exhibits, therefore, I plan to concentrate on the problem of improving monetary policy. As Chapter 4 of the draft Subcommittee Report presents a well-balanced and competent analysis of the problems and evidence involved, I shall confine my remarks to points that seem to me to be especially important.

Money and Interest Rates

The first of the two exhibits discusses the influence of money-supply changes on interest rates. I include it with this statement because

misunderstanding of the interaction of monetary policy and interest rates has been, in my opinion, the most important source of error in the conduct of monetary policy, not only in the United States but in most other countries as well. Misguided efforts of central banks and governments to stabilize interest rates have caused economic instability and inflation the world over. The effects on interest rates, moreover, have been perverse; interest rates are higher and certainly less stable than they would otherwise have been.

Attempts to insulate homebuilding from the effects of interest-rate instability -- as, for example, through requiring institutions to purchase prescribed amounts of mortgages or through the variable investment-tax credit recommended by the Board of Governors of the Federal Reserve System -- would, I believe, redistribute some of the costs of instability without significantly benefiting homebuilding. Aggravating instability in business spending for new plant and equipment by varying investment-tax credits, in particular, seems unlikely to foster the confidence in employment and income prospects that would encourage people to undertake the burdens and pleasures of homeownership.

The only effective way to attain lower and more stable interest rates is through maintaining lower and more stable rates of growth of the money stock than those of recent years. Under our current institutional arrangements, only the Federal Reserve can do that.

When I wrote the first exhibit on money and interest rates in early 1971, I was more optimistic about the outlook for interest rates than I

am today. The slowing of inflation that was underway at that time and the declarations of good intentions from the monetary authorities made lower and more stable interest rates seem highly probable. The subsequent swing to hyper-expansive fiscal and monetary policies and the resort to wage-price controls can perhaps best be described as wringing defeat from the jaws of victory. The effects of the resurgent inflation on interest rates need no elaboration here.

Instability and Inflation

The second exhibit, "Conflicting Targets of Monetary Policy," discusses some evidence on effects of money-supply changes and contains my recommendations for improving the conduct of monetary policy. Chart 18.1 shows changes in quarterly averages of the narrowly defined money stock (M_1) from 1947 through the second quarter of 1973. Two sets of guidelines that have been recommended by the Joint Economic Committee have been added to provide an idea of what might have happened had they been in effect over the whole period.

Two characteristics of that record strike me as being overwhelmingly obvious. The first is the great volatility in rates of change in the money stock. Every major reduction in the rate of growth except the one of 1971 was followed by a recession or a mini-recession (1967). Every time the rate of growth of the money stock fell below either the 3% or 2% minimum guidelines of the Joint Economic Committee, except in 1962 and 1971, a recession or mini-recession followed. This suggests that if monetary decelerations had been checked at either of the minimum guidelines, the subsequent recessions or mini-recession would have been avoided or reduced in severity.

The second important characteristic is the change in trend in the rates of growth of the money stock. From early 1952 through early 1960, the trend was downward. It was in this period that the World War II and Korean War inflations were painfully, but effectively, wrung out of the economy. From early 1960 through the second quarter of 1973, the trend has been

upward. The new inflation began in 1965, when money-growth rates approached or exceeded the 5% and 6% maximum guidelines. Inflation was strongly accelerated from 1967 through the second quarter of 1973, when money-growth exceeded both the 5% and 6% maximum guidelines in many quarters. This suggests that if money-growth had been checked at either of the JEC maximum guidelines, the economy would be suffering much less from inflation today – and interest rates would be lower.

Federal Reserve spokesmen undoubtedly will express reservations about this ultra-simple evidence. But their own research and statements support two of its main implications:

1. Econometric models in use at the Board of Governors and elsewhere in the System would forecast a reduction in the rate of growth of Gross National Product if the rate of growth of the money stock were to fall significantly below its prevailing trend and remain there for more than two calendar quarters.
2. Dr. Arthur F. Burns, Chairman of the Board of Governors, has testified, as he did before the Joint Economic Committee in February 1971, "... while a high rate of growth of narrowly defined money may well be appropriate for brief periods, rates of increase above the 5 or 6 percent range – if continued for a long period of time – have typically intensified inflationary pressures."

It may well be asked why the monetary authorities, who have acknowledged that changes in the money stock influence income, employment and prices, have not kept these changes within narrower bounds.

The Mechanics of Controlling the Money Supply

One of the defenses of the Federal Reserve is that there are defects in the machinery. From the early 1920's to this day, however, the principal weakness has been in the Federal Reserve's own conception of the processes it is sup-

posed to control. My own research, *Free Reserves and the Money Supply*, which was distributed within the System in 1960 and published by the University of Chicago Press in 1962, demonstrated the fallacy of the Federal Reserve's reserve-position doctrine. A three-part study done for this Committee by Karl Brunner and Allan H. Meltzer in 1964 carried the criticism much farther along and proposed an alternative approach to the monetary mechanism. Many other researchers inside and outside the System have contributed to the discussion since then. Yet, the same old discredited ideas still have a strong hold on System thinking. They are dressed up now in the language of modern macroeconomics and econometrics, but they still give a misleading impression of the difficulties involved in controlling the money supply. More important, they lead to operations that cause the money stock to behave in ways that the Open Market Committee itself considers inappropriate.

I will simply assert here that the Federal Reserve could exert much more effective control over the money supply than it now does, and that it will, whenever the Members of the Board of Governors decide that it is in their best interest to try. Changes in the machinery that have been initiated by the Board in recent years, however, have often been in the direction of making their job more difficult. I have particularly in mind the proliferation of reserve requirements on various categories of bank liabilities.

My own suggestions for improving monetary policy are:

1. Develop better measurements of the money supply and other monetary aggregates.
2. Renounce attempts to control interest rates, "money-market conditions," or the supply of credit.
3. Adopt a steady-growth rule for the money supply, so that money-supply changes would no longer cause instability

and inflation and no longer amplify disturbances originating elsewhere in the economy.

I would also suggest, as I have in the past, that the transition to a system of controlling the money stock be done gradually, through reducing the tolerated range of variation in money-growth rates while increasing the tolerated range of variation in short-term interest rates. This, it seems to me, would be consistent with the Joint Economic Committee's recommendation for specifying a range of variation in money-growth rates. I would certainly endorse, also, the suggestion in the draft Subcommittee Report that a target rate of growth for the money stock be set annually.

The Politics of Monetary Policy

When I speak of the politics of monetary policy, I use the word "politics" in its finest sense. Economic policy seems to me legitimately and necessarily subject to political decision and accountability. Considering the enormous costs of inflation and economic instability, therefore, it seems no more logical to have monetary policy determined by an independent monetary authority than to have all uses of military power determined by an independent Defense Department.

To explain why the Federal Reserve does not now do better than it does would carry me far beyond the boundaries of my professional competence. But I believe monetary policy would be enormously improved if the President were to set money-supply growth guidelines in his Economic Reports to the Congress and require the Federal Reserve to operate within these guidelines. This would focus the attention of the Federal Reserve on something they could do, rather than permitting them to intervene in so many different markets in so many different ways that they can never be held responsible for the results.

I have only one additional suggestion to make regarding other ways of making the Fed-

eral Reserve more responsive to the wishes of the President and the Congress. These are, after all, matters of organizational structure and procedure that the Members of this Committee are far more competent to judge than I am.

My one additional suggestion is to eliminate the secrecy that now cloaks the processes and decisions of the Board of Governors and the

Open Market Committee. I see no reason why Policy Directives of the Open Market Committee should not be publicly announced immediately after each meeting of the Committee, preferably with a discussion of the reasons for policy decisions. Ending the secrecy would not only facilitate the monitoring of System actions by the President and the Congress, but it would greatly reduce uncertainty among the general public.

Exhibit submitted to Committee on Banking and Currency, House of Representatives, 93rd Congress, First Session, Hearings on Recurring Monetary and Credit Crises, September 11, 1973, by A. James Meigs, Vice President and Economist Argus Research Corporation.

MONEY AND INTEREST RATES

... in order to estimate the possible variation in the rate of interest, we may, broadly speaking, take account of the following three groups of causes: (1) the thrift, foresight, self-control, and love of offspring which exist in a community; (2) the progress of inventions; (3) the changes in the purchasing power of money. The first cause tends to lower the rate of interest; the second, to raise it at first and later to lower it; and the third, to affect the nominal rate of interest in one direction and the real rate of interest in the opposite direction.

Irving Fisher, *The Theory of Interest*, 1930

Of Irving Fisher's three causes, monetarists have learned to concentrate on the third – the changes in the purchasing power of money. But the educational process has not stopped with monetarists. People who earn their bread by lending in the capital markets have rediscovered in an excruciatingly painful way a truth that Irving Fisher had clearly explained in 1896. This truth is that changes in the purchasing power of money have powerful effects on market interest rates – the nominal rates to which Fisher referred.

The Real Rate and the Money Rate

As Fisher explained it, we should distinguish between two kinds of interest rates: real rates and money (or nominal) rates. The real rate is the interest rate measured in terms of goods. When someone lends \$100 this year in

order to get \$105 next year, he gives up \$100 worth of goods and services for what he hopes will be \$105 worth of goods and services next year. We have no direct measure of this real rate. The money rate is the one we can see in the markets, where loans are measured in dollars, not goods.

If lenders and borrowers all believed that the purchasing power of money would remain constant, the real rate and the nominal rate would be the same. But people seldom, if ever, do believe that the purchasing power of money will remain constant. Therefore, the money rate of interest will be higher than the real rate if people believe prices will rise; and it will be lower than the real rate if people believe prices will fall. With prices expected to rise 5 percent per year, lenders will demand the real rate plus 5 percent so that they will be protected against the expected loss in the purchasing power of money. Borrowers will be willing to pay this 5 percent inflation premium because they expect to repay their loans with dollars worth 5 percent less than the dollars they borrow.

The revived Fisherian emphasis on the purchasing power of money directly contradicted a central proposition of the conventional approach to interest-rate forecasting used before 1965 because it implied that an easy-money

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policy would cause interest rates to rise. Most forecasters and money-market practitioners considered it an obvious fact instead that an easy-money policy would cause interest rates to fall. They accepted the traditional view that central banks could control interest rates through increasing or decreasing the supplies of credit and money and by changing the central banks' own discount rates.

The business cycle was important, in the conventional view, for two reasons: it influenced the demand for credit and it influenced credit policy and thereby influenced credit supply. The first step in anyone's interest-rate forecast, therefore, was a forecast of economic activity or GNP. After the introduction of the Federal Reserve's Flow-of-Funds Accounts in the mid-fifties, many forecasters in the United States began to project supplies of credit and demands for credit that they believed were implied by their own or other GNP forecasts. Expected federal budget deficits or surpluses played a key role in the flow-of-funds projections as well as in the GNP forecasts. The interest-rate forecasts would then depend largely on how the Federal Reserve was expected to react to the projected economic and credit-market conditions. Would the Federal Reserve allow a projected gap between credit demand and credit supply to be filled with bank credit? Or would it not? As a matter of fact, this flow-of-funds approach is still widely used.

The conventional approach to interest-rate forecasting had two parts of the problem right. That is, it was correct in expecting business fluctuations to push interest rates up or down. In the United States after World War II, interest-rate peaks roughly coincided with business-cycle peaks and interest-rate lows followed recession troughs by two to five months (see Chart 7-1). And the approach was correct in assuming that efforts of the Federal Reserve to counteract recessions and expansions would also push interest rates down or up, at least for a time. But even those few economists who were aware of the effects of price expectations on interest rates thought they worked so slowly

that they could be safely overlooked in forecasting.

As we saw earlier, however, the Federal Reserve and other central banks struggled mightily but unsuccessfully to curb the rise of interest rates in the second half of the sixties. Interest-rate forecasts of all types, therefore, proved to be spectacularly wrong.

In 1965, on the very eve of the inflation that still bedevils the United States, prudent, farseeing portfolio managers of financial institutions bought long-term corporate bonds yielding 4½ percent or less. Investors were glad to get them because corporations were so well supplied at the time with retained earnings and depreciation allowances that they were not borrowing much. Little did these expert portfolio managers know that by mid-1970 their actual return on these bonds would prove to be less than zero because of a depreciation in the purchasing power of money that they had not foreseen. Viewed in the glaring light of hindsight, lending decisions of banks and other institutions were also costly.

It is, of course, an ill wind that blows nobody good; the corporations that had the prescience or the good luck to borrow in 1965 were handsomely rewarded for the care they took of the institutions' money over the next five years. The same thing could be said of the homeowners who had bought houses in 1965 with mortgages yielding less than 6 percent to lenders. The government borrowed well, too.

Fisher had anticipated just such a possibility when he pointed out that the influence of changes in the purchasing power of money on the money rate of interest will depend on whether or not the changes are foreseen. "If it is not clearly foreseen," he said, "a change in the purchasing power of money will not, at first, greatly affect the rate of interest expressed in terms of money."

One of the most remarkable aspects of capital-market behavior in the period since 1965

is that the inflation that was not foreseen in 1965 was very quickly reflected in market interest rates. In mid-1970, shortly after the rate of rise of prices approached 5½ percent, (as measured by the GNP deflator), long-term bond yields hit 8½ percent. A 4 percentage-point increase in the rate of price inflation had been roughly matched by a 4 percentage-point rise in corporate bond yields. This was a more rapid adjustment than Fisher would have expected. Reverent Fisherians, consequently, underestimated the rise of rates along with nearly everyone else.

From Theory to Dogma

For more than sixty years, Fisher's idea about the effects of inflation on interest rates had been an esoteric proposition familiar only to a few economists. The painful experience of lenders in the 1960s, however, made it a matter of dogma in the capital markets in less than five years. Now, everyone knows that price inflation means high interest rates. This suggests that the grading system used in the markets must be quite effective in eliminating slow learners.

By 1971, however, forecasters were in some danger of forgetting that changes in the purchasing power of money affect market interest rates in both directions. Most of the people who were courageous enough, or foolhardy enough, to publish their views on the future of interest rates in early 1971 agreed that inflation had much to do with pushing rates to the peaks reached in 1969 and 1970. From there on they seemed to me to divide into four main camps. One group expected rates to remain high because inflation would never be curbed. Another expected rates to remain high even if inflation were to slow down – because of real forces, such as an expected capital shortage and a decline in the propensity to save. The third group expected rates to come down because of a slowing in the inflation rate. And a fourth expected rates to be driven down by the Federal Reserve. Membership of this group grew considerably during 1970.

We should not expect to keep these forecasters confined to the camps I just mentioned. There were certain to be migrations from camp to camp. For example, the forecasters who expected rates to be driven down by the Federal Reserve were likely to join the perpetual-inflation group in expecting high and rising rates after 1972. As a matter of fact, if the Federal Reserve were to try very hard to do what they expected in 1971, we might all join those who expect perpetual inflation and high rates.

The views of all these forecasters, and of the people who inhabit the markets as well, incorporated in various ways expectations about future prices, what determines future prices, and the effects of price changes. Fisher believed that people's expectations about prices were drawn from their own experience. Furthermore, in his day most people could remember periods in which prices fell as well as periods in which prices rose. Consequently, they did not jump quickly to the conclusion that a year of rising prices meant perpetual inflation or that a short period of falling prices meant perpetual deflation.

“... when prices are rising,” Fisher said, “the rate of interest tends to be high but not so high as it should be to compensate for the rise; and when prices are falling, the rate of interest tends to be low, but not so low as it should be to compensate for the fall.” Between 1965 and mid-1970, however, long rates rose higher and more quickly than can be explained by Fisher's view that price expectations and money interest rates are adjusted slowly in the light of actual price behavior.

One possible explanation for the apparent speeding up of interest-rate reactions to price inflation is that a long and accelerating rise of prices has a more powerful impact on expectations than an inflation that moves at varying speeds. We all must admit that the price rise from 1964 on was strong and convincing. Another is that expectations are influenced by other information than the actual past behavior

of prices. The new ingredient is economic policy or, rather, expectations about economic policy. Instead of looking just at prices, people analyze the speeches of the monetary authorities and read the election returns to decide whether or not inflation will continue.

Whatever caused the change, the lags in interest-rate reactions to changes in prices have shortened since Fisher's day. I should amend that to say the lags in reaction to a speeding up of inflation have shortened. We cannot be sure that the lag in reaction to a slowing of inflation has shortened as much, for in 1971 we had not yet had much opportunity to observe the effects of a slowing in the rate of inflation.

Lessons for the Seventies

The outlook for U.S. interest rates in the seventies, therefore, depends upon what policies the Administration and the Federal Reserve will follow, how soon and how much those policies will influence the rate of inflation, and finally, how soon and how much the change of inflation rates will influence price expectations and interest rates. To take these possibilities in turn, if the Administration and the Federal Reserve stay on the 1970-early 1971 strategy of moderation in fiscal and monetary policies, the slowing of price inflation, which had been so elusive, should become more noticeable in 1972, unless the monetary explosion of 1971 causes inflation to reaccelerate.

By 1975 the purchasing power of money could be approximately stable, as it was in the early 1960s. After all, four years of extraordinarily expansive monetary and fiscal policies were required to get the inflation started. In the absence of such policies, inflation will not continue indefinitely. Even if the price stability of the early sixties is not regained, however, the inflation rate should be considerably lower than it was when interest rates reached their peaks in 1969 and 1970.

I have already indicated that interest rates should react to a slowing of inflation by drifting

gradually downward after 1971. Whatever investors may say about inflation, many have been acting for some time as though they at least do not expect the inflation rate to increase. Judging by the tremendous volume of bonds purchased by households and institutions in 1970 and 1971, the inflation premium in bond yields seemed to have eased investors' fears of future injury from inflation. If they were to see inflation actually slowing down, therefore, their appetite for fixed-income securities might increase even more.

The painful lesson to lenders in the 1960s was that unforeseen inflation brings depreciation in the bond account. The more pleasant lesson of the 1970s may be that unforeseen slowing of inflation brings capital gains for the bond buyer. Either way, the slow learners are penalized, which may account in part for the shortening of the lags that I mentioned earlier.

The Financial Research Center of Princeton University found in a survey of 137 large institutional investors in 1971 that they expected an average annual inflation rate of nearly 4 percent for the next decade. A bond yielding 8 percent or more at the time of the survey would, therefore, provide them a real rate of return of 4 percent or more, if they correctly predicted the rate of inflation. If the inflation rate were to fall below 4 percent, as I expect it will, the 8 percent bond of 1971 would produce more than a 4 percent real rate of return.

If inflation were to go well above 4 percent per year, however, the investors who bought 8 percent bonds would suffer capital losses, as did those who bought 4½s in 1965. It is no wonder then that American investors have learned to keep one ear or both on Washington at all times. In interest-rate forecasting, as in forecasting the GNP, the most difficult problem is to forecast what the government and the central bank will do. In early 1971 an alarming upsurge in money supply raised the odds on another acceleration of price inflation that would drive rates higher.

Before escaping into the euphoric, less inflationary, long run, interest-rate forecasters in early 1971 had some troublesome details to clear up about the rest of the year. The U.S. economy had been below par for more than a year. Interest rates had fallen since June, 1970, as they always do in recessions. As economic activity improved in 1971, therefore, rates could be expected to rise. Nevertheless, the downward influence of the slowdown in price inflation on rates should tend to counteract the upward influence of the increase in activity. This suggested that although rates would rise again during 1971, the rises would stop far short of the previous peaks.

Another widely held view at the time, however, was that the recovery from recession would be slow, in fact, so slow that interest rates would continue to decline for much or all of 1971. The continuing decline of rates in this view would result from weakness of credit demand and from efforts of the Federal Reserve to get the economy moving again by expanding bank credit and the money supply.

Economic stagnation was the least likely outcome of the Administration's policies of curbing inflation and ending the Vietnam War. Both of these policies had contributed to unemployment by reducing demand for the products of some of this country's most important industries, including durable goods manufacturing in general and the aerospace industry in particular.

But it should not have been forgotten that the war and the space program had diverted enormous amounts of manpower and other resources from the production of many other things that Americans wanted, and still want – including millions of new houses and the community facilities required for a high-quality life. Inflation was one of the ways in which the U.S. government had extracted from an unenthusiastic electorate the real resources for the Vietnam War and the phenomenal expansion of non-defense programs that accompanied the war from 1965 through 1968. High interest rates

also played a part in the diversion of capital resources from home building and from state and local governments.

The resilience and flexibility of the economy could be counted on to complete the difficult transition from war to peace speedily. Unfilled demands would not long be neglected after resources became available for filling them. There was good reason to expect a recovery that would be a revelation to those forecasters who had allowed the pressing problems of the day to rob them of historical perspective. But there was a danger that the Federal Reserve might help that recovery with too much zeal and reawaken the sleeping dragon of inflation.

The Monetarists' Kit for Interest-Rate Forecasting

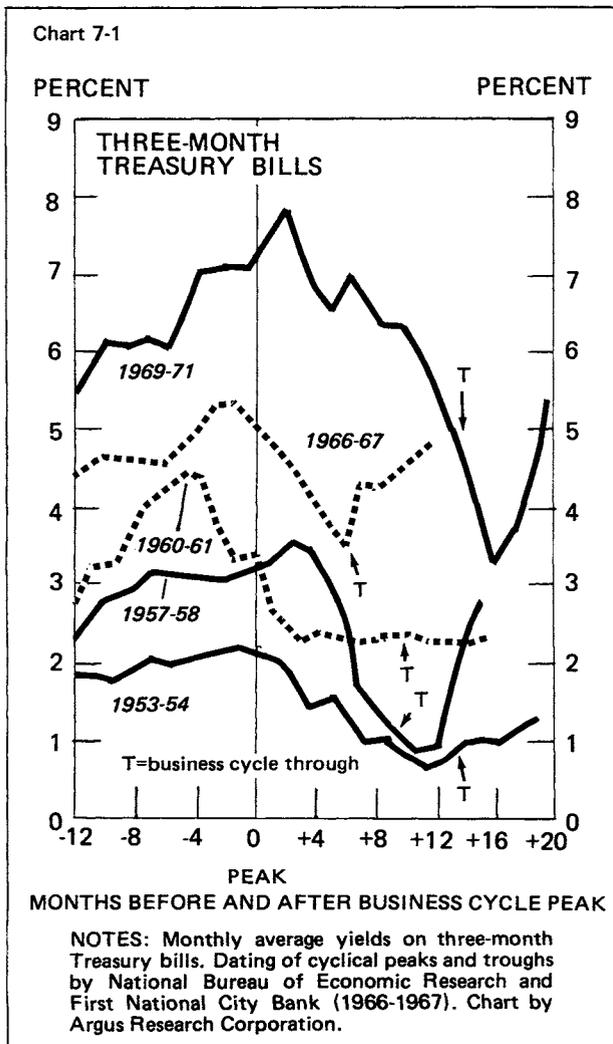
The revival of Fisher's view of interest-rate determination certainly improved the forecasting of interest rates but did not make it simple or foolproof. His contribution was the emphasis on the influence of price expectations, which had been a glaring oversight on the part of most forecasters. The new monetarists have added the improvements in forecasting fluctuations in business activity that were covered in the preceding chapter.

Monetarists' forecasting models now try to capture three different effects of money-supply changes on interest rates. The first is the familiar liquidity effect, the short-run tendency of an increase in money-supply growth to reduce interest rates. This one turns out to be surprisingly weak as compared with the others.

The second is the income effect, the tendency of an increase in money-supply growth to increase income six to nine months later and thereby to increase demands for credit and money and to raise rates. The projections of a GNP model like the one in the preceding chapter are used by some forecasters as the income variable in interest forecasting equations.

Some forecasters, myself included, were

so pleased to have discovered the tendency of the income effect of money-supply changes on interest rates to offset the liquidity effect that they were led to forecast too early a turnaround of interest rates in 1969, when monetary policy became restrictive. Earlier periods of monetary restraint in the United States, such as 1959 and 1966, had resulted in slowdowns of economic activity and declines in interest rates well before the monetary authorities relaxed the restraints.



From early 1969 on, therefore, monetarist forecasters watched and waited for a downturn in interest rates that did not come. Short-term interest rates peaked in December of 1969 and long-term rates did not peak until the following June. When interest rates finally did fall, however, the decline was greater than everyone expected.

The most plausible explanation for expecting the interest-rate turnaround in 1969 too early was that expectations of price inflation continued to carry rates on upward even after the 1969-1970 business recession had begun. The monetarist forecasters were correct in forecasting a recession that would cause rates to fall. But they made two mistakes. The first was to underestimate the amount and persistence of inflation from 1965 through 1970 and the second was to underestimate the impact of the inflation and possible other factors upon expectations and rates. As I said earlier, the 1965-1970 adjustment of interest rates to price inflation was in the direction predicted by Irving Fisher but was much more rapid than he would have expected. Needless to say, forecasters have been working feverishly since 1969 to improve their ability to forecast price-inflation rates and to learn more about how price expectations are formed. Although we believe major improvements have been made, we will not know for sure until we have observed more cycles of inflation and recession.

What causes the stability of the anticipated real interest rate is still, to me, largely a mystery. The real rate seems to be influenced by slow-moving forces of population changes, technological changes, and the willingness of people to defer consumption today for greater consumption in the future. Some economists who study the determinants of economic growth argue that the real rate is equal to the long-run rate of growth of real output, for it is the yield of the total stock of real capital in all forms. In any case, forecasters probably will not be too badly misled if they assume the real rate to be nearly stable while they focus on the forces that make nominal rates fluctuate around it.

The forecaster's problem is compounded also by the obvious fact that there is no such thing as "the" interest rate, whether real or nominal. What he faces is a vast array of particular market rates on short-term and long-term instruments ranging from commercial paper to home mortgages. Demand-supply an-

analyses, such as the flow-of-funds approach, will still be necessary for moving to the rates for particular instruments from the forecast levels of a few key rates that can be provided by monetarist models.

There is no danger of a collapse in the real rate, in my opinion. The world economy is certainly not heading into another depression that would paralyze saving and investment. Nor do we have much reason to expect the real rate to be substantially higher than it has been in the past decade, despite the fears of a capital shortage. The real rate on high-quality corporate bonds should remain around 3 or 4 percent in the United States, as it has for many years. The more difficult questions concern how large an inflation premium will be included in the money rates that we can see in the markets and how savers and investors will react to the economic policies of governments.

The most damaging feature of the inflationary environment in which the capital markets labored after 1965 was not price inflation, although that was damaging enough. Given time, money interest rates could adjust to a steady rate of price inflation, as Fisher predicted, so that interest rates and the markets could do their work of allocating capital resources smoothly and efficiently. Far more damaging was the uncertainty about how much inflation there would be and what, if anything, would be done about it.

Fears of direct credit controls in the United States surely made interest rates higher in the sixties than they would otherwise have been. Fearing they might at some time be cut off from credit suppliers, especially banks, corporations borrowed more than they needed and were willing to pay commitment fees for funds

they had not yet borrowed. Lenders, furthermore, were more reluctant to lend than they would have been if the monetary authorities had not been so determined to reduce bank lending to businesses. Large banks, effectively cut off from domestic time-deposit funds by Regulation Q ceilings on the rates they were allowed to pay, were afraid they would eventually be cut off from their alternative sources in the Eurodollar market. After Regulation Q was suspended on large negotiable certificates of deposit in June, 1970, the fears of borrowers and lenders were quickly dispelled and interest rates fell. Nevertheless, the interest-rate effects of controls imposed by governments in capital markets are extremely difficult to forecast.

The lingering uncertainty about economic policies delayed recognition in wage and price decisions of a movement toward price stability that should not be, but could be, aborted. Most helpful in dispelling uncertainty about the future purchasing power of money in the United States was the announced determination of the Administration and the Federal Reserve to avoid after 1968 the wide swings in fiscal and monetary policies that had brought confusion and disorder to the capital markets in the first place. The swing to highly expansionary monetary policy in early 1971 was disconcerting evidence that monetary instability had not yet been eliminated. But it was not yet too late to bring money under control. If the Federal Reserve eventually demonstrates through its actions that the prospect for stability can become more widely accepted, interest rates and the markets will behave as Fisher would say they should. Thrift, foresight, self-control, love of offspring, and the progress of inventions will replace changes in the purchasing power of money as the key determinants of money interest rates.

Exhibit submitted to Committee on Banking and Currency, House of Representatives, 93rd Congress, First Session, Hearings on Recurring Monetary and Credit Crises, September 11, 1973, by A. James Meigs, Vice President and Economist Argus Research Corporation.

CONFLICTING TARGETS OF MONETARY POLICY

In the discount market, the Bank's stress on the desirability of steadiness in the Treasury bill rate compromises its control over the cash base; in the bond market, the more it cares about the price of bonds, the less control it has over the liquid assets basis of the clearing banks.

R.S. Sayers, *Modern Banking*, 1964

Because monetary policies affect the economy with long time lags, the monetary authorities cannot immediately see the effects of their actions upon such key variables as national income, employment, and prices. Therefore, they must use intermediate guides for their day-by-day operations to tell them if they are exerting their influence in the right direction and in appropriate amounts.

The current world debate over standards for guiding monetary policy focuses on two main possible guides, or groups of guides. On one side are interest rates, which are price measures. On the other side are the monetary aggregates, such as money supply, bank reserves, the monetary base, or total bank credit; these are quantity measures. Although central banks generally strive for a compromise between the two, both guides cannot be followed at the same time. If a central bank attempts to control interest rates, it must allow money supply to fluctuate. If it controls money supply, it must allow interest rates to fluctuate.

A good guide should have two main characteristics. First, it should be closely under the control of the central bank, so that the central bank can interpret a change in the guide as the result of its own actions rather than the result of outside forces. Second, changes in the guide should have a strong and predictable relationship to changes in ultimate policy variables, such as income, employment, and the price level.

Although no guide may be considered ideal, some meet the practical requirements of the policy makers better than others. Money supply is far superior to interest rates, which have traditionally been the preferred guide of central banks. Monetarists have compiled abundant evidence on this point for the United States and have recently begun to do the same thing for other countries. In fact, the time-honored practice of trying to control interest rates while allowing the money supply to wander as it will can result in extremely serious and costly mistakes. It has fostered economic instability, price inflation, and large fluctuations of interest rates.

The Interest-Rate Guide

In most popular textbooks today, changes in the rate of growth of money supply are assumed to influence the economy mainly

Chapter 18 of A. James Meigs' *Money Matters: Economics, Markets, Politics* (New York: Harper & Row, Publishers, 1972)
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through changing interest rates, which in turn influence business investment spending, and, finally, consumer-spending. This orthodox, although perhaps oversimplified, Keynesian doctrine would justify the use of interest rates as monetary policy guides. A central bank might, therefore, try to stabilize the economy by changing interest rates.

In practice, however, central bankers seldom apply a consistently Keynesian approach to interest rates in the United States or anywhere else, although their explanations of their actions might suggest that they do. Most of the time the Federal Reserve and other central banks have been more concerned with stabilizing interest rates and money-market conditions than with manipulating them for contracyclical purposes. The practice of trying to minimize short-run changes in interest rates and availability of credit amounts to adding stability of financial markets and institutions as a fourth ultimate policy objective to the usual three – price stability, high employment, and balance-of-payments equilibrium. The market-stability objective, moreover, conflicts with the others.

Nearly everywhere it is assumed that the central bank is “called upon to keep the financial structure on an even keel.” Those words are borrowed from Britain’s Macmillan Committee Report, written in 1931, not from the more recent discussion of Federal Reserve operations in the United States. Stability in money-market conditions, or an even keel, is an elusive concept; but it has a high place among the goals of central bankers. It would probably be highly valued by most commercial bankers and other members of the financial community as well. At least they have become so accustomed to the daily presence of the central bank in the market that they find it difficult to imagine operating without it.

Central-bank pursuit of the widely extolled ideal of financial stability may now be a more important, though more subtle, threat to stability of income, prices, and interest rates than is the alleged propensity of governments to

use their central banks as “engines of inflation.” It is a more subtle danger precisely because it meets such widespread approval; official pressure on central banks to finance deficits is openly endorsed by almost no one.

A plausible rationalization for central-bank emphasis on interest rates and credit-market conditions is a belief that financial markets and institutions work better if interest rates are stable than if they fluctuate. Central banks, therefore, try to cushion money markets from sudden rate changes that might somehow impair market performance.

In the United States the Federal Reserve helps the Treasury to issue new securities or to refund existing ones by attempting to keep interest rates stable during Treasury financing operations. These so-called even-keel operations are especially important when budget deficits are large, as they were in 1967 and 1968. Even-keel operations during such periods can produce extremely large increases of money supply. Consequently, it is often assumed that the Federal Reserve is yielding to political expediency in helping the government to borrow on more favorable terms than it could otherwise. Although perhaps partly true, this is too simple an explanation.

Because the government is generally the largest and most disturbing borrower in the markets, it is the one most likely to trigger stabilizing operations by the central bank. Therefore, the borrowing of governments tends to be accommodated automatically by central banks. The Federal Reserve’s solicitude, however, is intended more for the market than for the government.

A Stable Money Market or A Stable Economy?

The principal objection to the practice of stabilizing interest rates is that supplies of bank credit and money will then be determined largely by changes in the demand for them. When the central bank intervenes in the markets, it uses

high-powered money. This means that there will be changes in money supply several times as large as the central bank's purchases or sales, unless these operations are almost immediately cancelled out by offsetting sales and purchases.

The paradoxical result of stabilizing interest rates or retarding their movement is that the central bank automatically becomes expansive when the government runs a deficit, instead of acting as a counterweight in the way indicated by most discussions of the appropriate fiscal-monetary policy mix. Because changes in money supply are induced also by increases or decreases in private demands for credit and money, a rate-stabilizing policy results in money-supply changes that amplify business fluctuations instead of countering them. This directly contradicts the usual textbook view that the central bank is a stabilizing influence in the economy.

Although fluctuations in the rate of growth of U.S. money supply since World War II -- even those after 1964 -- have been much more moderate than those before the war, they have been enough, in the opinion of monetarists, to have caused each of the postwar recessions and the minirecession of 1967. To have kept money supply growing at a steady rate, therefore, would at least have removed a source of disturbance and thus would have increased the stability of income and employment.

Central banks are so sensitive to the possibility of economic recession today that they are not likely to be misled by falling interest rates into being too restrictive. A much more likely mistake is the one of resisting a rise of rates and thus causing price inflation. In the summer of 1965, for example, the Vietnam War buildup and an already booming private economy caused U.S. interest rates to begin rising. The Federal Reserve System's efforts to keep rates from rising led to an enormous expansion of money supply that contributed to the inflation that plagued the country for years afterward.

In effect, price inflation was part of the cost of attempting to moderate the rise of interest rates. The interest-rate policy, moreover, was unsuccessful, for interest rates soared in spite of the Federal Reserve's efforts. Again, a simple policy of keeping the money supply growing at a steady rate would have done more to maintain stability than what was actually done.

The monetarist view of how interest rates are influenced by money-supply changes makes it clear that a policy of stabilizing interest rates in the short run makes them less stable in the longer run. Contrary to common belief, a restrictive monetary policy means lower rates and an expansive policy means higher rates. This view of interest-rate determination has truly ironic implications for central bankers because it demolishes the principal justification for their preoccupation with interest rates.

The bitter fruits of years of central-bank solicitude for investors can be seen in two representative long-term government bonds, one British and one American. British Treasury 2½s, redeemable after 1975, traded at less than 30 in 1970, or, in real terms, about 10 percent of their value at issue in 1946. U.S. Treasury 3s of 1995 traded as low as 60 in 1970, or at less than half their real value when they were issued in 1955. Holders of mortgages, long-term corporate bonds, and state-and-local government issues have similar capital losses to mull over.

It may seem that the deficiencies of the interest-rate guide are not in interest rates themselves but rather in the way the guide has been used by the central banks. It could be argued that if central banks aggressively changed interest rates in pursuit of more stable income and prices instead of stabilizing the rates, the results would be better. However, this argument is weak on two points: (1) central banks, as we have seen, have very little control over interest rates; and (2) the effects of changes in market interest rates on incomes and the price level are not eas-

ily predicted. Recognition of the effects of price expectations on market interest rates has weakened confidence in interest rates as a guide for both of these reasons.

The central bank has only a tenuous and temporary influence on market interest rates. Therefore, the monetary authorities cannot know whether a change of interest rates is a result of something they have just done, or a delayed result of actions taken many months earlier, or the result of forces completely out of their control.

Levels of market interest rates can be disastrously misinterpreted. In the thirties, for example, low interest rates were interpreted as evidence that U.S. monetary policy was expansive when, in fact, money supply was contracting. In the sixties high interest rates were interpreted as evidence that U.S. monetary policy was restrictive when, in fact, money supply was growing at an inflationary rate.

In Keynesian theory the rate that is important for influencing investment and saving is the real rate. Because Keynes assumed that prices were fixed over the period analyzed, market interest rates could be used as proxies for the real rate. Furthermore, money-supply changes could be used to manipulate interest rates without fear of inflationary consequences. But in the real world over-expansion of money supply does raise prices; and price expectations drive a wedge between the real rate that influences saving and investment and the nominal rates, or market rates, that we can measure. Therefore, changes in market rates cannot be assumed to be equivalent to changes in real rates. In fact, effects of central-bank actions on the real rate, if there are any, probably will be in exactly the opposite directions from the effects the central bank is trying to achieve on nominal market rates. Interest rates, therefore, are neither a reliable guide nor a policy instrument for the monetary authorities.

Which Monetary Aggregate?

When a central bank turns from interest rates to the monetary aggregates as guides it is confronted with a bewildering number and variety of aggregates from which to choose. Indeed, critics of the monetary aggregates point to this variety as a major problem. I believe this criticism is a red herring.

The U.S. Federal Reserve System still attempts to follow several guides at once, although this can be confusing. The confusion is avoidable, however, because one guide would be enough. Each of the candidates can be tested with regard to two criteria: (1) controllability by the central bank and (2) predictability of the relationship between the aggregate and the ultimate policy goals, such as income and prices.

The following list covers some of the monetary aggregates proposed as monetary-policy guides in the United States and suggests the shortcomings and advantages of each. Not all of them have close counterparts in other countries.

1. *Free reserves*, excess reserves less borrowings of member banks. This old favorite of the Federal Reserve and of many money-market practitioners is by all odds the least useful and most misleading guide that has ever been proposed. It is neither controlled by the Federal Reserve nor dependably related to any important ultimate policy goal.

2. *Credit proxy*, total liabilities of U.S. member banks. This measure has the advantage of being available to the Federal Reserve on a weekly basis as an approximation for total bank credit. However, it has all the weaknesses of total credit in explaining changes of income and prices. The apparent closeness of its relationship to income stems from the fact that it closely approximates changes in broadly defined money supply (M_2) because total member-bank depos-

its are a large part of total M_2 .

3. *Nonborrowed reserves* of member banks – probably the purest measure of what the Federal Reserve is doing to reserves of member banks. Looked at from the standpoint of the member banks, these are the reserves over which the banks have no control, but which the banks can supplement by borrowing from Reserve banks. Although closely controllable by the Federal Reserve through open-market operations, nonborrowed reserves are less closely related to income and prices than are other monetary aggregates.

4. *Total reserves* of member banks. More comprehensive than nonborrowed reserves, they are more closely related to income and prices; but they are a little more difficult for the Federal Reserve to control.

5. *High-powered money, or monetary base*, total member-bank reserves plus currency in the hands of the public. This is a key variable in determining the money supply. Because it is determined partly by decisions of the public, however, it is not a pure measure of central-bank actions. Furthermore, it is less closely related to income and prices than is money supply. In some other countries, however, this may well be the best operating guide available.

6. *Money supply* (M_1 , M_2 , M_X). Money supply, in any of its variants, is the most closely related to income and prices of all the monetary aggregates and, on this account, is the best guide. Ordinarily, narrowly defined money (M_1) and money including time deposits (M_2) perform about equally well in models for forecasting gross national product. But the Federal Reserve's use of Regulation Q ceiling rates on time deposits has so badly distorted M_2 in recent years that it is not safe to rely on predictions made from relationships between M_2 and income that were estimated before Regulation Q was an important influence. Other versions of money supply, represented here as M_X , incorporate other variables, such as savings and loan shares or other liquid assets, or attempt to

adjust for the distorting effects of Regulation Q by excluding negotiable certificates of deposit (CDs), for example. These are interesting refinements, but they are not essential for practical purposes.

The main objection to the use of money supply is that it is not completely within the control of the central bank. How important this objection is must be weighed against the alternatives available to the monetary authorities.

Perhaps the most extreme alternative to money supply as a guide for monetary policy was suggested by the Radcliffe Committee, an official body established to “inquire into the working of the monetary and credit system” of Britain in the late fifties. In its 1959 Report, the Radcliffe Committee concluded that the quantity of money was virtually irrelevant because the velocity of circulation was unstable. The key variable, instead, was “total liquidity,” to which money supply was only one of a great many contributors.

Because total liquidity was never clearly defined and because the relationships between it and the ultimate goals of income, prices, and the balance of payments were never empirically demonstrated, this concept could not serve as an operational guide. The Committee's endorsement of it did have the negative effect, however, of encouraging the Bank of England and other central banks to neglect the behavior of the money supply for a few years more.

At a tenth anniversary celebration of the Radcliffe Report, Professor A. A. Walters of the London School of Economics administered a less-than-merciful *coup de grace* to the total-liquidity concept.

“Liquidity” [he said] . . . is an eternally elusive concept -- a will-o'-the-wisp of monetary economics. Liquidity is “the amount of money which people think they can get hold of . . .” (para. 390) or “the lending behavior of an indefinitely wide range of financial institutions” (para. 394). It is impossible to grasp such a concept. Liquidity is a state of mind relative to an indefinite range of institutions. But even if one's intuition

were to penetrate the mists to meaning it is clearly quite impossible in principle to measure "liquidity." No refutable theoretical propositions can be formulated in terms of liquidity. The pure Radcliffe theory can never be tested.

A related criticism of money, the "Gurley-Shaw Thesis," became popular in the United States at about the time of the Radcliffe Report. In the course of an original treatment of the role of financial intermediaries, Professors John G. Gurley and Edward S. Shaw of Stanford University argued that savings and loan shares and other liabilities of nonbank financial intermediaries were close substitutes for money. One implication, therefore, was that if the central bank restricted growth of the money supply, other financial intermediaries would create more liabilities for the public to hold and the central bank would be frustrated. With nonbank intermediaries growing faster than commercial banks, furthermore, central banks would have to find ways to extend their powers to the nonbank intermediaries or resign themselves to impotence.

Like many other initially promising ideas, however, both of these propositions foundered when confronted with facts. Although the "near-moneys" are substitutes for money in the long run, the bank intermediaries do not have the power to frustrate the monetary authorities in the short run by issuing more of their liabilities when the central bank restricts growth of money. On the contrary, when growth of money supply is restricted, the nonbank intermediaries suffer a prompt and painful "disintermediation," as we saw in 1966 and 1969. Rather than viewing the nonbank intermediaries as a threat, the Federal Reserve System has been worried about how they can be shielded from the restrictive effects of its policies.

Still another vestige of the Radcliffe total-liquidity idea lingers in the "new view" of money that is associated with James Tobin and some of his students at Yale University. The "new view" emphasizes the role of portfolio management by economic units, an idea with which monetarists are quite at home, as we saw

earlier. It differs from the monetarist view, however, in arguing the necessity "to regard the structure of interest rates, asset yields, and credit availabilities rather than the quantity of money as the linkage between monetary and financial institutions on the one hand and the real economy on the other." The quantity of money, moreover, is not an autonomous variable controlled by the monetary authorities but an endogenous or "inside" quantity determined by the banks and other economic units. Effective policies, in the "new view," would require a tremendous investment in measurement and analytical efforts by the authorities and intervention at many points in financial markets.

These may seem like minor differences in emphasis, but they are of the sort that can keep controversies among the experts alive for a generation or more. And they can cause doubts about the efficacy of monetary policy, especially when put forward by such an eminent and distinguished economist as James Tobin. Nevertheless, I find myself, as a monetary practitioner rather than a theoretician, in agreement with Professor Harry Johnson's comment:

... the "new view" is long on elegant analysis of theoretical possibilities, but remarkably short on testable or tested theoretical propositions about the way the economy works, and specifically how it responds to monetary impulses, when the interaction of the monetary and real sectors is taken into account.

The performance of the economy would be improved, I believe, if central banks merely avoided gross changes in rates of money-supply growth. Fine tuning of the money supply day by day or week by week is not required. The monetary authorities have been overly sanguine about the consequences of the money-supply changes they produce while following guides they consider to be more important. But it is now clear that money matters. As I argued earlier, tolerance of large money-supply changes has increased economic instability, caused inflation, and made interest rates less stable in many countries. Worst of all, neglect of money supply has nourished beliefs that monetary policy is either impotent in the face of price inflation or too

harsh in its effects on certain sectors of the economy. One result has been a proliferation of governmental intrusions in the marketplace.

What Should be Done?

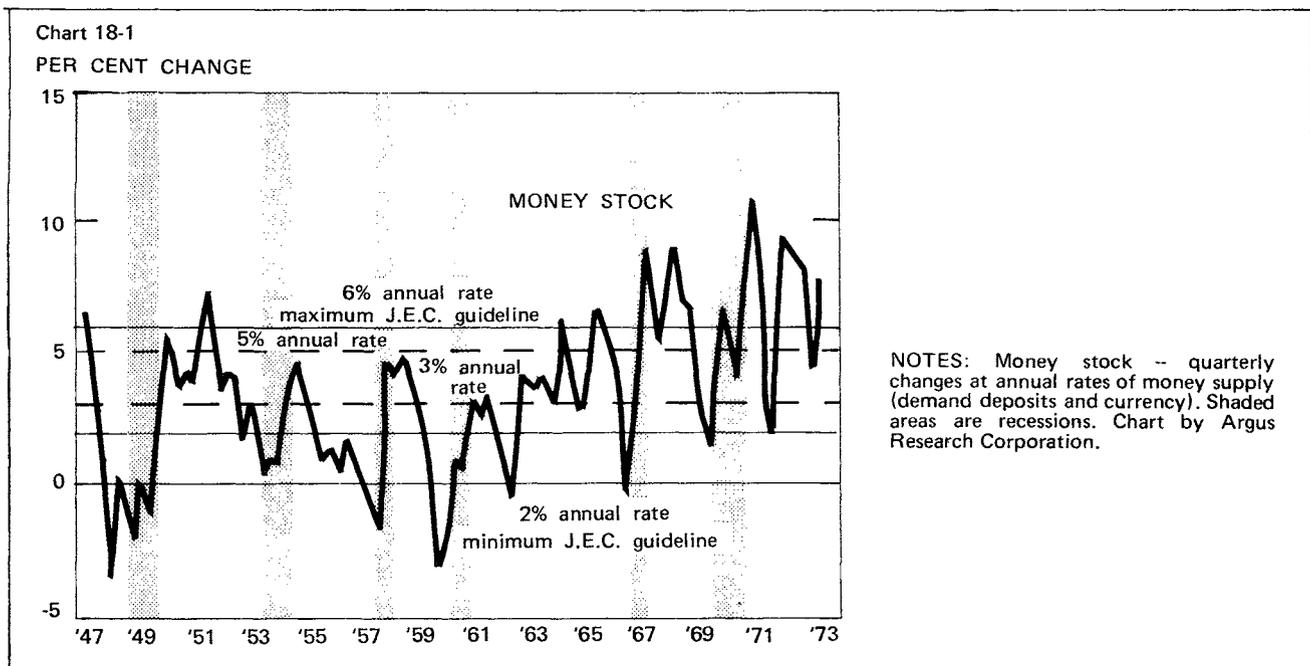
Although it is unlikely that money supply will continue much longer to be neglected as a monetary-policy guide, increasing the emphasis on money supply does present some adjustment problems for the central banks and for market institutions. The Joint Economic Committee of the U.S. Congress recommended for several years that the Federal Reserve should keep money-supply growth within limits shown on Chart 18-1. The System followed such a policy for a while in 1970. The International Monetary Fund made somewhat similar recommendations to the Bank of England in 1969. In both countries, the monetary authorities thus made a start toward more direct control of the money supply. However, the traditional central-bank concern with money-market conditions was not entirely abandoned in either country.

Given the fact that financial institutions are so much accustomed to the old regime in which the central bank continually attempted to moderate interest-rate fluctuations, any change is likely to be gradual and will stir protests from

market operators who will have to acquire new reflexes and new rules of thumb.

The Federal Reserve can make a gradual shift of emphasis between interest rates and the monetary aggregates within the framework of its present operating procedures through changing the Open Market Committee's directive. The directive formerly emphasized avoidance of short-run interest-rate fluctuations by instructing the manager of the Open Market Account to conduct open-market operations with a view to maintaining a particular set of money-market conditions. A proviso clause, added for the first time in 1966, was intended to guard against excessive fluctuations of bank credit and money supply. That is, if money supply or bank credit appeared to be increasing, or contracting, too much, the manager of the Open Market Account had authority to depart from the interest-rate targets.

With the new ordering of the guides after January, 1970, the Federal Open Market Committee instructed the manager of the Open Market Account to try to achieve some desired change in money supply and other monetary aggregates. The proviso clause then called for modifying operations if short-run changes in interest rates exceeded some specified range. If



wide fluctuations of interest rates would impose costs and structural changes on the economy, the proviso clause could be a safety valve.

We actually do not know much about the costs of fluctuating rates or how wide the fluctuations would be if the Federal Reserve attempted to keep money-supply growth within narrow bounds. These characteristics of the system must be determined through experiment. I believe these potential costs of greater, short-run variability of interest rates have been vastly overestimated for the United States.

Simulation experiments with the FRB-MIT econometric model reported by James Pierce, an economist at the Board of Governors, indicate that stability of the U.S. economy would increase as the bounds on money-supply growth are narrowed and the permissible range of variation of interest rates is widened. This is in line with the expectations of monetarists.

As experience with the new techniques and new strategies accumulates, the range of fluctuation permitted in money supply should be narrowed while the range of fluctuation of interest rates is broadened. By making the changes gradually, central banks can permit money-market institutions to adjust their practices with minimum strain.

However, I would urge the central bankers of the world not to be too kind to their money-market friends. It would be far better to inconvenience securities dealers and banks with fluctuating interest rates than to risk instability in income, employment, and prices for whole countries, and their neighbors, as some central banks have done in the past. Financial institutions are flexible and have strong incentives for adapting to whatever operating guides the central banks follow. *The key step in improving monetary policy will be for central banks to renounce attempts to control interest rates, once and for all.* The Bank of England came close to this in announcing in May, 1971, that it would restrict the extent of its operations in the gilt-edged market. This step was in line with the

Bank's earlier decision to increase its emphasis on controlling monetary aggregates.

Measure, Control, Simplify

Advice to central bankers about using money supply as a guide can be summed up in three words: measure, control, simplify.

Measurement is the essential first step. When the Federal Reserve System was not much interested in the money supply, it devoted very little effort to measuring it. Until the late 1950s the published money-supply series of the Federal Reserve was based on a one-day-per-month estimate. Because demand deposits in the United States sometimes fluctuate by several hundred million dollars per day, a one-day-per-month measure could be, and was, seriously misleading at times.

When the Federal Reserve Bank of St. Louis took on its now-legendary concern for the money supply around 1958, William J. Abbott, senior economic adviser, and his research assistant, Marie Wahlig, personally reconstructed the Federal Reserve's entire money-supply series. They based their new series on daily-average deposit data for the member banks that the System had gathered for years in the course of enforcing reserve requirements but had not used in the money-supply series. This one project immensely improved the quality of U.S. money-supply data and was a significant step toward improving U.S. monetary policy. Their project has since been followed by other improvements in U.S. money-supply data by the staff of the Board of Governors.

Nevertheless, the U.S. money-supply data still had serious flaws in 1969 and 1970, years in which the Federal Reserve was trying to curb inflation and to facilitate a recovery from recession which, in my opinion, was caused by too sharp a deceleration in money-supply growth in 1969. That error, however, should not be charged to faulty money-supply data, although there were substantial revisions of prior estimates during the year. In 1969 the Federal Reserve had

not yet adopted money supply as a guide. Therefore, I would attribute the overly severe restrictiveness of that year's policies to Federal Reserve attempts to curb business investment spending while overlooking what was happening to the money supply.

But in 1970 the Federal Reserve was trying to learn how to control the money supply. Errors in the statistics did not make that task easier. Large upward revisions of the data after the fact revealed that money-supply growth between February and October had been appreciably greater than the Fed had intended.

In his *Newsweek* column, Milton Friedman said in March, 1971:

The explanation of the major errors of the past two years is highly technical and cannot be spelled out here. I can only report my judgement that the errors would not have been anything like so large, and might not have occurred at all, if, years ago, the Fed had devoted to improving its measures of the money supply anything like the attention and research effort it has lavished on its index of industrial production, let alone on its surveys of liquid assets.

The Fed neglected monetary statistics for years because it took interest rates rather than monetary aggregates as its criterion of policy. It has corrected the mistake in policy. But it has not corrected the mistake in statistics. As a result, its present estimates of monetary aggregates are still defective.

Other central banks, like the Federal Reserve System, lavish resources on gathering and reporting financial and economic data of many kinds. Yet most of them lack good money-supply series. Obviously, this is something that can and will be corrected when they become serious about attempting to control the money supply.

There is still much to be learned about methods of money-supply control. The difficulty, however, stems mainly from attempting to do other things at the same time. The U.S. Federal Reserve System was still trying in early 1971 to control several monetary aggregates and interest rates simultaneously. The Federal Re-

serve was attempting to control money supply through controlling interest rates (money-market conditions), possibly the most difficult approach that could be found.

In the first half of 1971 this method of trying to control money-supply growth by controlling interest rates led to serious embarrassment for the Federal Reserve. The virtual explosion of monetary growth in that period revived fears of inflation that had been quieting down. It seemed to confirm press reports that the Nixon Administration had persuaded the Fed to abandon the fight against inflation. Long-term interest rates began to rise at once, despite the declared hopes of Administration and Federal Reserve spokesmen that they would continue to decline. Furthermore, it confirmed the fears of Europeans that the United States was indifferent to their problems of coping with large dollar inflows. Although the international monetary crisis of May, 1971, had many roots, there is no question that the upsurge of money-supply growth in the United States was one of them.

As we saw in 1959-1960, 1965, 1967, 1968, 1970, and 1971, the use of the "money-market strategy," or reserve-position doctrine, in guiding Federal Reserve open-market operations leads to changes in bank credit and money supply that the Federal Open Market Committee did not intend. And these inadvertent departures from the Committee's intentions have come at the most awkward times – at the onset of recessionary or inflationary swings in the economy.

More direct, more effective, methods for controlling the money supply will surely be developed. The key requirement is the will to do it. The will of the Federal Reserve should have been strongly reinforced by the furor stirred up by the monetary accident of early 1971.

A possible new procedure has been suggested by economists of the Federal Reserve Bank of St. Louis, which is an elaboration of the classic high-powered money and money-multiplier framework. In essence, the suggested

procedure requires the Open Market Committee to express a target in terms of a growth rate of money. This growth rate of money is then translated into a growth of "net source base" – non-borrowed reserves of the member banks plus currency held by the public plus vault cash of nonmember banks -- that the trading desk is to achieve through open-market operations over the control period of a month or quarter at a time.

To determine the growth of monetary base needed to reach the money-supply target would require a forecast of the multiplier. There is good reason to believe this can be done well enough to keep money supply under much better control than is attainable with the money-market conditions approach.

Finally, there is a good need for simplifying central-bank techniques. In viewing themselves as required to intervene in a great many ways in a great many markets in pursuit of a great many objectives, central bankers have made it extremely difficult for anyone to appraise the effectiveness of their actions. By narrowing down to a single guide, money supply, they would concentrate on something they can do and they would be able to determine the relationships between their actions and the behavior of ultimate objectives, such as income, employment, and prices. It would be especially helpful to drop the traditional preoccupation with interest rates.

The Bank of England, the "mother of central banks," has led the way by announcing its withdrawal from the hallowed practice of supporting the gilt-edge market. In a truly remarkable effort, the Bank also has simplified and improved its procedures and regulations. The Federal Reserve has been retrogressing in recent years. The number and variety of reserve requirements have been increased. Furthermore, the proposals for the so-called reform of the discount mechanism would make it more difficult for the System to control the issue of high-powered money. The number of reserve require-

ments should be cut to one, or none. The discount window could be abolished in the United States, for it has been rendered an anachronism by the development of open-market operations and the Federal Funds (interbank) market for rapidly transferring reserves within the System.

The most important, and currently most widely misunderstood, simplification would be to adopt a steady-growth rule for the money supply. A not untypical example of the misunderstanding about monetarists' arguments for steady growth in the money supply was a 1970 statement of Alfred Hayes, president of the Federal Reserve Bank of New York:

I am applying that term ["monetarist"] to those who believe in a virtually assured mechanical relationship of a casual character between the money supply and economic activity, and who therefore tend to favor a very steady increase in the money supply and a minimum resort to discretionary policy by the central bank.

Monetarists argue that it is precisely because there is *not* a "mechanical" one-to-one correspondence between changes in the money and changes in income that they favor a steady growth-rate for money supply. Because of the slippage, we do not know how to do better than to maintain a steady growth-rate. This does not rule out the possibility of adopting some other rule later when the linkages are better understood.

The wielders of discretionary powers seldom want to give them up. But the Federal Reserve and other central banks have treated the world economy as a "free-fire zone" in launching their discretionary measures at many visible and invisible targets. Among the unintended results of their discretionary measures have been economic instability, price inflation, and a growing uneasiness about the viability of the international monetary system. This is not a criticism of their intentions but is instead recognition of how limited is our knowledge of the linkages between actions and results. I believe it would be possible to do better by attempting less.