REVIEW OF MONETARY POLICY IN 1977

HEARING

BEFORE THE

SUBCOMMITTEE ON DOMESTIC MONETARY POLICY

OF THE

COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS

HOUSE OF REPRESENTATIVES

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REVIEW OF MONETARY POLICY IN 1977

MONDAY, JANUARY 30, 1978

HOUSE OF REPRESENTATIVES, SUBCOMMITTEE ON
DOMESTIC MONETARY POLICY OF THE COMMITTEE
ON BANKING, FINANCE AND URBAN AFFAIRS,
Washington, D.C.

The subcommittee met, pursuant to notice, at 10:10 a.m. in room 2128, Rayburn House Office Building, Hon. Parren J. Mitchell (chairman of the subcommittee) presiding.

Present: Representatives Mitchell, Barnard, Hansen, and Caputo.

Chairman MITCHELL. The hearing will now come to order, please. For the benefit of my colleagues who have joined me, we had planned an executive session this morning primarily to work up areas that we need to examine during this second half of the 95th Congress, areas of interest related to monetary policy. If you have not already submitted to my staff the areas that you would like to pursue and take a look at this year, please do so as soon as you possibly can. Mr. Hansen, the ranking minority member, has submitted his list of ideas in the areas that we need to pursue.

Again, for the benefit of my colleagues and for our witnesses here, our whip check revealed that most of the members of the subcommittee will be here. Some went home to their districts over the weekend and might be having travel problems because of the snow. Others had early meetings. But I expect more members of the subcommittee to join us.

I ask unanimous consent that my complete opening statement be placed in the record.

Our purpose in meeting this morning is to receive testimony on the performance of monetary policy last year. We will hear from four experts. They have been selected from among the respondents to a letter which I sent out last December. They were chosen so that we could hear both from critics and praisers of the 1977 Federal Reserve policy initiatives.

Since March 1975 the Federal Reserve has been required to appear before the Congress on a quarterly basis and announce target growth ranges for monetary aggregates. House Concurrent Resolution 133, which was incorporated into the Federal Reserve Act as new section 2(A) last year, mandates the setting and disclosure of monetary growth targets, in part to assist the Congress in its oversight responsibility of the Federal Reserve System and in part to provide guidelines to avoid the wide roller-coaster swings of money growth which have long characterized our economy and intensified beginning in the mid-sixties.

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From the bottom of the 1975 recession until last spring, the Federal Reserve had both announced and adhered to a moderate money growth policy. This policy provided the financial framework and foundation for a sustained economic recovery and a gradual deceleration of inflation.

But since the spring of 1977, money growth has literally exploded, greatly exceeding the Federal Reserve's own target ranges. From the fourth quarter of 1976 to the fourth quarter of 1977 our basic money supply, M_1, grew by 7.4 percent. This is more than one-third faster than the midpoint of the 4½ to 6½ percent target range which the Federal Reserve itself had set for that period, as was disclosed to the full House Banking, Finance and Urban Affairs Committee by Dr. Burns last February.

Of the full committee, 31 of the 32 majority members agreed that M_1 growth of about 5½ percent would be right for 1977. Plans were made in the Congress by the Budget Committee, the Appropriations Committee, and other committees, and by businesses, investors, and consumers based on the assumption that the Federal Reserve would adhere to and hit its own target for M_1 growth. The miss was the most significant financial event of 1977 and, obviously, the members of the committee have followed the implications of this wide miss, as I am certain have our witnesses.

I address that in my statement, and I will see to it that you get copies of it. I will not take time to read all of it at this time, but it seems to me one of the major results of that wide miss was to set the stage once again for a recession.

I stated in October:

I am apprehensive that the course of money growth which the Federal Reserve has been following recently will create a false sense of euphoria for a while as the monetary expansion stimulates output, but inevitably inflation will soar beginning in the latter part of 1978 or early 1979, and a deep recession will follow shortly after. I think we are on a collision path with another 1974–75 style bout with stagflation.

Since I made that statement, nothing has happened to change my mind. Perhaps I am wrong—and, frankly, I hope that I am wrong—I don't want to face another recession. Inflation hurts nearly everyone, particularly those living on fixed incomes and too poor to own their own homes. The impact of another recession would be devastating, especially upon the poor, blacks, and the other minorities.

But the question is—and this is why we have asked you gentlemen here—how do we avoid it? How do we sustain and enhance the recovery while at the same time decelerating inflation?

If rapid money growth won't do the job, will gradual deceleration work? Would slow deceleration work well enough to reduce black unemployment below the double digit level and move toward parity with white unemployment? How long would this take? What else, apart from a sound monetary policy, do we need? I am hopeful that our witnesses today can provide answers to these admittedly difficult but top priority questions.

[Chairman Mitchell's opening statement follows:]

OPENING STATEMENT OF PARREN J. MITCHELL, CHAIRMAN

The Subcommittee will please come to order. Our purpose in meeting this morning is to receive testimony on the performance of monetary policy last year.

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We will hear from four experts. They have been selected from among the respondents to a letter which I sent out in December. They were chosen so that we could hear from both critics and praisers of 1977 Federal Reserve policy initiatives.

Since March 1975, the Federal Reserve has been required to appear before the Congress on a quarterly basis and announce target growth ranges for the monetary aggregates. House Concurrent Resolution 133, which was incorporated into the Federal Reserve Act as new Section 2A last year, mandates the setting and disclosure of monetary growth targets, in part to assist the Congress in its oversight responsibility of the Federal Reserve System; and in part, to provide guidelines to avoid the wide roller-coaster swings of money growth which have long characterized our economy and intensified beginning in the mid-1960's.

From the bottom of the 1975 recession until last spring, the Federal Reserve had both announced, and adhered to, a moderate money growth policy. This policy provided the financial framework and foundation for a sustained economic recovery and a gradual deceleration of inflation. But since the spring of 1977, money growth has exploded, greatly exceeding the Federal Reserve's own target range. From the fourth quarter of 1976 to the fourth quarter of 1977, our basic money supply, M1, grew by 7.4 percent. This is more than one-third faster than the midpoint of the 4½ to 6½ percent target range which the Federal Reserve itself set for the period, as was disclosed to the full House Banking Committee by Dr. Burns last February. Thirty-one of the thirty-two majority members of the full Committee agreed that M1 growth of about 5½ percent would be right for 1977. Plans were made in the Congress by the Budget, Appropriations and other committees, and by businesses, investors and consumers, based on the assumption that the Federal Reserve would adhere to and hit its own target for M1 growth. The miss was the most significant financial event of 1977. Let me explain, very briefly, why.

Expenditures and receipts projections which we made in the Congress were thrown out of whack. The private sector had to adjust to an unexpected windfall of more than $5 billion in new money which was generated by the step-up in money growth. Initially, a step-up in money growth has beneficial effects. It increases spending, and when there is slack in the economy, the rise in spending speeds up the re-employment of labor and the recovery of production. But experience warns us that if long continued, the step-up in money growth may boomerang, and cause unintended and harmful changes. Though with a lag, it will cause prices to increase faster than they otherwise would. Accepting increased inflation later on for current increases in production and employment would be a tolerable trade-off if inflation was the only cost of excessively rapid money growth. But it isn't.

Even before inflation increases, the expectation of it feeds back into credit markets and causes longer term interest rates to rise. By itself, that would be damaging to investment in productivity enhancing, job creating, long range capital projects. But, in addition, short term rates may rise long before inflation actually accelerates. This is because market psychology may view any recent step-up in money growth as giving the Federal Reserve less room to maneuver in the near future, thus portending a near term liquidity squeeze. This would appear to have happened in 1977. Both short and long term interest rates rose very nearly in phase with the step-up in money growth.

The boomerang doesn't stop in credit markets. It has real as well as financial effects. As first interest rates and then inflation rise, the demands for housing, for automobiles and for all other goods fall and profit margins narrow. Production and employment are cut back. The end result is recession.

I stated in October that, "I am apprehensive that the course of money growth which the Federal Reserve has been following recently will create a false sense of euphoria for a while as the monetary expansion stimulates output. But inevitably inflation will soar, beginning in the latter part of 1978 or early 1979 and a deep recession will follow shortly after. We are on a collision path with another 1974–1975 style bout with stagflation."

Nothing has happened since then to change my mind. Perhaps I am wrong. Frankly, I hope so. The country can't stand more inflation or another recession. Inflation hurts nearly everyone, and particularly those living on fixed incomes and too poor to own their own homes. The impact of another recession would be devastating, especially on blacks and other minorities. But, how do we avoid it? How do we sustain and enhance the recovery while at the same time decelerating inflation? If rapid money growth won't do the job, will gradually decelerating

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it work? Would slow deceleration work well enough to reduce black unemployment below the double digit level, towards parity with white unemployment? How long would it take? What else, apart from a sound monetary policy, do we need? I am hopeful that our witnesses today can provide answers to these difficult, top priority questions.

Chairman MITCHELL. I will ask whether any of the members have an opening statement that they want to make. Mr. Barnard?

Mr. BARNARD. Mr. Chairman, I have no opening statement prepared to make except to say this:

I am delighted to have you gentlemen appear before the subcommittee this morning. As a member of this subcommittee and as a Member of Congress I don't know of any problem that we face in this country today more serious than the problem of inflation. We have many remedies that seem to be coming to us from various standpoints as to what we can do about it, but none of them really seem to be working. I am looking at these hearings with much interest to see what the analysis has been for 1977, what the forecast will be for 1978, and what we need to be doing about this problem.

If you have not already prepared to do so, I would hope that some of you would address the subject of our $500-billion proposed budget. I hear some economists saying that Government spending in times of growth periods does not contribute to inflation.

Gentlemen, I am not an economist, but I can't believe that.

I think it is something that all of Congress should be very mindful of as we consider this year's budget, and that sensitive relationship to what I feel is one of the greatest problems we have in this country today.

Mr. Chairman, I say that as an introduction to these hearings, and thank you very much.

Chairman MITCHELL. Thank you.

And before I ask Mr. Caputo, a very able member of the subcommittee, if he has a statement, let me take this opportunity to publicly thank the members of the subcommittee. You made the chairman's task much easier last year because of your cooperation and support, and I do thank all of the members of the subcommittee. Mr. Caputo.

Mr. CAPUTO. I have no statement, Mr. Chairman.

Chairman MITCHELL. All right, gentlemen, then let me ask you to proceed in alphabetical order, starting with Professor Christ.

It is obvious from my opening statement and the statement of my colleague that we have many questions. You may wish to encapsulate your testimony. Each of you, of course, will be allowed to submit whatever statement you want for the record, and if there is no objection, it will be printed in the hearing record.

With that little bit of background, you may proceed, Mr. Christ. And, indeed, we do welcome you and all of the witnesses here this morning.

STATEMENT OF CARL F. CHRIST, PROFESSOR OF ECONOMICS, THE JOHNS HOPKINS UNIVERSITY

Mr. CHRIST. Thank you very much, Mr. Chairman.

I have prepared a statement which will take about 15 minutes, but I see in your opening statement you would like us to limit ourselves to 5 minutes, so I will try to do that.

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Chairman MITCHELL. I struck that from my remarks because I had some question about trying to limit witnesses to just 5 minutes, so it seems to me, if your statement will take only 15 minutes, we can proceed with it.

Mr. CHRIST. All right. Thank you.

There are some charts at the end which I believe will be useful to print in the record, if that could be done.

The statement I want to make comes in nine topics, each of them quite brief.

First, a profoundly important feature of monetary policy is that it has different effects in the long run and in the short run. The short-run effect is concentrated on real output and employment; the long-run effect is concentrated on prices and inflation.

The second topic is the long-run effect. If monetary policy keeps the average annual growth of the money stock low but above zero over a long period of time, there will be little or no trend in the price level over that period, either up or down.

For example, from 1948 to 1961 the money stock grew at only 2 percent a year on the average. This was true for both the monetary base and M_1, which is currency outside banks plus demand deposits. Even M_2, which is M_1 plus time deposits at commercial banks, grew at only about 3 percent a year then. During that same period, inflation was at an average rate of 2 percent a year as measured by the Consumer Price Index.

By contrast, from 1971 to 1977 the average annual growth rates were 6 percent for M_1, 8 percent for the monetary base, and 9 percent for M_2. During that period inflation averaged 7 percent a year as measured by the Consumer Price Index.

These relationships are universal. A stable price level can be had over long periods if, and only if, the average growth rate of the money stock is kept low. Similarly, rapid inflation will persist if, and only if, the average rate of growth of the money stock is kept high. The experience of many countries confirms this, over many centuries. I know of no evidence to the contrary.

The third topic is the short-run effect of monetary policy.

When the growth rate of the money stock is increased, and then the new higher growth rate is maintained, the initial effect is to create a temporary increase in real output and employment, lasting for perhaps 2 or 3 or 4 years. But that effect then wears off and we are left with the long-run effect, which is a higher rate of inflation.

Similarly, when the growth rate or the money stock is reduced, and then the new lower growth rate is maintained, the initial effect is to cause a temporary decrease in output and employment, again lasting for perhaps 2 or 3 or 4 years. That effect then wears off and we are left with the long-run effect, which is a lower rate of inflation. Both theoretical and empirical economic studies are pointing more and more strongly to this conclusion.

The fourth topic is an analogy which I have concocted to show how monetary policy works.

The effect of monetary policy on the economy can be likened to the effect of a certain type of therapeutic drug on a patient. The patient has an annoying condition, which can be helped by putting him on a steady daily dosage of the drug, that is, helped temporarily until his

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body adjusts to that dosage of the drug, and then he is helped no longer. But he is now saddled with the cost and the side effects of that daily dosage of the drug. If he is to be helped by the drug at this point, the daily dosage must be increased. He then again experiences relief temporarily, until his body once again adjusts to the new higher dosage. And so on. If he wants to be free of the cost and the side effects of the daily dosage, his doctor can take him off the drug, but that must be done carefully in order to minimize the withdrawal reaction that occurs. I have consulted with a distinguished pharmacological colleague at Johns Hopkins who tells me there are indeed many drugs of this type.

The analogy is quite close between the effects of such a drug on the body and the effects of monetary policy on the economy.

Monetary policy does offer an increase in the growth rate of the money stock as a remedy for an unemployment rate higher than the minimum boom-time rate, but it works only temporarily. Its good effect soon wears off, and its ill effect persists, namely, a higher inflation rate.

In order to regain the good effect, one must increase the dosage of the remedy, that is, increase the growth rate of the money stock further. But again the good effect wears off, and the ill effect, the inflation, becomes greater. In order to be rid of the inflation, it is necessary to withdraw the remedy, that is, it is necessary to return the growth rate of the money stock to a low level. But that has to be done carefully, because it can cause withdrawal symptoms in the form of a temporary economic recession.

Since the good effects of an increase in the growth rate of the money stock are only temporary, while the bad effects are permanent, it is wise not to embark on a policy of rapid growth of the money stock in the first place. Now that we have done so, over the past 10 to 15 years, it is wise to withdraw that drug carefully, so as to return to a situation of stable prices. We should seek other remedies than monetary policy when we try to reduce the rate of unemployment.

The fifth topic is interest rates. It is important to consider interest rates when conducting monetary policy. In doing so, we must realize that here, too, short-run and long-run effects differ.

We know that if the growth rate of the money stock is increased, the initial effect on interest rates is to lower them. This helps to bring about the increase in output and employment mentioned earlier, but that reduction in interest rates is only temporary.

Furthermore, if the growth of the money stock is continued at the new higher rate, then the inflation rate increases. And when that happens, interest rates not only go back up to their previous levels, they go up more than that, and end up higher than they were to begin with.

This is because both borrowers and lenders come to expect that the more rapid inflation will continue, and so they agree upon interest rates that are high enough to give a real return to the lender after adjusting for inflation.

For example, if they agree on a real return of 4 percent, then they will agree on an interest rate of 9 percent if they expect the inflation rate to be 5 percent. This example illustrates the main reason why mortgage interest rates and other interest rates are higher now then they were in the fifties when inflation was nearly zero.

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Thus we see that in order to have low interest rates in the long run, we must have a low inflation rate in the long run. So the way to bring interest rates permanently down to their traditional low levels of the fifties and earlier is to bring the inflation to a stop.

The sixth topic is the details of monetary policy in 1977.

The growth rate of the monetary base in 1977 was about 9 percent. It had been very steady over the past 6 years at about 8 percent, and was increased slightly in 1977. Thus one can say that from 1971 to 1977 the monetary base was managed in such a way as to insure the continuation of inflation at a rate in the neighborhood of 6 to 8 percent with a slight additional inflationary stimulus added in 1977.

The growth rates of M_1 and M_2 were broadly consistent with this pattern. In 1977 M_1 grew at about 7 percent and M_2 at about 9 percent. As noted earlier, from 1971 to 1977 the growth rates were about 6 percent for M_1 and 9 percent for M_2.

During 1977 and also on the average from 1971 to 1977, the Consumer Price Index inflation rate was about 7 percent.

What about interest rates in 1977?

They rose.

Short-term rates rose from the 4½ to 5 percent range at the beginning of the year to the 6 to 7 percent range at the end. Long-term rates rose also from about 8 percent at the beginning of the year to about 8½ percent at the end.

In my view, this does not represent the effect of any change in the basic stance of monetary policy. There virtually was no such change, only a slight increase in monetary growth. Rather, it represents the adjustment of financial markets to the continuance of inflation at 7 percent a year, combined with the normal cyclical increase of interest rates during a business recovery.

At the beginning of 1977 the real rates of return on short- and medium-term debt were negative because their interest rates were below the inflation rate of 7 percent. By the end of the year the combination of the business recovery and the adjustment to a 7 percent inflation had brought real short-term interest rates up to zero, and real medium-term rates up to about plus 1 percent. If monetary policy maintains the growth rate of the monetary base at 8 or 9 percent a year in the future, interest rates will rise somewhat more and will settle somewhat above 8 or 9 percent in or near the 10- to 14-percent range.

Why were the growth rates of the various money stocks increased slightly in 1977 rather than being held constant or reduced slighty? Not being a member of the Federal Reserve Board or the Open Market Committee, I can only guess. My guess is that it was out of fear of further short-run increases in interest rates. However, if the aim is to reduce interest rates, this was a short-sighted policy, for it will result in higher interest rates once the economy adjusts to the faster monetary growth and the attendant faster inflation.

The seventh topic is short-run changes in monetary policy.

For judging short-run changes in monetary policy, some economists prefer to look at M_1 and/or M_2 rather than the monetary base. We have seen that the monetary base grew very steadily during 1971–77, at about 8 percent a year. M_2 grew less steadily, as fast as 11 percent

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for 12 months in 1976–77 and as slow as 7 percent for 12 months in 1974–75. M_1 grew still less steadily, as fast as 8 percent for 12 months in 1972 and as slow as 3 percent for 9 months in 1974–75; it even declined for 3 months in 1974–75. Some economists argue that it would be better to prevent substantial variations in the rate of growth of M_1 and/or M_2, and at the very least to prevent declines in either one during depressions. The Federal Reserve has not pursued such a policy thus far. I believe it would be more likely to be helpful than harmful. Nevertheless, the Federal Reserve should receive some credit for not allowing the growth rate of the monetary base to undergo a down-and-up cycle during the depression of 1974–75. This is an improvement over the Federal Reserve's management during previous business cycles.

Could monetary policy be used in a deliberately countercyclical way, to inflate the economy during depressions and deflate it during booms?

This seems possible in principle. But remember that the output effects of a change in monetary policy, though temporary, last for 2 or 3 or 4 years. Furthermore, we do not have good reliable knowledge of just how long they last, and indeed their duration does not appear to be the same in all cases. Most complete business cycles last about 3 to 5 years, 1 or 1½ years for the downswing and 2 to 4 years for the upswing. This means that by the time we recognize the need for a policy change to combat a depression or soften a boom, it is already too late to do so by means of monetary policy.

An easy monetary policy, undertaken when a downswing is clearly upon us, is more likely to aggrevate the next boom than to help combat the downswing. Similarly, with tight money that is imposed when a boom appears to be getting excessive; it is more likely to aggravate the next depression than to soften the boom.

Therefore, until economists develop truly reliable ways of forecasting when the next boom or depression will be, and how long the output effects of each monetary policy change will last, it is better to keep the growth rate of the money stock rather steady throughout both booms and depressions.

The eighth topic deals with the relation of fiscal policy to monetary policy.

This hearing is about monetary policy. Of course, monetary policy is not the only force that affects the economy. Fiscal policy is another important force, and the two are related.

When the Federal budget has a deficit the Treasury must sell bills and bonds to cover it. The Federal Reserve has a choice as to whether to buy some of those bills and bonds or not. If they don't, the monetary base is not increased, and inflation does not result. But then the Treasury must compete with private borrowers in the market, which will drive interest rates up, especially if the deficit is large. Government borrowing may then crowd out private borrowing and hence inhibit business investment that is needed for growth.

On the other hand, if the Federal Reserve does buy some of those Treasury bills and bonds, the monetary base is increased, and if it is done on a large scale, inflation will result.

Therefore, a large continuing Federal deficit presents dangers. Either the Federal Reserve does succumb to the pressure to hold down

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interest rates in the short run, which leads to inflation and high interest rates in the long run, or the Federal Reserve resists the pressure, which leads to high interest rates immediately and to the crowding out of private investment, though not to inflation.

The ninth point is the conclusion. My testimony can be summarized as follows:

Monetary policy can assure long-run stability of the price level. Or it can assure long-run inflation. It cannot provide a permanent stimulus to output and employment, except at the cost of ever-increasing doses of monetary growth and ever-accelerating inflation. And monetary policy is not a very good tool for trying to counteract business cycles, because its effects operate with a delay that is too long and too unpredictable.

Hence, in our present state of knowledge the best monetary policy is to keep the growth rate of the money stock low, to avoid inflation, and keep it rather steady to avoid magnifying the disturbances that come from other causes.

Are we then helpless to deal with business depressions and unemployment? I think not. But that would lead us beyond the topic of this hearing today.

Thank you very much.

[Mr. Christ's prepared statement, with attached charts, follows:]

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STATEMENT OF CARL F. CHRIST
ALBERT HUTZLER PROFESSOR OF ECONOMICS
THE JOHNS HOPKINS UNIVERSITY

prepared for

HEARING ON MONETARY POLICY IN 1977
U.S. HOUSE OF REPRESENTATIVES
SUBCOMMITTEE ON DOMESTIC MONETARY POLICY

of the

COMMITTEE ON BANKING, FINANCE, AND URBAN AFFAIRS

I am glad to be here today to discuss monetary policy in 1977.

1. Long and Short Run Effects of Monetary Policy

A profoundly important feature of monetary policy is that it has different effects in the short run and in the long run. The short run effect is concentrated on real output and employment. The long run effect is concentrated on prices and inflation.

2. Long Run Effect of Monetary Policy

Consider the long run effect first. If monetary policy keeps the average annual growth rate of the money stock low over a long period of time, then there will be little or no trend in the price level over that period, either up or down. For example, from 1948 to 1961 the money stock grew at only about 2 percent a year on the average. This was true for both the monetary base and M_1 (currency outside banks plus demand deposits). Even M_2 (M_1 + time deposits at commercial banks) grew at only about 3 percent a year then. During that same period, inflation was at an average rate of 2 percent a year as measured by the consumer price index (CPI).

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By contrast, from 1971 to 1977 the average annual growth rates were 6 percent for M_1, 8 percent for the monetary base, and 9 percent for M_2. During that period, inflation averaged 7 percent a year as measured by the CPI.

These relationships are universal. A stable price level can be had over long periods if, and only if, the average growth rate of the money stock is kept low. Similarly, rapid inflation will persist if, and only if, the average rate of growth of the money stock is kept high. The experience of many countries confirms this, over many centuries. I know of no evidence to the contrary.

3. Short Run Effect of Monetary Policy

Now consider the short run effect of monetary policy. When the growth rate of the money stock is increased, and then the new higher growth rate is maintained, the initial effect is to create a temporary increase in real output and employment, lasting for perhaps 2 or 3 or 4 years. But that effect then wears off, and we are left with the long run effect, which is a higher rate of inflation. Similarly, when the growth rate of the money stock is reduced, and then the new lower growth rate is maintained, the initial effect is to cause a temporary decrease in output and employment, again lasting for perhaps 2 or 3 or 4 years. That effect then wears off, and we are left with the long run effect, which is a lower rate of inflation. Both theoretical and empirical economic studies are pointing more and more strongly to this conclusion.

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4. Monetary Policy and Drug Therapy

The effect of monetary policy on the economy can be likened to the effect of a certain type of therapeutic drug on a patient. The patient has an annoying condition, which can be helped by putting him on a steady daily dosage of the drug -- that is, helped temporarily until his body adjusts to that dosage of the drug, and then he is helped no longer. But he is now saddled with the cost and the side effects of that daily dosage of the drug. If he is to be helped by the drug at this point, the daily dosage must be increased. He then again experiences relief temporarily, until his body once again adjusts to the new higher dosage. And so on. If he wants to be free of the cost and the side effects of the daily dosage, his doctor can take him off the drug, but that must be done carefully in order to minimize the withdrawal reaction that occurs. I have consulted with a distinguished pharmacological colleague at Johns Hopkins who tells me there are indeed many drugs of this type.

The analogy is quite close between the effects of such a drug on the body and the effects of monetary policy on the economy. Monetary policy does offer an increase in the growth rate of the money stock as a remedy for an unemployment rate higher than the minimum boom-time rate, but it works only temporarily. Its good effect soon wears off, and its ill effect persists, namely, a higher inflation rate. In order to regain the good effect, one must increase the dosage of the remedy, that is, increase the growth rate of the money stock further. But again the good effect wears off, and the ill effect (the inflation) becomes greater. In order to be rid of the inflation, it is necessary to withdraw the remedy, that is, it's necessary to return the growth rate of the money stock to a

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low level. But that has to be done carefully, because it can cause withdrawal symptoms in the form of a temporary economic recession.

Since the good effects of an increase in the growth rate of the money stock are only temporary, while the bad effects are permanent, it is wise not to embark on a policy of rapid growth of the money stock in the first place. Now that we have done so, over the past 10 to 15 years, it is wise to withdraw that "drug" carefully, so as to return to a situation of stable prices. We should seek other remedies than monetary policy when we try to reduce the rate of unemployment.

5. Interest Rates

It is important to consider interest rates, when conducting monetary policy. In doing so, we must realize that here, too, short run and long run effects differ.

We know that if the growth rate of the money stock is increased, the initial effect on interest rates is to lower them. (This helps to bring about the increase in output and employment mentioned earlier.) But that reduction in interest rates is only temporary.

Furthermore, if the growth of the money stock is continued at the new higher rate, then the inflation rate increases. And when that happens, interest rates not only go back up to their previous levels, they go up more than that, and end up higher than they were to begin with. This is because both borrowers and lenders come to expect that the more rapid inflation will continue, and so they agree upon interest rates that are high enough to give a real return to the lender after adjusting for inflation.

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For example, if they agree on a real return of 4 percent, then they will agree on an interest rate of 9 percent if they expect the inflation rate to be 5 percent. This example illustrates the main reason why mortgage interest rates and other interest rates are higher now than they were in the 1950's when inflation was nearly zero.

Thus we see that in order to have low interest rates in the long run, we must have a low inflation rate in the long run. So the way to bring interest rates permanently down to their traditional low levels of the 1950's and earlier is to bring the inflation to a stop.

6. Monetary Policy in 1977

Now let us look at monetary policy in 1977. The growth rate of the monetary base in 1977 was about 9 percent. It had been very steady over the past 6 years at about 8 percent, and was increased slightly in 1977. Thus one can say that from 1971 to 1977 the monetary base was managed in such a way as to insure the continuation of inflation at a rate in the neighborhood of 6 to 8 percent, with a slight additional inflationary stimulus added in 1977.

The growth rates of M_1 and M_2 were broadly consistent with this pattern. In 1977 M_1 grew at about 7 percent, and M_2 at about 9 percent. As noted earlier, from 1971 to 1977 the growth rates were about 6 percent for M_1 and 9 percent for M_2.

During 1977, and also on the average from 1971 to 1977, the CPI inflation rate was about 7 percent.

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What about interest rates in 1977? They rose. Short term rates rose from the 4½ - to - 5 percent range at the beginning of the year to the 6 - to - 7 percent range at the end. Long term rates rose also, from about 8 percent at the beginning of the year to about 8½ percent at the end. In my view, this does not represent the effect of any change in the basic stance of monetary policy. There virtually was no such change, only a slight increase in monetary growth. Rather, it represents the adjustment of financial markets to the continuance of inflation at 7 percent a year, combined with the normal cyclical increase of interest rates during business recovery. At the beginning of 1977, the real rates of return on short and medium term debt were negative, because their interest rates were below the inflation rate of 7 percent. By the end of the year, the combination of the business recovery and the adjustment to a 7 percent inflation had brought real short term interest rates up to zero, and real medium term rates up to about +1 percent. If monetary policy maintains the growth rate of the monetary base at 8 or 9 percent a year in the future, interest rates will rise somewhat more, and will settle somewhat above 8 or 9 percent, in or near the 10 - to - 14 percent range.

Why were the growth rates of the various money stocks increased slightly in 1977, rather than being held constant, or reduced slightly? Not being a member of the Federal Reserve Board or the Open Market Committee, I can only guess. My guess is that it was out of fear of further short-run increases in interest rates. However, if the aim is to reduce interest rates, this was a short-sighted policy, for it will result in higher interest rates once the economy adjusts to the faster monetary growth and the attendant faster inflation.

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7. Short-Run Changes in Monetary Policy

For judging short-run changes in monetary policy, some economists prefer to look at M_1 and/or M_2 rather than the monetary base. We have seen that the monetary base grew very steadily during 1971-77, at about 8 percent a year. M_2 grew less steadily, as fast as 11 percent for 12 months in 1976-77 and as slow as 7 percent for 12 months in 1974-75. M_1 grew still less steadily, as fast as 8 percent for 12 months in 1972 and as slow as 3 percent for 9 months in 1974-75; it even declined for 3 months in 1974-75. Some economists argue that it would be better to prevent substantial variations in the rate of growth of M_1 and/or M_2, and at least to prevent declines in either one during depressions. The Federal Reserve has not pursued such a policy thus far. I believe it would be more likely to be helpful than harmful. Nevertheless, the Federal Reserve should receive some credit for not allowing the growth rate of the monetary base to undergo a down-and-up cycle during the depression of 1974-75. This is an improvement over the Federal Reserve's management during previous business cycles.

Could monetary policy be used in a deliberately countercyclical way, to inflate the economy during depressions and deflate it during booms? This seems possible in principle. But remember that the output effects of a change in monetary policy, though temporary, last for 2 or 3 or 4 years. Furthermore, we do not have good reliable knowledge of just how long they last, and indeed, their duration does not appear to be the same in all cases. Most complete business cycles last about 3 to 5 years, 1 or 1½ years for the downswing and 2 to 4 years for the upswing. This means that

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by the time we recognize the need for a policy change to combat a depression or soften a boom, it is already too late to do so by means of monetary policy. An easy monetary policy, undertaken when a downswing is clearly upon us, is more likely to aggravate the next boom than to help combat the downswing. Similarly with tight money that is imposed when a boom appears to be getting excessive; it is more likely to aggravate the next depression than to soften the boom. Therefore, until economists develop truly reliable ways of forecasting when the next boom or depression will be, and how long the output effects of monetary policy changes will last, it is better to keep the growth rate of the money stock rather steady throughout both booms and depressions.

8. The Relation of Fiscal Policy to Monetary Policy

This hearing is about monetary policy. Of course, monetary policy is not the only force that affects the economy. Fiscal policy is another important force, and the two are related. When the Federal budget has a deficit, the Treasury must sell bills and bonds to cover it. The Federal Reserve has a choice as to whether to buy some of those bills and bonds, or not. If they don't, the monetary base is not increased, and inflation does not result. But then the Treasury must compete with private borrowers in the market, which will drive interest rates up, especially if the deficit is large. Government borrowing may then crowd out private borrowing and hence inhibit business investment that is needed for growth.

On the other hand, if the Federal Reserve does buy some of those Treasury bills and bonds, the monetary base is increased, and if it is done

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on a large scale, inflation will result.

Therefore, a large continuing Federal deficit presents dangers. Either the Federal Reserve does succumb to the pressure to hold down interest rates in the short run, which leads to inflation and high interest rates in the long run, or the Federal Reserve resists the pressure, which leads to high interest rates immediately and to the crowding out of private investment, though not to inflation.

9. Conclusion

My testimony can be summarized as follows. Monetary policy can assure long-run stability of the price level. Or it can assure long-run inflation. It cannot provide a permanent stimulus to output and employment, except at the cost of ever-increasing doses of monetary growth and ever-accelerating inflation. And it is not a very good tool for trying to counteract business cycles, because its effects operate with a delay that is too long and too unpredictable. Hence the best monetary policy is to keep the growth rate of the money stock low, to avoid inflation, and rather steady, to avoid magnifying the disturbances that come from other causes.

Are we then helpless to deal with business depressions and unemployment? I think not. But that would lead us beyond the topic of this hearing today.

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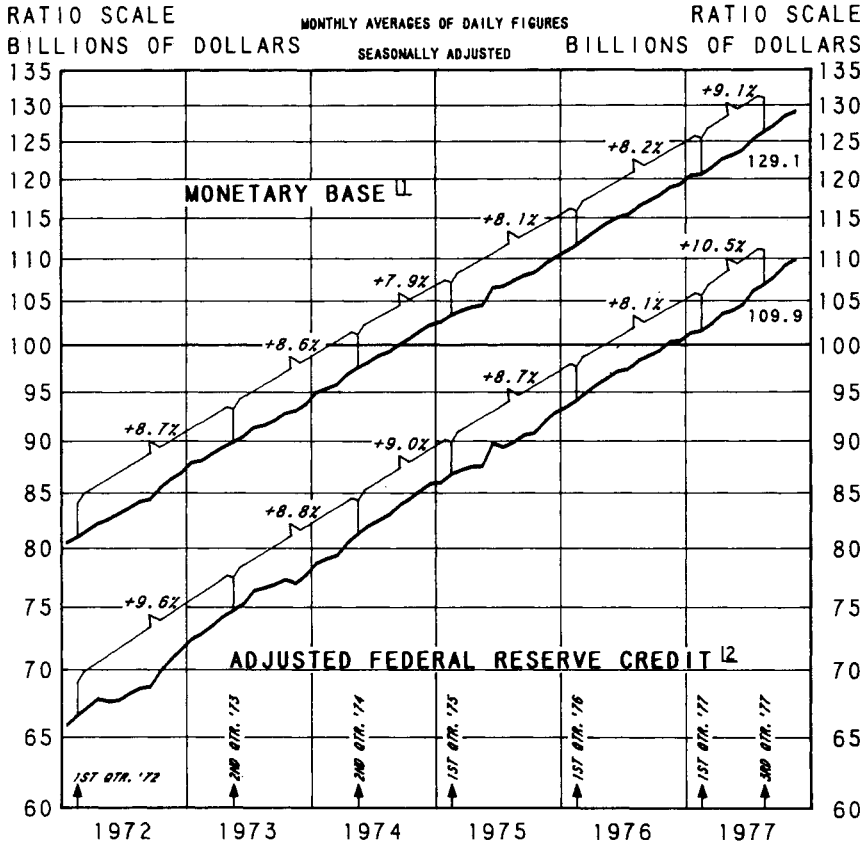
MONETARY BASE AND ADJUSTED FEDERAL RESERVE CREDIT



[1] USES OF THE MONETARY BASE ARE MEMBER BANK RESERVES AND CURRENCY HELD BY THE PUBLIC AND NONMEMBER BANKS. ADJUSTMENTS ARE MADE FOR RESERVE REQUIREMENT CHANGES AND SHIFTS IN DEPOSITS AMONG CLASSES OF BANKS. DATA ARE COMPUTED BY THIS BANK.

[2] FEDERAL RESERVE CREDIT CONSISTS OF FEDERAL RESERVE HOLDINGS OF SECURITIES, LOANS, FLOAT AND OTHER ASSETS. ADJUSTED FEDERAL RESERVE CREDIT IS COMPUTED BY SUBTRACTING TREASURY DEPOSITS AT FEDERAL RESERVE BANKS FROM THIS SERIES, AND ADJUSTING THE SERIES FOR RESERVE REQUIREMENT RATIO CHANGES AND SHIFTS IN THE SAME TYPE OF DEPOSITS BETWEEN BANKS WHERE DIFFERENT RESERVE REQUIREMENT RATIOS APPLY. DATA ARE COMPUTED BY THIS BANK.

PERCENTAGES ARE ANNUAL RATES OF CHANGE FOR PERIODS INDICATED.

LATEST DATA PLOTTED: NOVEMBER

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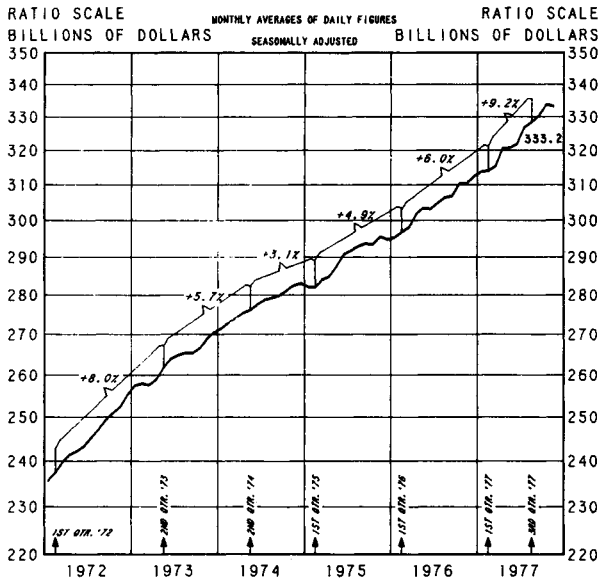
MONEY STOCK (M_1)



PERCENTAGES ARE ANNUAL RATES OF CHANGE FOR PERIODS INDICATED.
LATEST DATA PLOTTED: NOVEMBER

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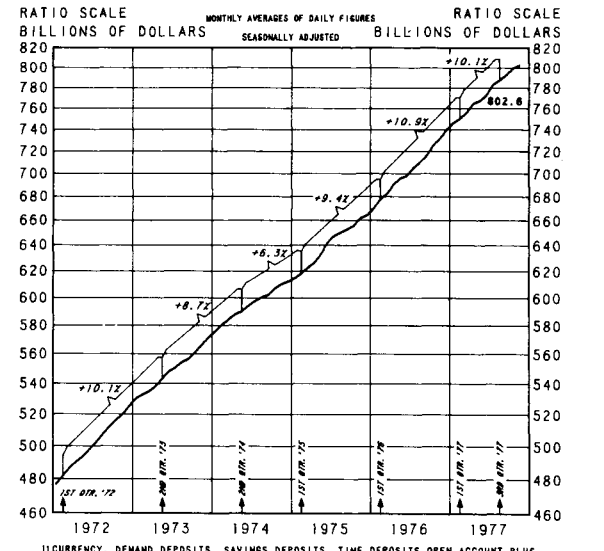
MONEY STOCK PLUS NET TIME DEPOSITS (M_2)[1]



[1]CURRENCY, DEMAND DEPOSITS, SAVINGS DEPOSITS, TIME DEPOSITS OPEN ACCOUNT PLUS TIME CERTIFICATES OF DEPOSIT OTHER THAN NEGOTIABLE TIME CERTIFICATES OF DEPOSITS ISSUED IN DENOMINATIONS OF $100,000 OR MORE BY LARGE WEEKLY REPORTING COMMERCIAL BANKS.

PERCENTAGES ARE ANNUAL RATES OF CHANGE FOR PERIODS INDICATED.

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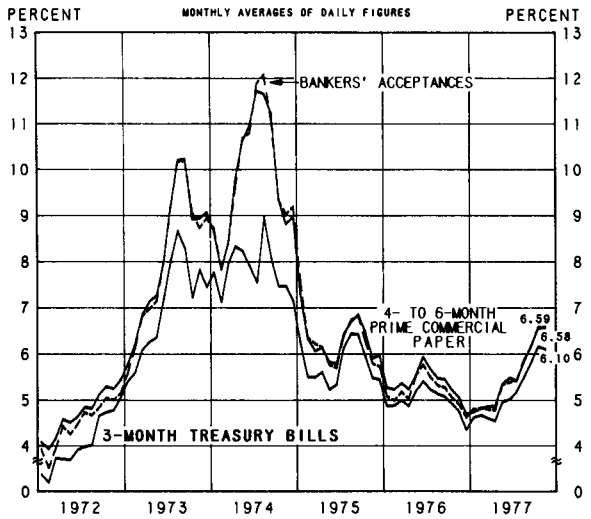
MONEY MARKET RATES



LATEST DATA PLOTTED: NOVEMBER

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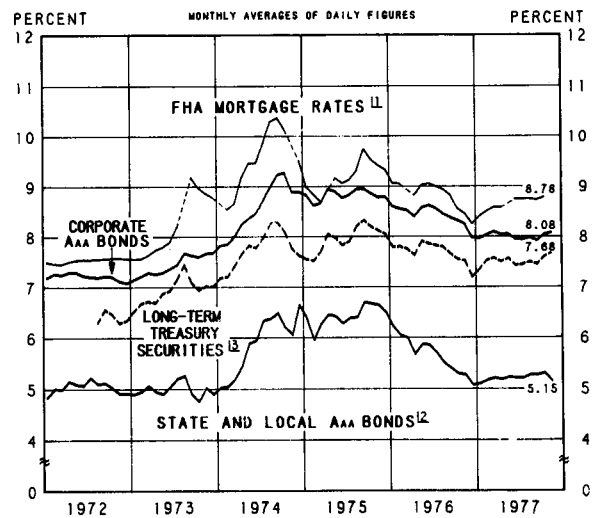
LONG-TERM INTEREST RATES



[1] FHA 30-YEAR MORTGAGES. DASHED LINES INDICATE DATA NOT AVAILABLE.

[2] MONTHLY AVERAGES OF THURSDAY FIGURES.

[3] AVERAGE OF YIELDS ON COUPON ISSUES DUE OR CALLABLE IN TEN YEARS OR MORE, EXCLUDING ISSUES WITH FEDERAL ESTATE TAX PRIVILEGES. YIELDS ARE COMPUTED BY THIS BANK.

LATEST DATA PLOTTED: FHA-OCTOBER; OTHERS-NOVEMBER

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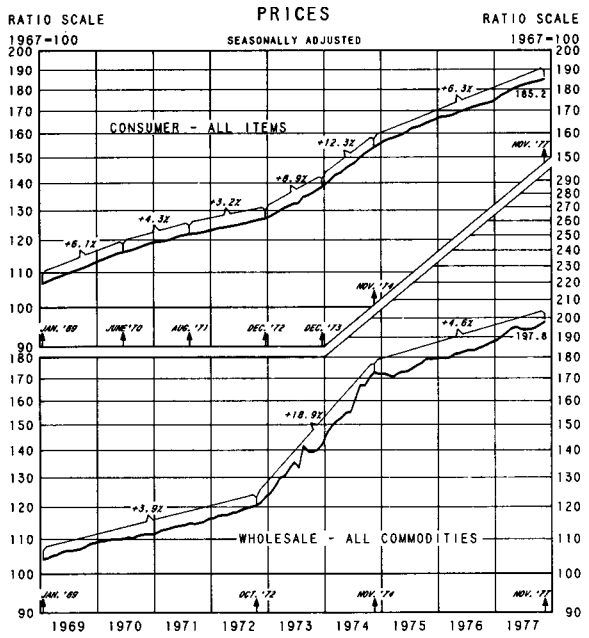

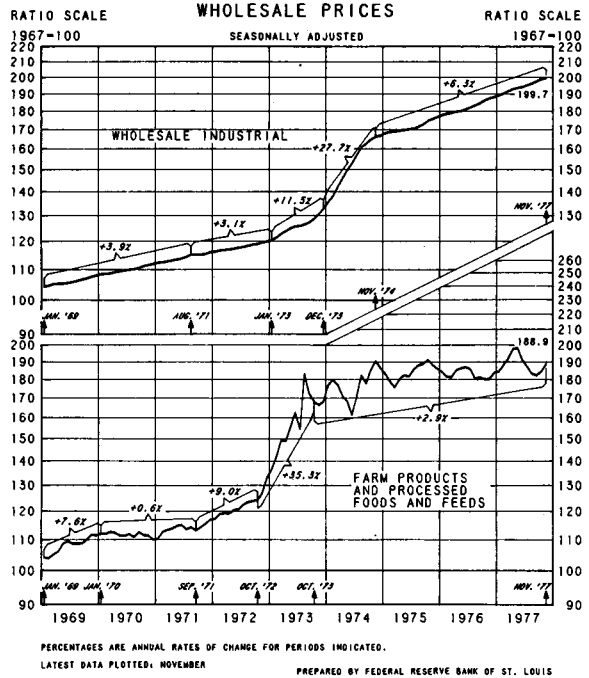

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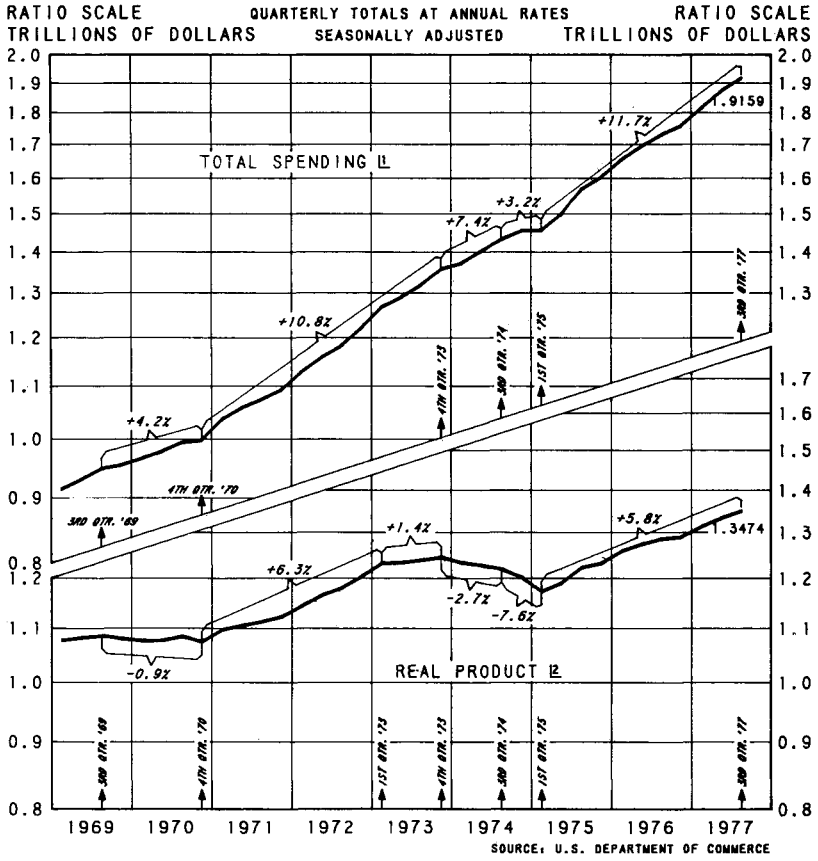
DEMAND AND PRODUCTION



SOURCE: U.S. DEPARTMENT OF COMMERCE

[1] GNP IN CURRENT DOLLARS.
[2] GNP IN 1972 DOLLARS.
PERCENTAGES ARE ANNUAL RATES OF CHANGE FOR PERIODS INDICATED.
LATEST DATA PLOTTED: 3RD QUARTER

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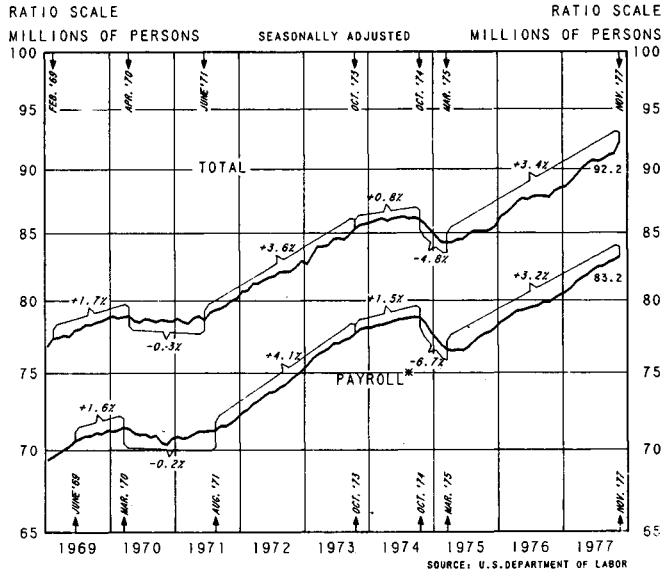
EMPLOYMENT



PERCENTAGES ARE ANNUAL RATES OF CHANGE FOR PERIODS INDICATED.

LATEST DATA PLOTTED: NOVEMBER PRELIMINARY
REVISED FROM 1972.

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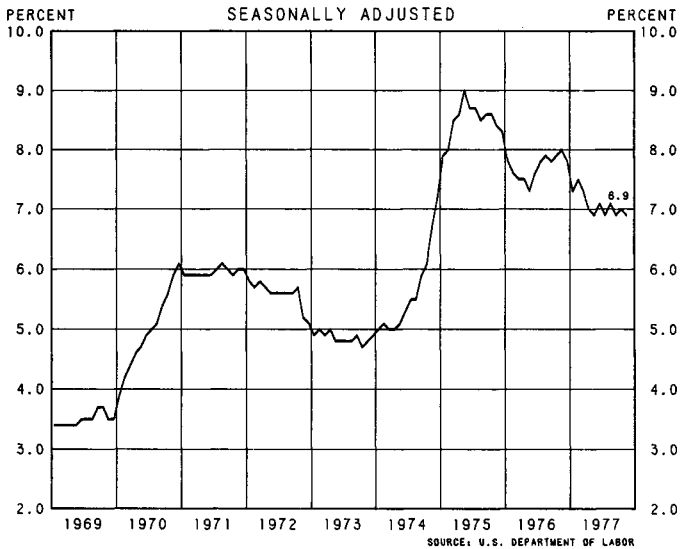
UNEMPLOYMENT RATE



PERCENT OF CIVILIAN LABOR FORCE
LATEST DATA PLOTTED: NOVEMBER

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Chairman MITCHELL. We thank you very much for your testimony and, obviously, we will have questions.

If it is all right with my colleagues, I would like to hear from all of the witnesses first. Is that agreeable? Fine. Mr. Hunt?

STATEMENT OF LACY H. HUNT, SENIOR VICE PRESIDENT AND ECONOMIST, THE FIDELITY BANK & FIDELCOR, INC.

Mr. HUNT. Thank you very much, Mr. Chairman. It is a pleasure to be here today.

A strong case can be made that monetary policy in 1977 was on the overly expansive side. In the past 9 months, the rate of growth in the narrow money stock has been similar to comparable time spans in 1968, 1972, and 1973, periods when rapid money growth eventually led to spiraling inflation.

The monetary base, which is high-powered money and the key underlying determinant of the monetary aggregates, is currently expanding at a near record-setting pace for a 2-year interval. This suggests that unless the growth rate in the base is reduced quickly and measurably, the pace of expansion in M_1 will accelerate further in coming months.

To some extent, the rate of increase in M_1 and the closely related M_2 and M_3 monetary aggregates has recently been understated. In the fourth quarter, large denomination certificates of deposit, which are not included in any of these three aggregates, accelerated quite sharply. The rapid increase in CD's tended to diminish the expansion in demand deposits and the less comprehensive aggregates. The M_4 and M_5 measures, which do include large CD's, expanded at their fastest pace during the final quarter of 1977.

The rise in short- and long-term interest rates since the end of 1976 does not, therefore, reflect an unaccommodative monetary policy. The upward movement of interest rates stems from an explosive growth in credit demands, both at the commercial banks and in the nonbank financial markets. The increase in total commercial bank loans was almost 9 percentage points faster in 1977 than in 1976. Moreover, net credit raised in the financial markets by the nonfinancial sector of the economy was at a record level in both absolute and relative terms in the third quarter, the period of latest data.

Net credit raised relative to either GNP or the monetary aggregates is well above the peaks registered in 1969 and 1973. This comprehensive credit aggregate rose from $284 billion or 16.2 percent of GNP in the final quarter of 1976 to $370 billion or 19.4 percent of GNP in the third quarter of 1977.

There is other evidence to suggest that the upward pressure on long-term interest rates was, in fact, a response to the intensity of credit demands. A sharp rise in long-term bond yields during 1977 occurred between mid-November and the end of December. This was a period of time when the Federal funds and other short-term interest rates were essentially stable.

The upward pressure generated by the rising credit demands could have been moderated by an even faster acceleration in the monetary base and in the money aggregates. Such a policy, however, would be

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counterproductive over the longer term since the additional money growth would further stimulate economic activity, inflation, and credit demands. This would thereby reintensify the rise of short- and long-term interest rates.

The very rapid expansion in the money aggregates has already produced at least two visible results that are disconcerting. First, the rate of growth of consumer installment and mortgage debt in 1977 was at an unprecedented pace. The explosion in mortgage financing played an important role in the double-digit spiral of housing prices.

As a consequence of the brisk growth of consumer and mortgage debt, a heavy and perhaps unsustainable portion of consumer income is now pledged to debt servicing.

Second, the excess money has spilled into foreign exchange markets, partly accounting for the strong depreciation of the dollar in the past year. The decline of the dollar is serving to raise prices for a wide variety of consumer and industrial products. It should be recalled that the rapid monetary growth of 1971 and 1973 also resulted in overexuberant real estate and credit growth and foreign exchange market turbulence.

Business cycle history in the postwar period clearly suggests that sharp monetary growth is not an inconsequential matter. In the past 25 years, a strong relationship between money and economic activity has been discernible. Sustained monetary accelerations have eventually produced rising rates of inflation. Increasing price pressures have, in the past, necessitated monetary decelerations which have, in turn, produced either business downturns or business recessions.

In other words, the exuberant monetary growth is disquieting because it points to higher inflation and the record of the business cycle clearly reveals that high and rising inflation is ultimately the precursor of recession and increasing unemployment.

The intensity and/or length of the recessions since 1950 is directly correlated with the preceding inflation. In other words, when inflationary bouts were relatively mild, recessions were not too deep or terribly long. But when inflationary outbursts were pronounced, then the recessions were either steep or extended.

Thus, the shape of the next downturn of the U.S. economy is likely to be determined by the inflation that ensues in the next year or two. If inflation were to accelerate sharply, the next downturn could be relatively severe. However, if inflationary pressures are contained, the next downturn could still be relatively mild.

My own prescription for avoiding a replay of these well-known cyclical patterns is that the rate of growth in the money supply be held to no more than 6¾ percent in 1978, or approximately the same as the yearly average growth rate for all of 1977.

To implement this policy, the increase in the monetary base should be restrained at no more than 8.5 percent, or roughly the same magnitude as in 1977.

This prescription, however, would entail reducing the latest 9-month pace of expansion in M_1 about 1 percentage point. This procedure would lead to further near-term increases in short-term interest rates and, by a marginal amount, real growth would be less this year.

However, the higher money market yields would serve to stabilize foreign exchange markets. Also, economic conditions in 1979 would

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possess less inflation and fewer excesses, and this expansion would have a better chance of continuing.

Thank you.

Chairman MITCHELL. Thank you very much, Mr. Hunt. You have laid out some hard data before us, and we will be responding to it.

Mr. McKinney, we are delighted to have you, sir.

STATEMENT OF GEORGE W. McKINNEY JR., SENIOR VICE PRESIDENT, IRVING TRUST CO.

Mr. MCKINNEY. Thank you, Mr. Chairman, members of the subcommittee.

I feel a little deferential in tackling the problem of what the Federal Reserve System did last year and the quality of their work, because it is so easy to criticize in retrospect what somebody else has done, especially if you do it with the benefit of hindsight and if you didn't actually have the responsibility.

Because of that deferential feeling, I would like to emphasize that the Federal Reserve did an outstanding job in the conduct of monetary policy last year. Certainly, the basic thrust of that policy, which was moderation to limit the availability of money in order to slow inflation, has been in the Nation's best interests.

Further, the most widely voiced criticism of monetary policy—and I believe this is the most widely voiced one, that perhaps policy was too restrictive in late summer and early fall—has proved substantially invalid, as the revisions of data show that the economy was, in fact, considerably stronger then than was thought.

Thus, the Federal Reserve shows up even better in light of information that was not available to its critics at that time, last summer and fall.

I think the biggest weakness in Federal Reserve policy formulation these days stems from the requirement that the Federal Reserve make quarterly reports to the Congress on its plans for monetary policy, specifically monetary growth, over the coming year.

This requirement skirts excessive involvement of the Congress in the detail of how the Federal Reserve conducts its policies, as distinguished from whether or not it achieves its objectives.

Unfortunately, this report to the Congress tends to be focused on an intermediate and partly irrelevant objective, the money supply, rather than being focused on the real objective, the ultimate objective of maintaining monetary conditions conducive to maximum sustainable employment, production, and purchasing power.

I do not think that the Congress should judge the Federal Reserve on its money supply targets. They are a means to an end. Instead, the Federal Reserve should be held accountable under current circumstances for the degree of progress the Nation makes in limiting inflation, while simultaneously avoiding recurrence of recession.

Of course, you can't hold the Federal Reserve accountable for those fiscal policies which make it more difficult to attain those objectives. Nevertheless, if that is the standard by which the Federal Reserve is judged, it has done considerably better than could reasonably have been expected, even with the benefit of hindsight.

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An unfortunate side effect of the congressional focus on details of monetary policy has been that the Federal Reserve has adopted what, to me, is an untenable approach to monetary policy execution, in that it keeps one foot in the interest rate camp and the other in the money supply camp, by setting targets for the Federal funds rate at levels felt to be consistent with the desired rate of money growth.

This approach does not allow adequately for market reaction to changes in the money supply. If, for example, the money supply grows at rates above the announced targets, the market assumes that the Federal Reserve will have to take positive action to get money growth back within bounds. Since this will involve higher Federal funds target rates, both sellers and buyers of money market instruments adjust their sights accordingly.

As a result, decisions relating to liquid asset holdings or issuance of liabilities that were associated with the old lower level of interest rates tend now to be associated with the new higher expected level of interest rates.

The relationship between money growth and interest rates which previously existed does not now exist, and the level of the Federal funds rate, which is consistent with any given rate of money supply growth, is higher than it was earlier. Thus, the Federal Reserve, when it starts on a money supply chase intended to bring money supply growth back within those announced target ranges, thereby stimulates faster money growth and creates a great part of the problem that it is trying to solve.

Ultimately, the Federal Reserve catches up with the moving target, and the money supply growth slows. This is what I think happened in 1975, in 1976, and again in 1977, when money growth accelerated. The Federal Reserve tightened in line with a preannounced policy pattern. The market perceived this; conditions changed; and the money growth accelerated because the Federal Reserve was following simultaneously policies of interest rate and money supply growth control.

I think that if the Federal Reserve were not required to state its money growth targets publicly and if it did not simultaneously attempt to peg both prices and quantity, this problem of market reaction would be markedly reduced, and it would be easier for the Federal Reserve to concentrate on its ultimate objectives.

That was the statement I intended to make, Mr. Chairman.

Could I sneak in just a couple of quick comments on some of the questions you mentioned in your comments and on one that Mr. Barnard made, just to create a little discussion later.

Chairman MITCHELL. Well, I am certain there will be ample discussion, but you are perfectly free to sneak something in.

Mr. MCKINNEY. Let me state my biases quickly.

First, as to how do we sustain and enhance the recovery while at the same time decelerating inflation, I think there is absolutely no other policy than the one that the Federal Reserve has been following—one of moderation, one of patience, of neither excesses nor deficiencies, neither too much nor too little, keep everybody a little unhappy over a sustained period of time until you get the excessive liquidity out of the economy. It will take a while, and it will be pain-

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ful, but I don't think there is anything else, anything better that can be done, in the field of monetary policy.

And I will elaborate on that. In connection with Mr. Barnard's comments on the $500-billion budget, of course it makes a difference. It makes an important difference. There is a school of thought that says that money is coincident with inflation and deflation and that fiscal policy is coincident with real growth, faster or slower.

I think this is a counterproductive line of argument, and an incorrect line of argument. My observations have been that both monetary and fiscal policy influence total nominal incomes and total nominal gross national product and total nominal activity, and the split between inflation and real is not traceable to either fiscal policy or monetary policy. Therefore, the other half of the policy which would sustain and enhance the recovery while decelerating inflation requires moderation in fiscal policy and other governmental measures as well as those of the Federal Reserve.

Would slow deceleration work well enough to reduce black unemployment below the double-digit level? I think the answer is yes. To parity with white unemployment? No; not by itself, although it would tend to move in that direction, toward parity, but not to parity with white unemployment. I think that does require additional measures.

With regard to your question, "What else apart from a sound monetary policy do we need?" I think that, No. 1, the most important thing we need is to make sure that the Humphrey-Hawkins bill does not get passed because that would be counterproductive to the interests of minority employment since it simultaneously pegs an unreachable and unrealistic quantitative target and directs the use of aggregate monetary and fiscal policies to attain that target.

That would result only in greater inflation and higher—not lower—levels of unemployment and greater disparities in unemployment.

A second step that I feel would be helpful would be to roll back the indexing of our minimum wage, which I feel has exactly the same discriminatory effects.

And finally, I would recommend that the Federal Government serve as a residual employer to all at rates below the minimum wage rate. I thought that might excite a little discussion later.

Chairman MITCHELL. Well, I am bleeding just a little bit, really, and am considering my position that you should get a little more time to answer those questions. Perhaps that was a fatal mistake on my part. [Laughter.]

Mr. Taub, we are delighted to have you with us.

STATEMENT OF LEON W. TAUB, VICE PRESIDENT, CHASE ECONOMETRIC ASSOCIATES, INC.

Mr. TAUB. Mr. Chairman, members of the subcommittee, thank you for the opportunity to present my views to this subcommittee. I will summarize my views here today, but request that my entire statement be placed in the record.

The contents of my testimony can be divided into two parts. First, I will summarize the major results of a study which I prepared for

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the Subcommittee on Domestic Monetary Policy. Second, I will use the results of the study to derive inferences concerning the conduct of monetary policies which were actually followed during 1977.

A little over 1 year ago I directed a study entitled "An Investigation of the Impact of Alternative Monetary Policies on Recent Business Cycle Fluctuations." The purpose of the study was to examine the consequences of alternative monetary policies for the U.S. economy during the period 1965 through 1975, and to compare the simulated outcomes to the path of actual economic behavior during that period.

The most important conclusions which emerged from the study are as follows:

One, the actual monetary policies followed by the Federal Reserve System during the past 10 years have been procyclical.

Two, the choice of a level and starting point for a rule-of-thumb growth target is at least as important as any decision to move to this type of policy.

Three, rule-of-thumb monetary growth targets can promote stable economic growth if the target is based upon a 6-month average growth rate, and if the target is subject to the constraint that quarterly changes in reserves not be negative.

Four, while small single-quarter changes in short-term interest rates have relatively little effect on long-term rates in the affected quarters, large changes in short-term interest rates do cause economic instability and can worsen the prevailing inflation/unemployment tradeoff.

Five, an indication of several monetary indicators viewed collectively can provide a better indication of monetary conditions and the direction of monetary policy than an analysis of any single indicator, such as M_1 alone.

Six, there appears to be a serious conflict between short-run and long-run economic goals in the United States. In the short run, an expansionary monetary policy usually increases real growth much more powerfully than it increases the rate of inflation. However, in the long run, beginning in approximately 3 to 4 years, a more expansionary monetary policy leads to a significant increase in the rate of inflation and a shift in the potential inflation/unemployment tradeoff, to a more unfavorable position.

Seven, proper management of monetary policy requires that the designated authorities take into account forecasted as well as historical economic conditions.

I would like now to turn to an evaluation of monetary policy during 1977.

I believe that the monetary policies which were followed during 1977 were appropriate and consistent with the Nation's goals of continuing above-equilibrium growth during the recovery phase of a business cycle, while attempting to prevent an increase in the long-run rate of inflation.

The criticism that the growth in the money supply was too expansionary cannot be dismissed easily. In the study referred to earlier, excessive growth in the money supply was shown to lead to an increase in the long-run rate of inflation, particularly if this excessive growth was continued well into the peak stage of the business cycle.

There are three reasons why I believe this criticism to be unfair. First, it must be remembered that economic conditions during the

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first quarter of this past year were extremely uncertain. Many commentators feared that the great pause of 1976 was the precursor of a recession in 1977—particularly given the adverse weather conditions during the early part of the year.

Even though most forecasters—including those at Chase Econometrics—believed that the economic stimulus proposed by President Carter was sufficient to insure fairly rapid growth through at least the third quarter of 1977, the Fed could be excused for choosing to err on the side of excessive ease.

The anemic growth in M_1 served as a further, although misleading, indication that more stimulus might be necessary. In any case, by May, the inappropriateness of this excessively easy policy was implicitly acknowledged by the pursuing of a policy which led to a relatively steady 200-basis-point increase in the Federal funds rate.

Second, during most of 1977 the economy was too weak to have been able to accommodate additional monetary stringency without falling short of the Nation's goal of above-equilibrium real growth.

In order to recognize how badly this economic growth was needed, it must be remembered that the unemployment rate in December 1976 was an intolerable 7.8 percent. While this rate did fall sharply in January of 1977, at that time it was not clear how much of this drop was real and how much was due to the bad weather which was being experienced at the time.

The precarious nature of the recovery during 1977 and its dependence upon relatively easy monetary policy is illustrated in table 1. While the aggregate GNP grew at healthy, above-equilibrium rates during 1976 and 1977, the importance of this extraordinary growth in the market for residential homes is not generally appreciated.

[Table 1 follows Mr. Taub's prepared statement.]

As shown in table 1, if one subtracts the growth in GNP due directly to residential construction and the growth in GNP due to the multiplier impact of the increased construction upon the economy, the economy's performance during those 2 years appears considerably less robust. In fact, if the impact of housing construction is omitted, the growth in real GNP during 1977 was at the lower end of what is generally considered the economy's equilibrium long-run growth rate.

Furthermore, table 1 may even understate the importance of housing in the growth of the economy during 1977. The assumption that the multiplier impact of residential construction is only two may be overly conservative, since the purchase of a new home normally induces purchases of other complementary goods such as furnishings, appliances, and perhaps even automobiles.

Also, there has been a tremendous increase in existing-home resales. The National Association of Retailers estimates that existing-home sales grew more than 25 percent during 1977. Since consumers normally increase their mortgages when moving, high levels of housing resales increase consumer expenditures by increasing consumers' liquidity. This increase in liquidity may be particularly potent, since consumers also have an increased incentive to buy durables, particularly those durables which are required to furnish the newly acquired homes.

Had interest rates reached the level at which disintermediation would have been a serious problem in early 1977, it is extremely likely

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that much of the growth in residential construction and housing resales would not have occurred, and that the economy's performance during 1977 would have been far less satisfactory.

Third, it is unlikely that easy monetary policy was or will be responsible for any additional inflation during 1977 and 1978. In the course of the study referred to earlier, I consistently found that increases in the money supply at a time when the economy was not operating near peak capacity promoted significant real growth and very little, or no inflationary cost.

Rather, it is likely that the increased monetary ease actually acted to reduce inflation: First, by causing greater real growth and increased productivity; second, by keeping mortgage interest rates, which enter the Consumer Price Index directly, stable; and third, by encouraging additional housing construction, which has acted to moderate—if that is the word—the tremendous explosion in housing prices which is now occurring.

However, it is undeniable that the monetary ease during 1977 will tend to cause increases in the rate of inflation in future years, unless the rather large increases in the monetary base during 1977 can be offset in these future years.

To do that, we will need coordinated fiscal and monetary policies which are designed to stimulate investment and increase the growth in aggregate supply.

While there is still time to act—and I believe the President's proposed tax cuts, which are balanced in terms of aiding investment as well as consumption, are an important step in this direction—inflation is not a problem which can be cured with a one-shot remedy.

Whatever one thinks of monetary policy during 1977, it is important to recognize that sharp oscillations in monetary policy are extremely harmful to the economy; and that any changes in policy designed to reduce the long-run rate of inflation should be done gradually so as not to cause major dislocations in the real sector of the economy.

For the reasons stated above, I believe that the monetary policy followed during 1977 was appropriate. While interest rates did rise significantly, real growth was encouraged rather than stymied, and no major sectors of the economy were squeezed out of the financial markets.

At the same time, it appears that monetary policies did not cause any additional inflation in the short run, and may actually have acted to reduce the rate of inflation during 1977 and 1978.

While these policies might be considered excessively easy in terms of their impact upon long-run inflation, it is important to recognize that the rate of inflation in the economy is determined by many factors, including the type and mixes of fiscal and monetary policies; and that, if one asks monetary policy to bear the entire burden of fighting inflation, particularly during a limited time period, one is likely to cause serious disruptions in the economy and achieve a level of economic activity which is well below that which could be achieved through a more balanced mix of policies.

Thank you.

[Mr. Taub's prepared statement follows:]

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STATEMENT OF

DR. LEON W TAUB
VICE PRESIDENT
CHASE ECONOMETRIC ASSOCIATES, INC.

before the

SUBCOMMITTEE ON DOMESTIC MONETARY POLICY
COMMITTEE ON BANKING, CURRENCY, AND HOUSING
U.S. HOUSE OF REPRESENTATIVES
MONDAY JANUARY 30, 1978

Mr. Chairman and Members of the Committee:

Thank you for the opportunity to present my views to this committee. During the course of my testimony I will refer to a study which I directed for the Subcommittee on Domestic Monetary Policy. The conclusions drawn, and the views I express today do not necessarily represent the conclusions and views of Chase Econometric Associates, Inc., or the Chase Manhattan Bank, N.A., the parent company of Chase Econometric Associates, Inc. However, the model used in the performance of this study is the Chase Econometrics Macroeconomic Model. The results of these macroeconomic simulations may be attributed to the model since these results would have been achieved by any independent researcher using that model.

The contents of my testimony today can be divided into two parts.

First, I will summarize the major results of the study. Second, I will use the results of the study to derive inferences concerning the conduct of the monetary policies which were actually followed during 1977.

Summary of the Study

A little over one year ago, I directed a study titled An Investigation of the Impact of Alternative Monetary Policies on Recent Business Cycle Fluctuations. The purpose of the study was to examine the consequences of alternative monetary

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policies for the United States economy during the period 1965-1975, and to compare the simulated outcomes to the path of actual economic behavior during that period. The alternative policies were designated in terms of fixed "rule-of thumb" monetary and reserve growth targets.

The most important conclusions which emerged from the study are as follows:

1. The actual monetary policies followed by the Federal Reserve System during the last ten years have been pro-cyclical. By contrast, a wide variety of rule-of-thumb monetary growth targets would have been more successful than the policies actually followed in meeting the economy's needs for stability by encouraging less severe recessions and, to a smaller extent, less exuberant booms.

2. The choice of a level and starting point for a rule-of-thumb growth target is at least as important as any decision to move to this type of policy. If a rule-of-thumb monetary growth target had been chosen without regard to contemporaneous economic developments, the result might have been a substantially worse economic performance than was actually experienced during the ten year period.

3. Rule-of-thumb monetary growth targets can promote stable economic growth if the target is based upon a six-month average growth rate and if the target is subject to the constraints that quarterly changes in reserves not be negative. However, an attempt to obtain an inflexible monetary growth rate target on a quarterly basis can be destabilizing or can lead to oscillating changes in reserves and interest rates.

4. While small, single-quarter changes in short term interest rates have relatively little effect on long term rates in the affected quarters, large changes in short term rates do cause economic instability and can worsen the

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prevailing inflation/unemployment trade-off. Also, large oscillations in interest rates can have significant effects upon income distribution and the composition of economic activity among the various sectors of the economy. In particular, investment seems to be depressed more than consumption by oscillating monetary policies and interest rates.

5. An examination of several monetary indicators viewed collectively can provide a better indication of monetary conditions and the direction of monetary policy than an analysis of any single indicator such as M1 alone.

6. There appears to be a serious conflict between short-run and long-run economic goals in the United States. In the short run, an expansionary monetary policy usually increases real growth much more powerfully than it increases inflation. However, in the longer run (beginning in three to four years) a more expansionary monetary policy leads to a significant increase in the rate of inflation and a shift in the potential unemployment/inflation trade-off to a more unfavorable position. In addition, by approximately the tenth year after the institution of an expansionary monetary policy, the increase in inflation becomes so great that the economy actually begins to grow more slowly under a "more expansionary" policy. Furthermore, the design of the study was such that this ten year estimate should be treated as an upper bound; the cross-over into the time at which additional monetary causes slower real growth may occur significantly sooner.

7. Proper management of monetary policy requires that the designated authorities take into account forecasted as well as historical economic conditions.

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An Evaluation of Monetary Policy During 1977

I believe that the monetary policies which were followed during 1977 were appropriate and consistent with the nation's goals of continuing above equilibrium growth during the recovery phase of a business cycle while attempting to prevent an increase in the long run rate of inflation. During 1977 the federal funds rate rose from approximately 4½% to approximately 6½%, an increase of 200 basis points. While the monetary base increased at a relatively rapid rate of 9.5%, the money supply increased far more slowly--7.2% on an M1 basis and 8.7% on an M2 basis. To argue that a given policy was correct, one has to address both the potential criticism that the policy followed was too restrictive and the potential criticism that the policy followed was too expansionary. The former criticism, that the policy followed was too restrictive, can be dismissed relatively easily. The economy did grow rapidly during 1977 and the current rate of above-equilibrium real growth shows every sign of continuing through at least the first quarter of 1978. Interest rates, although rising steadily for the final three-quarters of the year avoided the levels at which severe disintermediation would take place. Furthermore, the fact that the monetary base grew much faster than the monetary stock indicates that, had the economy needed additional liquidity, the money stock would have grown to accommodate these needs without significant increases in interest rates.

The criticism that the growth in the money supply was too expansionary cannot be dismissed as easily. In the study referred to earlier, excessive growth in the money supply was shown to lead to an increase in the long run rate of inflation, particularly if this excessive growth was continued well into the peak stage of the business cycle.

There are three reasons why I believe this criticism to be unfair.

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First, it must be remembered that economic conditions during the first quarter of the year were extremely uncertain. Many commentators feared that the "great pause" of 1976 was the precursor of a recession in 1977, particularly given the adverse weather conditions during early 1977. Even though most forecasters, including those at Chase Econometrics, believed that the economic stimulus proposed by President Carter was sufficient to insure fairly rapid growth through at least the third quarter of 1977, the Fed could be excused for choosing to err on the side of excessive ease. The anaemic growth in M1 served as a further, although misleading, indication that more stimulus might be necessary. In any case, by May, the inappropriateness of this excessively easy policy was implicitly acknowledged by the pursuing of a policy which led to a relatively steady 200 basis point increase in the federal funds rate.

Second, during most of 1977 the economy was too weak to have been able to accommodate additional monetary stringency without falling short of the nation's goal of above-equilibrium real growth. In order to recognize how badly this economic growth was needed, it must be remembered that the unemployment rate in December 1976 was an intolerable 7.8%. While this rate did fall sharply in January of 1977, at that time it was not clear how much of this drop was "real," and how much was due to the bad weather which was being experienced at the time. The precarious nature of the recovery during 1977, and its dependence on relatively easy monetary policy is illustrated in Table 1. While aggregate real GNP grew at healthy, above-equilibrium rates during both 1976 and 1977, the importance of the extraordinary growth in the market for residential homes is not generally appreciated. As shown in Table 1, if one subtracts the growth in GNP due directly to residential construction and the growth in GNP due to the multiplier impact of the increased construction upon the economy, the economy's performance during these two years

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appears considerably less robust. In fact, if the impact of housing construction is omitted, the growth in real GNP during 1977 was at the lower end of what is considered the economy's equilibrium long run growth rate. Furthermore, even Table 1 may understate the importance of housing in the growth of the economy during 1977. The assumption that the multiplier impact of residential construction was only two, may be overly conservative since the purchase of a new home normally induces purchases of other complementary goods such as furnishings, appliances, and perhaps even automobiles. Also, there has been a tremendous increase in housing resales. The National Association of Retailers estimates that existing home sales grew more than 25% during 1977. Since consumers normally increase their mortgages when moving, high levels of housing resales increase consumer expenditures by increasing consumers' liquidity. This increase in liquidity may be particularly potent since the consumers also have an increased incentive to buy durables, particularly those consumer durables which are required to furnish the newly acquired home.

Had interest rates reached the level at which disintermediation would have been a serious problem in early 1977, it is extremely likely that much of the growth in residential construction and housing resales would not have occurred and that the economy's performance during 1977 would have been far less satisfactory.

Third, it is unlikely that easy monetary policy was or will be responsible for any additional inflation during 1977 and 1978.

In the course of the study referred to earlier, I consistently found that increases in the money supply at a time when the economy was not operating near peak capacity promoted significant real growth at very little or no inflationary cost. Rather it is likely that the increased monetary ease actually acted to reduce inflation: (a) by causing greater real growth and

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increased productivity; (b) by keeping mortgage interest rates, which enter the consumer price index directly, stable; and (c) by encouraging additional housing construction which has acted to moderate, if that is the word, the tremendous explosion in housing prices which is now occurring.

The Outlook for Long-Run Inflation

However, it is undeniable that the monetary ease during 1977 will tend to cause increases in the rate of inflation in future years unless the rather large increases in the monetary base during 1977 can be offset during the coming years. To do that, we will need coordinated fiscal and monetary policies which are designed to stimulate investment and increase the growth in aggregate supply. While there is still time to act, and I believe the President's proposed tax cuts which are balanced in terms of aiding investment as well as consumption are an imporatnt step in this direction, inflation is not a problem which can be cured with a one-shot remedy. Whatever one thinks of monetary policy during 1977, it is important to recognize that sharp oscillations in monetary policy are extremely harmful for the economy and that any changes in policy designed to reduce the long-run rate of inflation should be done gradually so as not to cause major dislocations in the real sector of the economy.

Summary

For the reasons stated above, I believe that the monetary policy followed during 1977 was appropriate. While interest rates did rise significantly, real growth was encouraged rather than stymied, and no major sectors of the economy were squeezed out of the financial markets. At the same time, it appears that monetary policies did not cause any additional inflation in the short run and

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may actually have acted to reduce the rate of inflation during 1977 and 1978. While these policies might be considered excessively easy in terms of their impact upon long run inflation, it is important to recognize that the rate of inflation in the economy is determined by many factors, including the type and mixes of fiscal and monetary policies, and that if one asks monetary policy to bear the entire burden of fighting inflation, particularly during a limited time period, one is likely to cause serious disruptions in the economy and achieve a level of economic activity which is well below that which could be achieved through a more balanced mix of policies.

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TABLE 1

Impact of Residential Construction Upon
Real Economic Growth

	1976	1977
Real Gross National Product		
First difference ($ billions)	72.5	62.9
Percent change	(6.0)	(4.9)
Less		
Real Residential Construction		
First difference ($ billions)	8.9	9.2
Percent change	(23.1)	(19.2)
Multiplier Impact ($ billions) (assumed multiplier of 2.0)	8.9	9.2
Real Gross National Product Not Attributable to Residential Construction		
First difference ($ billions)	54.7	44.5
Percent change	(4.7)	(3.6)

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Chairman MITCHELL. Thank you, very much, Mr. Taub.

We will proceed under the 5-minute rule.

Very tentatively, in my opinion, Congress is trying to approach some coordination between fiscal policy and monetary policy. It is still very tentative as of this point, however. In light of this attempt to achieve some degree of coordination, the Congress sought to require that the Federal Reserve report to Congress its monetary targets a year ahead—and that gives us a sort of base upon which Congress can judge where we can go with fiscal policy.

In light of your statement, Mr. McKinney, I know your feeling on it; I would like to direct this to Mr. Christ, Mr. Hunt, and Mr. Taub. Mr. McKinney made the suggestion that we hold the Federal Reserve accountable for its degree of progress in limiting inflation—I think that is what you said—while avoiding the recurrence of recession, instead of setting monetary growth targets and hitting them. May I have your reactions to Mr. McKinney's position? We will start with Mr. Christ, and I would appreciate hearing from each of you three gentlemen.

Mr. CHRIST. I think Mr. McKinney is quite right, that the ultimate purpose of Federal Government monetary and fiscal policy is to moderate inflation, and to maintain real output and employment, so I don't disagree with that part of the statement.

It is, of course, correct that the monetary aggregates are only a means to an end, and are not an end in themselves. I think that experience has made it pretty clear that abrupt changes in the rates of growth of the monetary aggregates are disturbing, and I think it is useful to ask the Federal Reserve to state in advance, quarterly, what the intentions are as to the growth rates of these monetary aggregates—not so much because the maintaining of those aggregates on a strict, constant path is an end in itself; but rather, because experience shows that disturbances are in some cases created, and in other cases amplified, if the monetary policy is conducted in such a way as to produce important, substantial changes in those growth rates.

Chairman MITCHELL. Thank you. Mr. Hunt?

Mr. HUNT. I also agree that the money supply is not the ultimate objective; that the long-term objective is to have a stable rate of inflation. with a minimal amount of unemployment.

However, I think it is useful for the Federal Reserve to come, on a quarterly basis, and explain its targets to Congress. I think that when they miss them as badly as they did in 1977, you should read the riot act to them.

The swings of this sort as the data and historical experience clearly reveal—are destabilizing and harmful. They have longer term consequences; I would prefer for the Federal Reserve to stay with the targets.

I do agree with one of the other things that George McKinney mentioned. I believe the Federal Reserve impedes its own operations by simultaneously trying to have a Federal funds operating target, and a money supply objective.

In many of the foreign countries, the day-to-day, or call-money rate, swings quite widely. The participants in those money markets have come to know that a 3-percent or a 4-percent swing during the course of a week is normal, and dominated by seasonal influences.

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The Federal Reserve should ignore the Federal funds rate, set its reserve objectives in light of its monetary policy objectives, keep them reasonably stable, report them to the Congress, and I think over the longer term its policies will be better.

Chairman MITCHELL. Mr. Taub?

Mr. TAUB. Thank you. I do believe it is important to coordinate fiscal and monetary policy to a greater degree than we are presently doing. The Fed must be kept independent, and an independent Federal Reserve System is important to economic growth. However, that does not mean that the Congress of America, and the people of America should not know what the Fed is doing.

I believe that House Concurrent Resolution 133 was extremely important in requiring the Fed to set monetary target growth, and I think that that policy could even be expanded slightly—first, by asking that the Fed report on its belief as to what that monetary policy will do to interest rates, other financial indicators, and important sectors of the economy such as housing which are affected by monetary policy.

Second, I believe that the Fed should be asked to compare a longer time period, and set a growth rate for a longer time period than 3 months. In particular, it could not only set a 3-month growth rate target, but also set a 6-month growth rate target, based upon the next 3 months, and the last 3 months. In this case if there is an error in Fed policy in reaching a target on a 3-month basis, that error is not completely forgotten. The Fed would have an obligation to set monetary policy over a 6-month period to be consistent with the Nation's goals for employment and inflation.

Chairman MITCHELL. Thank you, very much. Mr. Hansen?

Mr. HANSEN. I would yield to Mr. Caputo.

Mr. CAPUTO. I was curious about the apparent unanimity over the inevitability of a change in any of the monetary aggregate growth rates and inflation, for 3 to 4 years, and later. How do you get to that conclusion?

I think Mr. Christ mentioned two data points which, even if the two phenomena were utterly random, you would have a 50-percent chance of reaching your results of the two data points. Do you regress to changes in monetary aggregates against the Consumer Price Index quarterly data 4 years in the future? How do you reach the conclusions that you each reached in that area?

Mr. CHRIST. Well, there are two kinds of approaches to this. One is a much more simplistic view than that. For example, when gold was discovered in the New World in the 16th century, the Spanish brought much gold back to Spain, and there was a substantial increase in prices in Spain at that time.

You can find similar effects in other places, in centuries past. In more recent periods, we don't base the money supply on the quantity of gold. It is still true that in the periods and places in which the money supply has grown rapidly there has been rapid inflation.

If you look at the hyperinflation in Germany immediately after World War II, the money supplies were growing extremely rapidly, on the order of 1,000 percent a month, and the price level was rising at rates like that.

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We can have that, too, in our country if we want to. In dealing with periods such as postwar American history, where the inflation rates have been much more moderate than those of the German hyperinflation, the kind of method that you suggest makes sense. One can conduct regression analyses and one can use, as a dependent variable in such an equation, the rate of inflation; and one can use, as explanatory variables, the rates of growth of money stock 1, 2, and 3 years earlier.

Mr. CAPUTO. Have you done that?

Mr. CHRIST. I have not personally done this. I have read a great number of studies of this sort. One of them was published by this subcommittee, I believe it was last year, which did a very careful job of exactly that kind of thing, and concluded that in the postwar American experience this relationship, which has been observed in many other countries and many other places, is still operating.

Mr. HUNT. I have actually performed the type of regression analysis which you and Professor Christ alluded to in your remarks. I have not only looked at broad aggregates of the Consumer Price Index—such as durable, nondurable, and service subcomponents, but I have examined subcomponents of the wholesale Industrial Price Index, in order to trace the effects of inflation through the various stages of production.

The most recent evidence that we have, in terms of looking at monthly changes in industrial wholesale and subcomponents of consumer prices, is that the lags between acceleration in money growth, and acceleration in prices is actually shortening.

Mr. CAPUTO. Is actually what?

Mr. HUNT. Is actually shortening. The lags are becoming shorter. In fact, some of our latest regression work seems to suggest that a discernable impact on the Wholesale Industrial Price Index is evident within 7 or 8 months. There is a continuing lag on out to 2½ and 3 years. The mean, or the midpoint of that impact may now be around 15 or 16 months, in terms of the Consumer Price Index.

Mr. CAPUTO. Mr. McKinney, do you have any comment on that?

Mr. MCKINNEY. Well, your comment was that there is unanimity of the observation that money supply growth was correlated with inflation. The unanimity does not quite extend to the direct relationship that I think can reasonably be inferred from some of the comments.

I would like to point out that inflation is caused by a lot of other things than monetary policy, but, having made that additive comment—not competitive comment—then I would certainly concur with the observations, which are the result of an awful long time of watching by a lot of people, not merely statistical observation but correlation of theory and qualitative observation over generations that have, I think, very firmly proved the case.

Mr. TAUB. One purpose of the study which we performed for the subcommittee was to see if a major macroeconomic model such as the Chase model, which is generally thought to be primarily Keynesian rather than monetarist, would still show that increases in money supply caused additional inflation.

We did find that, in the longer run, that effect did hold.

Mr. CAPUTO. Mr. Hunt, what kind of statistical reliability do we find in the studies? Are there very high R squares?

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Mr. HUNT. Well, I have estimated the monthly work that I was referring to you. I have estimated the monthly data since 1965, and generally speaking, I can explain approximately 86 percent of the monthly variance in the Industrial Wholesale Price Index.

There are other variables in the equation, as Mr. McKinney suggested, and you have to take those into consideration. The money supply works both indirectly and directly on the rate of inflation. So, it is not a single-shot determinant.

Mr. CAPUTO. What are the other variables that seem to have a lot of explanatory value?

Mr. HUNT. Well, I think that there are certain factors that are very difficult to predict. We call exogenous prices, prices that seem to move in a nonrandom way in relation to money. For example, fuel is one of the most notable. It is very difficult to ignore fuel, especially in light of the experience since 1973, when there was a quintupling of oil prices.

The agricultural cycle is not influenced any significant way by monetary policy changes. There are a number of structural factors having to do with laws of Congress, for example, changes in the minimum wage, and its impact—there are other costs that are imposed externally by the operation of our regulatory procedures, and they, too, can influence.

And finally, there can be demand that can be generated from outside of our country. For example, a shift in the trade deficit can impact upon domestic demand and thereby the rate of inflation. And, as several other members also suggested, also a shift in the demand from the Federal Government can influence the rate of inflation.

Mr. CAPUTO. I am afraid my time has expired.

Thank you. I appreciate it.

Chairman MITCHELL. My very distinguished colleague and friend, Mr. Barnard.

Mr. BARNARD. You are too flattering, Mr. Chairman.

Chairman MITCHELL. I need your vote. [Laughter.]

Mr. BARNARD. Last year we had a lot of discussion here, as we have already alluded to this morning, about the necessity of the Fed forecasting what their ambitions would be in the growth rate.

I am interested to know whether or not you think this is some infringement on the independence of the Fed, and second, whether or not their predictions and their objectives, if they were not consistent with the administration's objectives, could somewhat politicize the Fed and some of its monetary policies?

Mr. Hunt, I think you hinted that the Fed needed to be taken to task about not meeting some of their forecasts. How would you consider that?

Mr. HUNT. Well, I like Mr. Taub's suggestion that when the Federal Reserve makes its quarterly presentation of the projected growth for the next 3 months, that there should be an examination of how they did over the prior 3 months, to take into account explicitly whether or not they hit their objectives.

I think it is desirable to have an independent Federal Reserve System. But, it is also desirable, at the same time, for the Federal Reserve to know and fully understand the desires of the Congress and the

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administration, and so that the Congress and the administration and the American public can know if the Federal Reserve is going to pursue a somewhat independent policy.

Mr. BARNARD. Do you think a 3-month period of time is reasonable to achieve those growth periods?

Mr. HUNT. I think that they can achieve it within about 75 percent of their target. More precision than that should not be required. Over a 6-month time span I think you could achieve somewhat higher results.

Mr. BARNARD. How much do you think public attitude has to do with this? In other words, we have to get the public accustomed to buying more houses after going into the consumer area. Do you think that they can adjust their personal attitudes in that period of time?

Mr. HUNT. If you are talking about the consumer and his whole family, probably not. But the lending institutions who deal with the consumer, your commercial banks, your savings and loan institutions, and even, to a growing extent, probably your credit unions would be able to take account of these adjustments and make their plans accordingly.

Mr. BARNARD. Would any of the other gentlemen like to address that question?

Mr. MCKINNEY. I would, sir. Again, I don't think you are shooting at the right thing, and I think that whether the Federal Reserve volunteers for it or whether you ask for it, I think that for you to hold them accountable for an achievement of a money supply target is an error, it is a mistake. There are many things that influence economic activity other than money.

As these gentlemen have admitted, the relationship between money and economic activity is not the only one. There are other factors, and they are variable, they are in some degree unpredictable. They also change from time to time. The relationship between money and economic growth does not remain constant.

The variability on the short-run basis of other factors is considerably more important than is that of money.

I think you would do better if you asked them how far they thought they could reduce the inflation rate and how tight a policy they would have to follow to do it. And I do not believe it is appropriate to measure the tightness of that policy by the extent to which the money supply increases or decreases.

An increase of the money supply of x percent under one set of circumstances is a much tighter policy than an increase of the same amount under another set of circumstances.

Mr. BARNARD. Mr. Hunt.

Mr. HUNT. Could I say something? While admitting that there are other factors that influence the inflation rate besides money, we must not forget that money is the single most important factor that we can control. The Congress and the Federal Reserve can't influence the pricing of oil on world markets. They cannot control the agriculture sector.

The tool that you have to insure that we have noninflationary growth over the longer term is the money supply. That is the only one of the variables that you have control over. So, if you relinquish your control over money supply, then inflation becomes a purely random event.

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It is controlled by whatever the money supply happens to be, by the swing in oil prices, the swing in agricultural prices, and what is to assure over the longer run that we do not have horrendous conditions?

The money supply is the principle policy control variable. Like it or not, that is what policymakers have to contend with.

Mr. BARNARD. Not interest rates?

Mr. HUNT. I don't believe so. Interest rates, especially your long-term interest rates, are dominated by fluctuations in inflation. Investors incorporate inflationary expectations in the intermediate and long-term rates. This is documented, I think, by a lot of people.

Mr. BARNARD. Don't you think the market is changing though, with the variable interest rates on long-term debt?

Mr. HUNT. I don't see any significant move toward variable long-term interest rates. The mortgage sector, where there has been some movement is small, the bulk of the financing and the long-term corporate and municipal bond markets are based on fixed rates.

Mr. BARNARD. I am afraid my time is fleeting fast.

Mr. Chairman, I would like one of these gentlemen to address if it can be possible for monetary and fiscal policies to be coordinated.

Mr. MCKINNEY. To the extent they are coordinated, it is going to be somewhat like sleeping with an elephant. If the elephant rolls over, you will get squashed, and if you coordinate fiscal and monetary policy, I am reasonably sure that monetary policy would be squashed and there would be a politicization of the process.

Mr. BARNARD. Mr. Christ.

Mr. CHRIST. I think that in principle it is certainly possible to coordinate monetary and fiscal policy. I think there is the danger of the elephant squashing monetary policy, as Mr. McKinney said, but it is not really required of the Federal Reserve that they do step in and respond when the budget runs a big deficit. It is not required that the Federal Reserve buy a substantial amount of those bills and bonds which the Treasury issues. However, there is very intense political pressure on the Federal Reserve to do that, and it is very hard for the Federal Reserve to resist that pressure. They are regarded as an independent agency, but I think they all know how they were created. They were created by the Congress, and they can be abolished by the Congress as well. This is the reason why they are not totally independent.

It seems to me, in a democracy such as we have, it is not obvious that they should be totally independent. There should be a recourse for the populace in the Nation to bring about the kind of monetary policy that is wanted, and I think that one of the encouraging things about hearings like this is that we have a discussion about what the right kind of monetary policy should be. I think that the discussion may lead to improved understanding, and if it does, then I think the deficits will not be so large in the future.

I think you are really on the right track in your Original question. If the deficits are not so large in the future. then the pressure on the Fed to buy bonds to finance those deficits will not be so great, and we won't have such a great inflation. If the Fed could resist the pressure to help finance large deficits, we would not have inflation, but we would have a heavy competition between the private

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sector and the Treasury for funds at a time when the budget runs a big deficit, and then it would be likely to push interest rates up. This always produces large complaints from well-known sectors of the economy against the high interest rates. That is the source of the pressure which is very hard for the Fed to resist.

Mr. BARNARD. Mr. Chairman, I realize my time is up, but I want to say that I think the discussion this morning dispells that old philosophy that economists put end to end could not reach a conclusion. It seems like these gentlemen have reached a conclusion this morning, and a very happy one.

Thank you very much.

Chairman MITCHELL. I would agree on macroeconomic issues. I hope, however, there would be some dispute on the specific recommendations that Mr. McKinney made. It is clear that the President is increasingly calling upon the private sector to do more in terms of combating unemployment and helping the economy grow. That was mentioned in his State of the Union message, I believe a greater reliance should be placed upon the private sector to help our somewhat sluggish economy. In that connection, all of the expert witnesses who appeared before the Joint Economic Committee's midyear hearings last year indicated that there has to be a heavier weight, a heavier reliance placed upon monetary policy if we are going to call upon the private sector to do more. Those witnesses came to a kind of consensus which said, in effect, that to avoid the danger of recession in 1978 and to meet the targets for 1981, M_1 would have to grow at a rate of about 8 percent, and M_2 would have to grow at a rate of at least 11 percent for the next several years. In your testimony, Mr. Hunt, I think you addressed this problem and gave an indication as to where M_1 and M_2 should be. You seem to be in agreement with this consensus.

I would like to hear from Mr. Christ and Mr. Taub and Mr. McKinney. The Fed is going to come in with a specific target for M_1 and M_2. It is required by law. What should be the upper and lower ranges of those targets? Mr. Christ?

Mr. CHRIST. This is always a very hard question for next year; it is an easy question for the long run. It seems to me, if we want not to have inflation then we should, 10 years from now, be in a position where M_1 is growing at something like 2 percent a year. How we get there from here is really the hard question, and that goes back to this drug analogy that I mentioned.

I think we have placed ourselves in a position now where we are taking a dose of monetary expansion at a rate of about 8 percent a year on the monetary base, and about 7 percent a year on M_1. And if we are going to get off of that, we are going to have to reduce the rate of growth of the money stock at some point.

Now, either we do that, or we don't do it. I think one thing that can be said for the Fed over the last 4 years is that they have not varied the rate of growth of the monetary base. They have made that extremely steady. If you look at one of the charts that is in the back of my testimony, it shows a very, very steady rate of growth of the monetary base; and M_1 and M_2 fluctuate between each other, and also over time, to some extent. But, if the monetary base is growing at a steady rate of about 8 percent, then M_1 and M_2 will not stray very far for very long from that rate.

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Now, I think what the target should be in the immediate future is a very touchy question, and it is a little like the question of how fast the doctor should take the patient off of a drug whose side effects have now been determined to be harmful, in the form of inflation.

There will never be a perfect time to do this, because there will never be a time when it won't either aggravate some little depression that may be in process, or where it won't threaten to slow down a boom which is in process.

I think there is going to be no way to slow down the rate of growth of the money stock without having some people say "you are endangering real output."

And I think our choice is to either decide that we are going to live with a 6- or 7-percent inflation forever—which means living with interest rates of 10 and 12 percent for mortgages, slowing down gradually. And I think the best policy is probably a very gradual slowdown. It is hard to adopt this and make it stick, due to the membership of the Congress changing over 10 years; and maybe 10 years from now the people who are passing the bills won't any longer agree with this position that we ought to slow the monetary growth rates down to something like 2 percent, and really stop the inflation.

But, I think if we could get a national consensus that we don't want inflation, and then we could determine to live through the 3- or 4-year period of inhibition of real output that that would create, then I think we would have clear sailing after that. We would then be in a position where interest rates would be low, and inflation would be gone, and fluctuations would be moderate. It is just a question of how to get there from here, and it isn't easy.

Chairman MITCHELL. Well, you have not made my job much easier, because the Federal Reserve Board is going to give us a specific range for the year next month. Should the lower bound of M_1 be 4½ percent?

Mr. CHRIST. I would think half a percent less than it was the year before, and keep doing that until inflation is gone.

Chairman MITCHELL. Do any of you other gentlemen wish to comment on this?

Mr. TAUB. Yes, I think that it is now a fairly favorable time to start reducing the growth in money supply. There are two reasons for this:

First, the economy is much nearer to high employment than it has been for a very long time. Second, we are now in a particularly fortuitous position: we know that the economy will be growing at a fairly rapid rate for at least the first quarter, based upon the information we have already; and we know that, beginning in the fourth quarter when the proposed tax stimulus, which appears to be virtually certain to be enacted, takes effect that the economy will grow strongly in the fourth quarter of this year and the first quarter of next year.

Therefore, there is very little to lose by an additional tightening now. We don't have to worry about pushing the economy into a recession, because we know we will have substantial fiscal stimulus coming at the end of this year. Now would be a good time to start the process.

Chairman MITCHELL. Mr. McKinney?

Mr. MCKINNEY. May I comment on the inconsistency of the fact—which is correct, which he has just pointed out—that we know the economy will be growing beautifully because of fiscal stimulus; and that therefore we feel we are in a good position to tighten our monetary

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policy—a process which shifts economic activity from the free enterprise system, from that private economy that Mr. Carter says he wants to grow, into Government.

It might well be worth considering a little less fiscal stimulus, and a little more monetary restraint. But, in specific answer to your question as to what growth rates: The growth rate should be reduced as rapidly as is possible without triggering recessions. I submit that neither you nor I nor Mr. Hunt nor the Federal Reserve knows, in advance, what that will be.

Therefore, I would suggest that the range for money growth ought to be a very wide one, in order not to inhibit the Federal Reserve in following policies that are appropriate to the moment.

Mr. BARNARD. Will the gentleman yield?

Chairman MITCHELL. Yes.

Mr. BARNARD. You say a "range," Mr. McKinney. Do you mean 3, 4, or even 6 percentage points? That is a big range.

Mr. MCKINNEY. If that inhibits the Federal Reserve at any time, it is not a wide enough range. During 1977, it did. The Federal Reserve did move outside of it. I think the range ought to be big enough, in conducting monetary policy, so that, month-to-month, the Federal Reserve does not move outside of it.

Mr. BARNARD. Thank you, Mr. Chairman.

Chairman MITCHELL. Mr. Hunt, you wanted to comment on this?

Mr. HUNT. Yes, I would. It seems to me that this expansion is at a very old age.

If you look over the postwar period, you will find that the average of the peacetime recoveries was about 34 months. January is the 34th month of this expansion. There are a few visible excesses that are beginning to emerge. Productivity is declining. This suggests that there will be increased pressure on corporate profit margins, increased price pressures from the industrial sector—we have had a precipitous decline of the dollar, which is adding to inflationary pressures.

Also in certain sectors, notably the construction and related sectors, they are beginning to get into the bottleneck conditions. If we continue pursuing a high money growth policy, it is going to give us increasingly a disproportionate amount of inflation. And the greater inflationary evolution during the next 2 years could give us another one of these hard landings.

It seems to me we are approaching very quickly a critical turning point in whether we avoid that merry-go-round that we have been on since 1950. I think it is important for the Federal Reserve to move quickly to lower the targets. I, like Mr. Taub, agree that now is a propitious time to do so. To delay, I think we will pay in terms of higher unemployment and slower growth over the longer term.

Chairman MITCHELL. The Chair would like to raise one other question in connection with this discussion. And I use as my point of focus some remarks that Mr. McKinney made. I don't know that they are in your written testimony, but you referred to "moderation" being required; that people will have to be a little more unhappy for just a little longer period until the economy becomes more stabilized. Generally, is that a correct accounting of the remarks you made?

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Mr. McKINNEY. Yes, sir. I hope that word "unhappy" is not misinterpreted. I mean by that, that observers may continue to simultaneously feel we are both going too fast and too slow.

Chairman MITCHELL. Well, this is the point I am trying to make. All of us here can be very objective and systematic in our analysis of data that appears before us, but there are a large number of people out in the real world who have been unhappy for 8 years, or longer. I am talking about those who have been and are still unemployed. From my perspective, it is almost unconscionable that we will have such high rates of unemployment nationally. And, when you target in on blacks and other minorities, it is an abomination of the American system that this persists.

Now, my question is: You suggest or infer that we will have to live with this high unemployment rate for a wee bit longer; but I have to balance that out against what it is costing us. When that unemployment rate remains as high as it is, we are talking about roughly $14 billion for each 1 percent of unemployment that we have in this country. That appears not to be a sensible kind of approach to our economic system. I hope I am making my point clearly. Nowhere in your testimony did you address or mention the problem of unemployment. Second, with your remarks that I don't think were in your prepared testimony, when you talked about folks being unhappy for "just a little longer," I immediately thought about the unemployed who have been unhappy for so long, and the taxpayers who are paying—some say $14 billion, some say $19 billion for every 1 percent of unemployment. If I have made my area of concern clear to you, do you wish to respond to it?

Mr. McKINNEY. I really do, sir, because I am at least as critically concerned about the specifics of what you were talking about as you are.

I am absolutely certain I am as concerned about that as you are. But I think that we are making, as a nation, a serious mistake in the way in which we hope to address that in many specifics: the use of macroeconomic policies, fiscal policy, monetary policy, aggregate stimulus, regardless of where it came from, and the attempt to move the entire economy in order to reduce the black unemployment rate.

Mr. MITCHELL. Total unemployment rate?

Mr. McKINNEY. Or to move the total unemployment rate to levels which would have once been thought appropriate is not under today's circumstances possible. It would create inflation which would lead to additional unemployment later.

However, the problem which you address and which I am critically concerned about of minority unemployment, youth unemployment, specific types of unemployment, can be addressed by specific measures that are targeted toward reducing that kind of unemployment.

I personally think the best way to do it is for the Federal Government to offer anyone who wants a job a job whenever they want it, and it will not be at a net cost to the U.S. Government or to the American people if those jobs are made available at less than the wages that are paid by business.

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The necessity for it being less is that we are talking about an addendum to what the private enterprise system can do without tearing itself apart in today's inflationary environment.

The whole job cannot be done through macroeconomic stimulus.

Therefore, the Government addenda to that overall stimulus must be undertaken in a way which aids the problem without exacerbating the problem. This can only be done through rifleshot approaches to the unemployment of those who are unemployed under the existing circumstances.

Chairman MITCHELL. I thank you for your statement. However, I do not quite buy that approach.

Mr. Caputo?

Mr. CAPUTO. I wanted to pursue this further. It is somewhat tedious but interesting to me—the conclusion that everybody seems to have reached subject to one constraint, that monetary policy is very predictable, or inflation is very predictable, based upon changes in monetary aggregates, according to the study that you referred to that this subcommittee did 23 months ago. This data indicates that except for unusual changes of import prices and monetary aggregate growths, something like seven-eights of the change in the Consumer Price Index today can be described by changes, annual changes, in monthly M_1 data 23 months ago.

How do you reconcile that with the minimum wage, the EPA legislation, with the change in oil prices, even though this is adjusted to a degree for import price changes, with changes in agricultural policy?

I would have assumed without benefit of any analytical analysis that what we did in Congress was far more significant than these data seem to show.

Mr. CHRIST. Can I comment on the relation of oil prices and farm prices and world food prices to inflation in the United States?

When a country such as the United States is buying something from abroad—oil or sugar, for example—and the sellers of that are in a position to raise the price of that product, that need not produce inflation in the United States in the long run. It depends on the way we react to it.

It is quite clear that energy now costs us more in real terms than it used to. We had a choice in the United States in organizing our monetary policy as to whether to maintain a stable price level in the face of that increase in energy prices, which would have meant that other things would have had to become absolutely cheaper in dollar terms. So if we had stabilized the price level in the United States in the presence of this oil increase, it would have meant slight declines in the price of everything except oil, a large increase in the price of oil, and the average price level could have been kept the same. And that is what would have happened if we had maintained our monetary policy in such a way as to stabilize the average price levels.

What we did, in fact, was to say there has been a substantial increase in the price of oil; it won't do to let the prices of other commodities be pushed down through monetary policy; therefore, we will accommodate the oil price increase by increasing the money stock; and then people can compute the price index as a whole and find that the average price level went up, because things other than oil did not

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change much. They went up a little bit and oil went up a lot. And so we have this several-percentage-point increase in the average price level as a result of oil.

The same thing happened with food. We don't need to have an increase in the average price level every time there is an increase in some one particular thing.

If we operate our monetary policy in such a way as to say no prices ever have to go down, then all price adjustments will have to take place through increases of some prices while other prices stay the same. And if we keep doing that on a long-term basis, then the average price level is going to keep going up, because relative prices will not stay constant. Something is always getting more expensive than something else. If we had stabilized calculator prices over the last 3 years, we would have a horrendous inflation, because their prices have been declining.

Mr. HUNT. The way I look at the inflation rates agrees in basic substance with Professor Christ. Inflation is determined by aggregate demand and aggregate supply. On the aggregate supply side, the aggregate supply curve is nothing more than the cost curve of firms producing goods and services. Now, if there is a shift upward in some basic cost, such as food or agriculture, temporarily that can serve to raise the price, provided that the aggregate demand curve shifts with it. In other words, the Federal Reserve accommodates the supply pressures through a faster growth in money supply.

In the past we have had dislocations in the agricultural sector and the energy sector. Rather than having a decrease in output the aggregate demand curve has been typically shifted outward through faster money supply growth or a more stimulative fiscal policy. Policy actions have usually allowed deflation somewhere else in the economy. Consequently inflation keeps moving on up, ratcheting on up, with higher rates of inflation.

Now, I happen to believe that if you look at all of the factors that influence inflation—and there are many—that changes in money supply are perhaps the most important.

I don't want to quibble about that, but monetary growth is the predominate policy control variable in determining the inflation rate. There are, of course, other things that Congress could do.

Mr. CAPUTO. Agricultural policy, energy policy, minimum wage policy?

Mr. HUNT. That is right.

Mr. CAPUTO. Are you saying then that Fed policy is the most important factor?

Mr. HUNT. Yes, I think over the long run there is very little that Congress can even do; over the short run, yes; there is a great deal that they can do, but not over the long run.

Chairman MITCHELL. You gentlemen have been very patient with us, and I think you can sense from our questioning that we are really groping for answers. You have been helpful in giving us some direction.

Mr. Hunt, in your testimony you indicated, or you attributed a part of the rise in interest rates last year to the rise in credit demands rela-

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tive to GNP. Then, I think, Mr. Christ, your view was that inflation expectations pulled up the rates; is that correct?

Mr. CHRIST. Yes.

Chairman MITCHELL. So, apparently, we have an inconsistency. Don't we have a relatively sharp difference of views on this issue? Is that correct?

Mr. CAPUTO. Mr. Chairman, if I might excuse myself, I have floor duty, and I want to apologize to the gentlemen for leaving early.

Chairman MITCHELL. Fine. Thank you for being here.

To put it more specifically, are credit demands fed by inflation, or are they fed by inflationary expectations? That is, I guess, what I am trying to get to.

Mr. CHRIST. Well, I noticed the contrast between the two explanations that we gave for the rise in interest rates when Mr. Hunt was giving his testimony. I am not sure that they are really in conflict with each other.

The increase in housing, for example, has come in part due to a situation in which we had a housing depression for several months, and this was in part because there were regulations imposed by State governments as to the rates of interest that could be charged on mortgages. Those regulations had been in effect for years, and interests for many years were well below the ceilings that were required by those State laws. When we got into an inflationary situation and the general level of interest rates rose, then mortgage interest rates bumped against those ceilings and the market rates exceeded the ceilings, and many people who were interested in making mortgage loans stopped doing so because they could earn a higher interest rate in some other market than in the mortgage market. And many States have revised their ceilings.

Maryland's used to be 6 percent. I think maybe now it is 10 percent. I am not quite sure. It was raised in two stages.

This has happened in other places, so that now the housing market has had increased access to funds. And there was a time when housing construction was extremely low, and when you go through a period like that and then it is over with, the ceilings are higher and the market interest rates were a little lower in 1976–77 than they had been at the credit crunch, then you get a big backlog of housing demand and people come forth and want to borrow and purchase houses.

So I think there is not a real conflict between these two explanations.

Also, when you are living in a world when the general prices are rising at 7 percent a year, you expect the credit demands to rise at least that fast, measured in money terms, just to keep up with the inflation. And we are coming out of a business depression in the last year, and that normally is accompanied by an increase in credit demands, also.

Mr. HUNT. I don't view any difference with Professor Christ. On page 6 he listed the fact that the markets were adjusting to a continuation of inflation at 7 percent. That was certainly at work last year. We had a very low inflation rate in the fourth quarter of 1976, and as the year proceeded it became clear that we were not going to hold at that lower rate.

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And he also mentions the normal cyclical increase in interest rates as credit demands rise cyclically at this stage.

But I would point out that the credit growth of last year was at unprecedented proportions. There were three large sectors of net credit demands. In the housing sector inflationary expectations of consumers are quite high. Individuals look around and they see nothing has held up against the rate of inflation that they can purchase except a home. Thus they try to get on the front side of the inflation curve by buying a home and leveraging themselves as much as they possibly can do so.

There was also a very rapid growth in other consumer types of debt which were in part related to the fact that they were moving into these new houses and fixing up older ones.

And a third source of larger credit growth was the Federal Government itself and its agencies. And toward the end of last year when the financial markets had to fund a very significant part of new debt, they really sagged quite badly, and bond market yields went up, and there was a considerable erosion of value in the bond market because of those prices.

But, no; I don't view our answers in conflict in any way at all.

Chairman MITCHELL. Thank you.

The last question—well, there are a half dozen questions, but I would like to ask your indulgence. If we send them to you, would you respond to them, with particular emphasis upon what I consider to be the most potentially dangerous economic situation in America, our black unemployment rate? We must find answers to this problem. That would have been my last question, but rather than prevail upon your time any longer, I will send them in writing to you.

Black unemployment is a potentially dangerous situation which is costly, both in terms of economics and in terms of social/psychological matters in this country. So the monster is now loose up there.

I thank you gentlemen. It has really been most informative, and I appreciate your responses to the questions that we will address to you in writing, and certainly your responses to those this morning.

Thank you very much.

The subcommittee is adjourned.

[Whereupon, at 11:45 a.m., the subcommittee adjourned.]

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APPENDIX I

BRIEFING PAPERS
FOR
MONETARY POLICY
OVERSIGHT HEARINGS

SUBCOMMITTEE ON DOMESTIC MONETARY POLICY
OF THE
COMMITTEE ON BANKING, FINANCE, & URBAN AFFAIRS

JANUARY 30, 1978

PREPARED BY STAFF,
SUBCOMMITTEE ON
DOMESTIC MONETARY POLICY

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EXHIBIT I. STORY. M1 is shown in billion-$. So is the target range. It was converted to $ levels by multiplying observed M1 in billion-$ each quarter by the Federal Reserve's percentage growth targets and using the result to show target levels four quarters later.

After entering the target range in March 1976 at its lowest end, M1 crawled along the bottom until last fall. In October, M1 was increased to the middle of the range and kept there through March. In April, M1 growth increased at an annual rate of almost 20 percent and hit the top of the target. In July, growth again approached 20 percent per year and now M1 burst through the top of the range.

The monetary policies that were followed from early 1975 to October 1976, and which laid the foundation for recovery together with reduced inflation, have ended. Recent rapid money growth places the economy's stability in jeopardy.

The situation that is developing is reminiscent of a few years ago when rapid M1 growth from early 1971 to mid-1973 fueled the inflation which began in 1973, and which in turn, contributed to the 1974-1975 recession.

The rapid M1 growth since last winter, if long contintued, will surely recreate the 1973-1975 inflation-recession cycle. But it will be a tricky business reducing M1 growth back into the target range. Decelerations nearly always slow economic growth for a time, but if we don't decelerate M1 growth now, we face the danger of accelerating inflation and bringing a deep recession later on.

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EXHIBIT 1

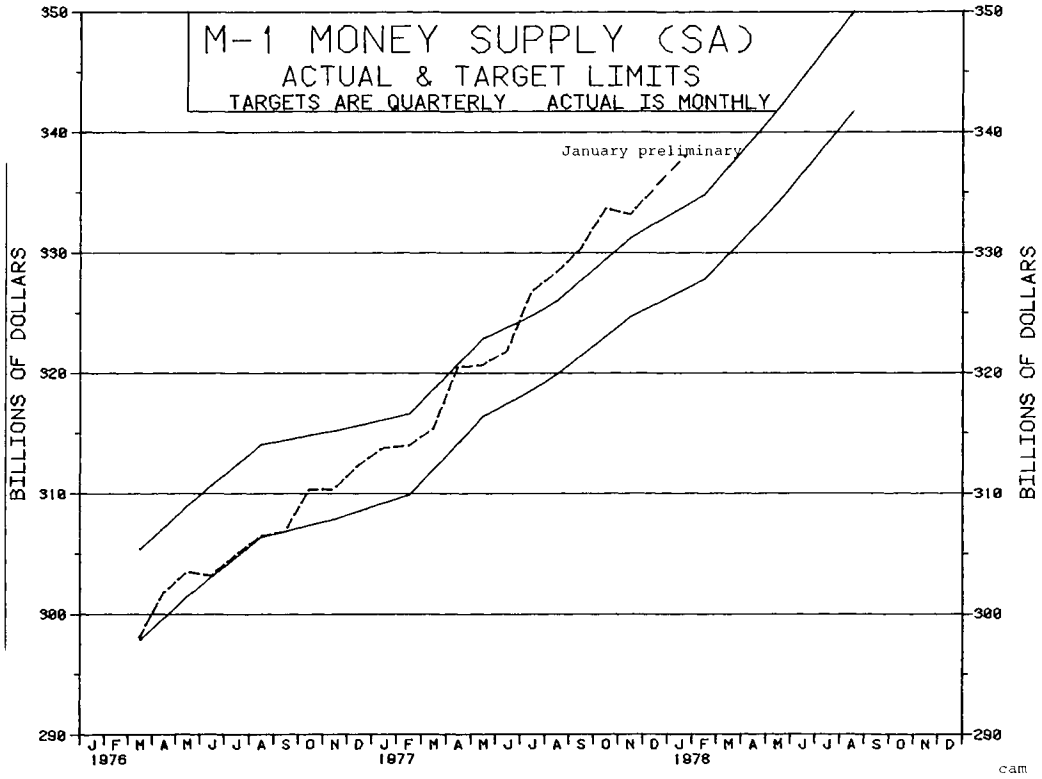

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EXHIBIT 2, STORY. This graph shows the percentage change from a year ago of three money supply measures, M1, M2, and M3.

M1 is currency plus demand deposits.

M2 is M1 plus time deposits excluding CD's

M3 is M2 plus nonbank thrift deposits

Roughly speaking, the growths of the three M's move up and down together. Thus, it would not appear to matter very much which of the M's is monitored in measuring the thrust of monetary policy.

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EXHIBIT 2

MONEY STOCK MEASURES
YEAR TO YEAR PERCENT CHANGE

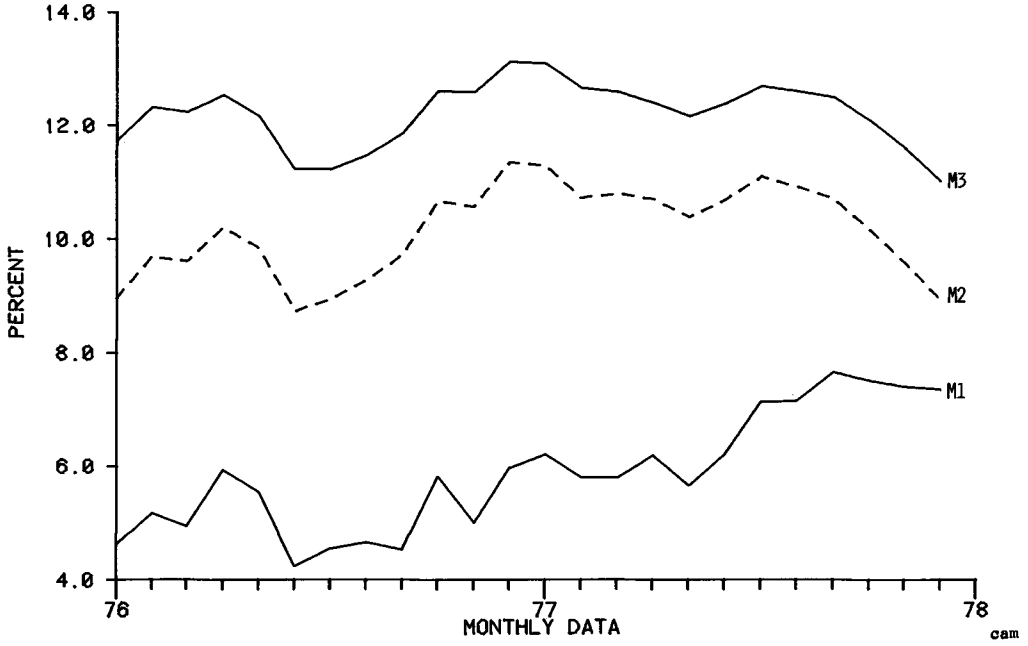

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EXHIBIT 3. STORY. This graph charts yearly percentage changes in M-1 velocity between the same quarters from one year to the next. The dashed line is the mean velocity change during the period from 1954 thru 1977. Its value is 3.1.

Changes in the rate of rise of velocity appear to be random around the 3.1 percent trend. It would be difficult for the Federal Reserve to anticipate these changes. Also, it would appear risky to try to compensate for recent changes in the rate of rise of velocity, as these can quickly and unexpectedly reverse.

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EXHIBIT 3

MONEY VELOCITY (CURRENT GNP / M1)
PERCENT CHANGE, YEAR TO YEAR

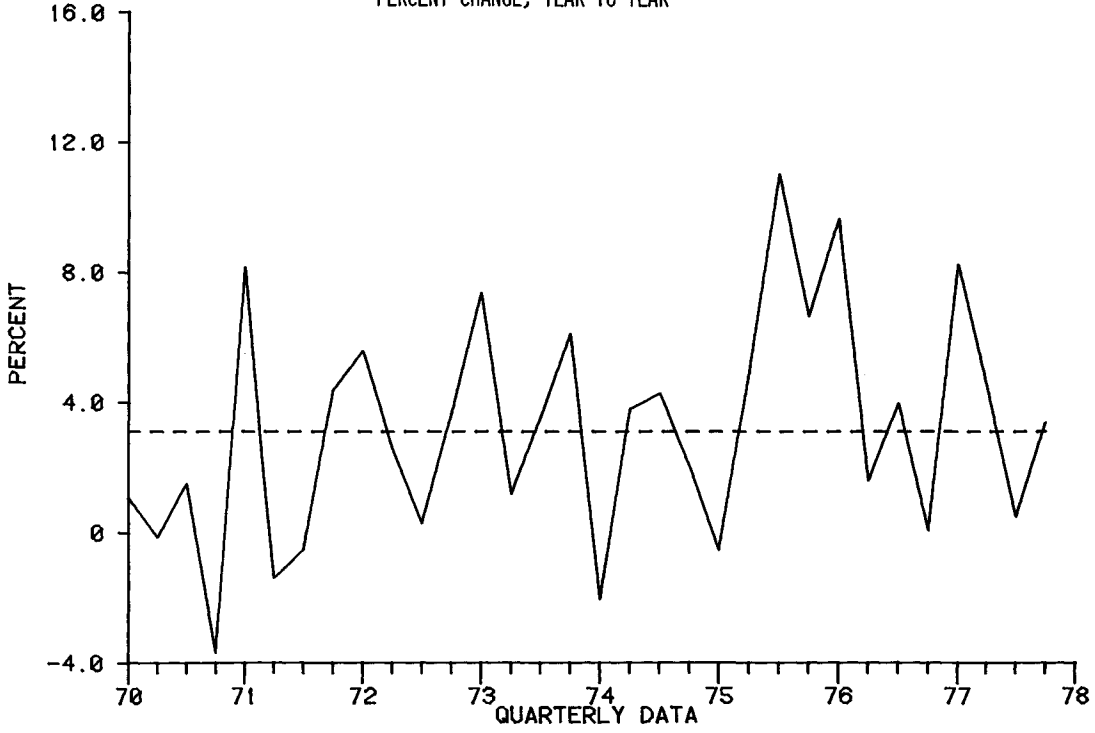

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EXHIBIT 4. STORY. This graph plots actual percentage changes in the CPI between the same months from one year to the next (solid line) against predicted changes (dashed line). The predicted changes were computed from past M1 growth and changes in import prices. The M1 growth used is measured between the same months from one year to the next and is lagged 23 months. Changes in import prices, also measured over twelve month periods, are weighted by imports as a percent of GNP and lagged one month.

Lagged changes in M1 growth were multiplied by .725 and the changes in weighted import prices by 1.235. The two were then added to obtain the predictor (dashed line). The multipliers (.725 & 1.235) were derived by computer analysis estimating how changes in money growth and weighted import prices affected inflation in the period 1947 - 1977.

It is important to note that the M1 multiplier exhibits extraordinary long term stability. For the 1947-1965 period its value was .76. This is powerful evidence of the stability of the relationship between lagged money supply and inflation.

In view of the evidence, it is naive to believe that inflation can be licked without reducing money growth, or that accelerating money growth will not accelerate inflation.

But it is also clear that recent inflation cannot be fully explained by changes in lagged money growth and current import prices. It appears also to be partly self-generating. Judged by the gap between predicted and actual inflation, momentum adds about 2 percent per year to CPI. Policies other than monetary will have to be used to reduce inflation momentum.

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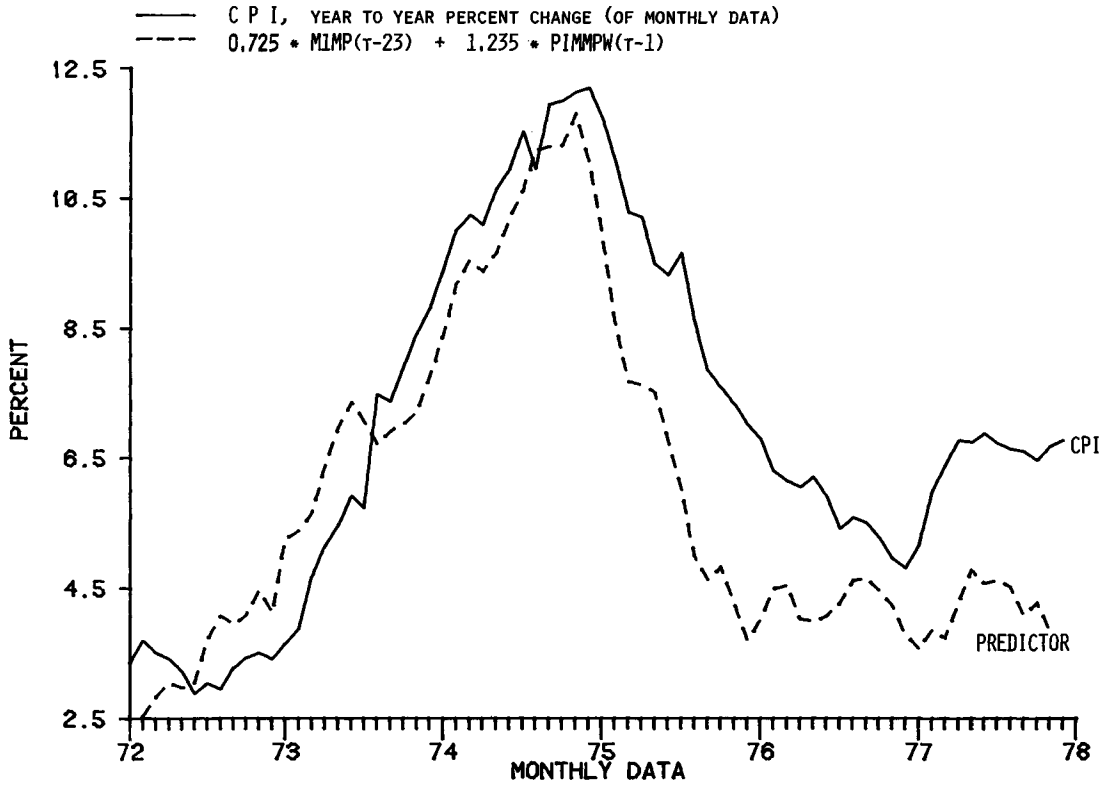
EXHIBIT 4



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EXHBIT 5, STORY. This graph or scatter diagram maps year-over-year changes in the CPI last year against this year's average unemployment. That the inflation rate is lagged one year means that the 1976 inflation rate and the 1977 unemployment rate are labeled '77. The graph connects contiguous years. The evidence plotted in this exhibit indicates that apart from the Vietnam War period, accelerating inflation was followed by increased unemployment, and slowdowns in inflation by reduced unemployment.

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EXHIBIT 5

SCATTER DIAGRAM

C P I (LAGGED 1 YEAR) VS UNEMPLOYMENT

YEARLY AVERAGE OF MONTHLY DATA

1954 - 1977

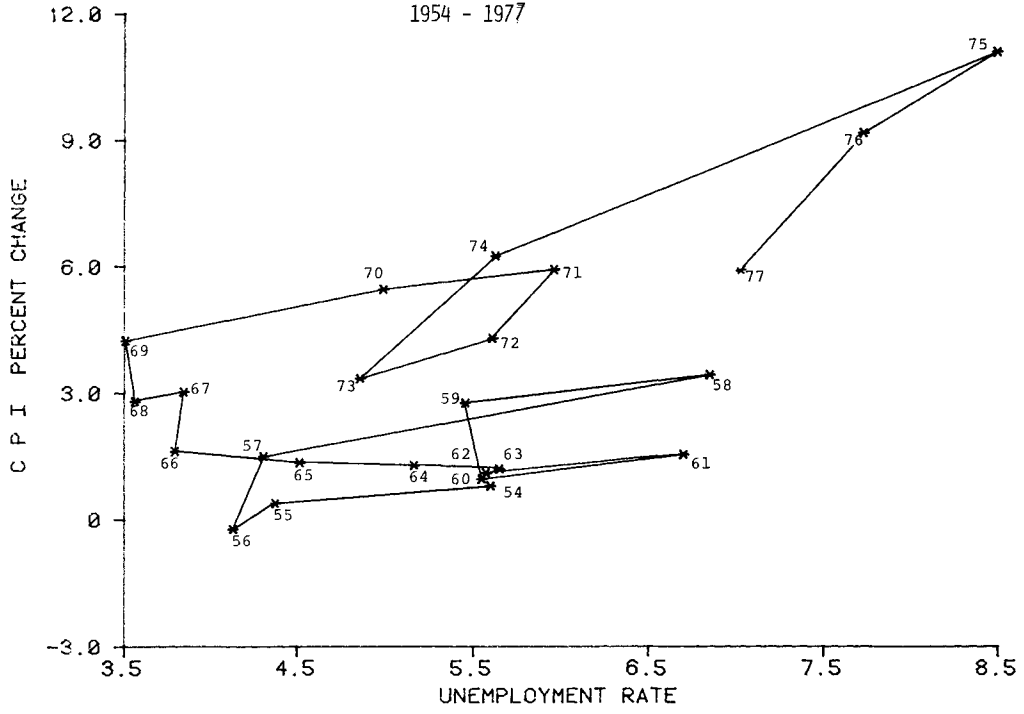

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EXHIBIT 6, STORY. This exhibit graphs monthly yields on five and 20-year U.S. Treasury bonds in the 1972-1977 period. It is not surprising that rates on these maturities tended to rise in 1973 and 1974, to fall in 1975 and 1976, and to move up a notch in early 1977. These trends followed closely changes in inflation. An important principle of monetary economics is that interest rates, at least longer term rates, will tend to follow inflation rates -- rising with inflation and falling as inflation tapers-off. Inflation accelerated in 1973 and 1974, tapered-off in 1975 and 1976, but began to accelerate again somewhat in 1977.

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EXHIBIT 6

MARKET YIELD ON TREASURY SECURITIES

5-YEAR & 20-YEAR MATURITY ISSUES

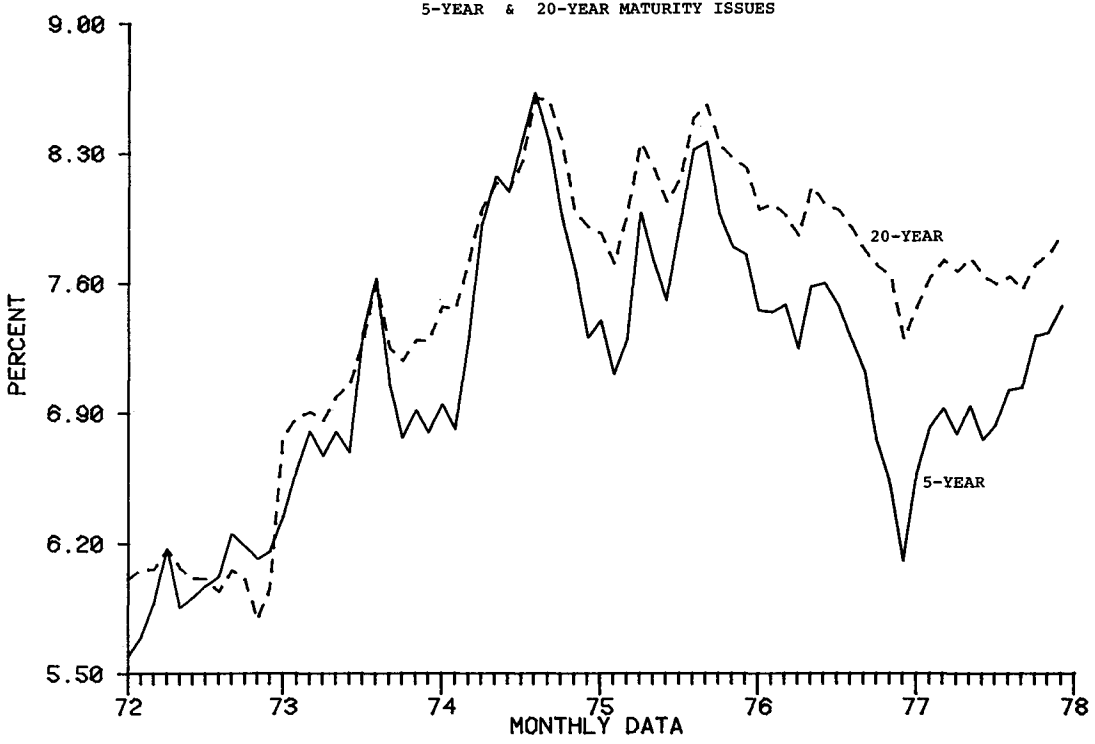

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EXHIBIT 7, STORY. This graph plots percentage changes in the CPI measured between the same months from one year to the next (CPI) and the Federal funds rate (FFR). It shows that monthly movements in the funds rate occur very nearly in lock step with changes in the inflation rate measured from the same month a year ago. The evidence thus indicates that even short-term interest rates are very powerfully affected by immediate past inflation experience.

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EXHIBIT 7

C P I, PERCENT CHANGE FROM A YEAR AGO
VS
FEDERAL FUNDS RATE (AT N.Y. BANKS)

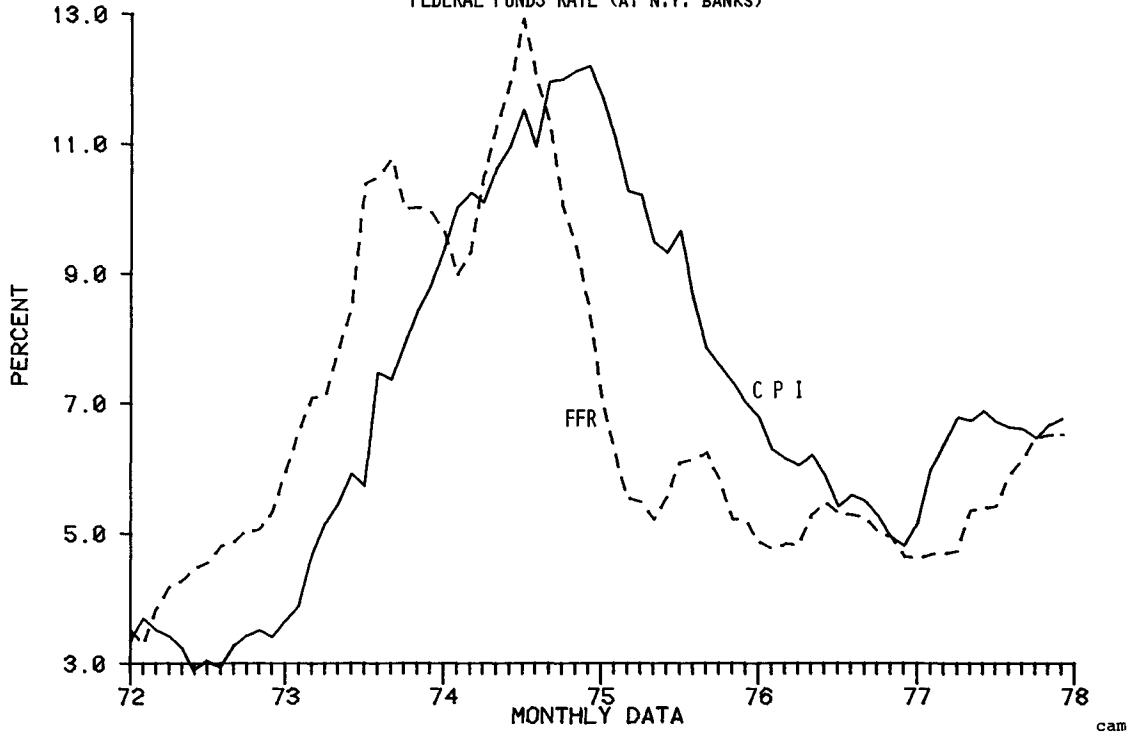

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EXHIBIT 8. STORY. This exhibit graphs the interest rate which the "average homebuyer" paid to secure a mortgage during the last two and one-half years, and the interest rate on long term (20 year) government securities during the same period. The graph reveals the "stickiness" of mortgage rates.

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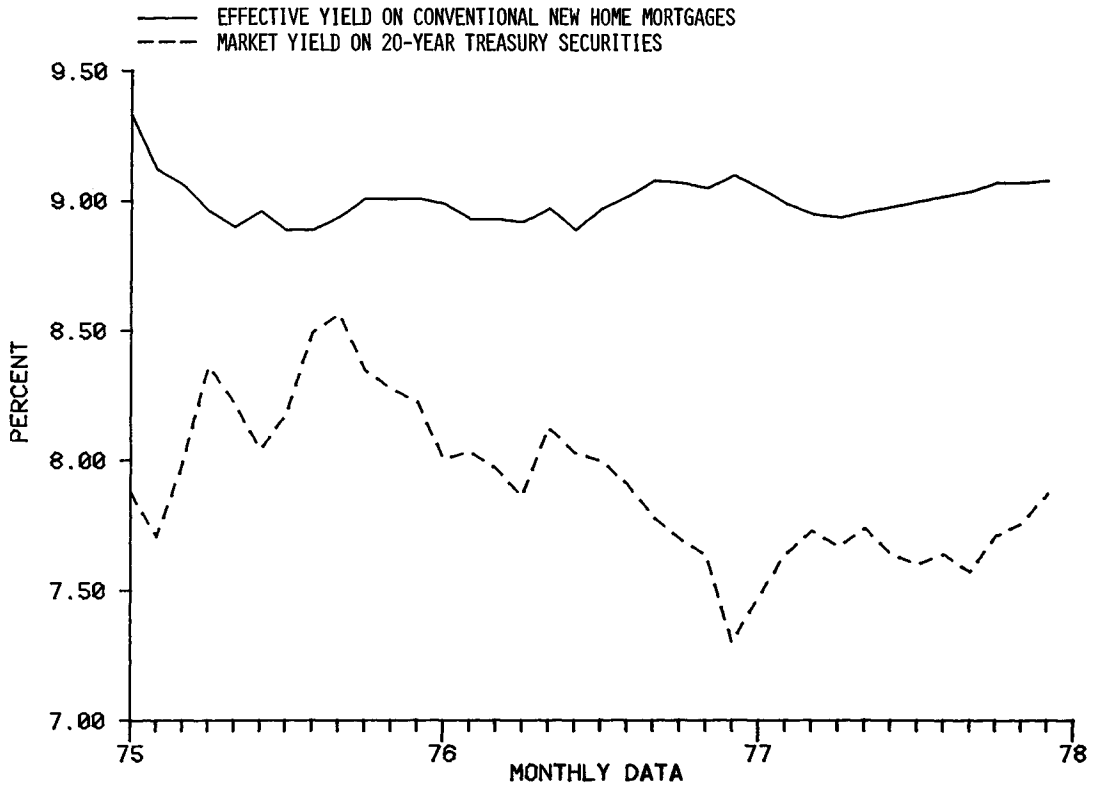
EXHIBIT 8



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APPENDIX II

FARREN J. MITCHELL, MD., CHAIRMAN
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U.S. HOUSE OF REPRESENTATIVES
SUBCOMMITTEE ON DOMESTIC MONETARY POLICY
OF THE
COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS
NINETY-FIFTH CONGRESS
WASHINGTON, D.C. 20515

31 January 1978

Dear

Please answer these additional questions, which will be included in the hearing record.

(1) What are the implications of inflation for long-term economic growth, and in the near-term for achieving full employment? Does increased inflation slow capital investment and also does it create sufficient fiscal and other drags on the economy to increase the likelihood of recession? Or, as some say, is inflation simply the price we must pay to achieve full employment?

(2) What fiscal policies might be used to increase meaningful employment opportunities in inner cities and for blacks and other minorities?

Thank you for your testimony.

Sincerely yours,

Bob

Robert Weintraub

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THE JOHNS HOPKINS UNIVERSITY
BALTIMORE, MARYLAND 21218

DEPARTMENT OF POLITICAL ECONOMY
(301) 338-7600

February 13, 1978

U.S. House of Representatives
Subcommittee on Domestic Monetary
Policy
Committee on Banking, Finance & Urban Affairs
Washington, DC 20515

Here for the record are brief answers to the additional questions Congressman Mitchell mentioned at the hearing of January 31, 1978, which are set forth in your letter of the same date.

1. (a) In the long run, inflation has no important effect on economic growth, provided that the inflation proceeds at a steady rate for many years, so that everyone in the economy can become adjusted to it. This requires perhaps half a century, because many pension contracts and long term leases stretch out that long.

However, fluctuations in the inflation rate have disturbing effects on private investment, thus inhibiting the growth of productive capital, and reducing the growth of the economy.

(b) An increase in the rate of inflation is the long-run effect of an increase in the growth rate of the money stock. The short-run effect is a temporary decrease in unemployment. But we cannot create a permanent decrease in unemployment by repeated doses of this medicine, because the public will not stand for the resulting acceleration of inflation.

(c) Fluctuating inflation slows capital investment. And fluctuating inflation usually follows greatly increased inflation, because when inflation increases greatly, public opinion demands that it be stopped or at least slowed.

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(d) Inflation does create fiscal drag, if the tax system is progressive in terms of money income. This can be countered by changing the tax brackets periodically to match inflation. But inflation increases the likelihood, or severity, of a subsequent temporary depression in an indirect way, by creating a demand for reduced inflation, which when translated into action has a temporary inhibiting effect on output and employment.

(e) The statement that inflation is "simply the price we must pay to achieve full employment" is incorrect, or at least misleading. If we try to obtain higher employment, by inflationary monetary policy, one choice we can make is to buy a temporary increase in employment with an increase in the long-run inflation rate. We did this in 1960-78. A second choice is to buy a permanent increase in employment with ever-increasing inflation. Clearly we do not think the second choice is worth the price. Are we sure about the first?

1. (Summary) Monetary policy is crucial for the inflation rate, but is not a good tool for reducing unemployment.

2. To increase employment in inner cities and for blacks and other minorities, I believe several measures are warranted. Not all fall under the traditional definition of fiscal policy.

One is to abolish the minimum wage. This would remove the present legal barrier between those who would willingly work for $5,299 a year or less (40 hours a week for 50 weeks a year) and those who would willingly hire them. This is especially important for young women and young blacks. Notice that while the overall average unemployment rate rose by a factor of 1.59 from 1955 to 1977, the corresponding factors for people aged 16-19 are 1.75 for white females, 2.08 for black females, and 2.76 for black males. (Economic Report of the President, January, 1978, p. 292.)

Another measure is to replace the present complex of welfare programs by a negative income tax. The marginal positive tax rate should be substantially below 100% so as to give an economic incentive to work.

Another measure is to improve the performance of the schools. When (as occurred recently) a school principal can declare that from now on a degree of functional literacy will be required for high school graduation, it is clear that we have been short-changing some of our young students, and we have much room for improvement.

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Another measure is to improve job training and labor market information.

Finally, the Federal government might serve as an employer of last resort, at a wage rate below that of the private sector so as not to draw workers away from private employment, but above the minimum guarantee under the negative income tax.

I hope these brief answers are helpful.

Sincerely yours,

Carl F. Christ

Carl F. Christ
Professor

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Chase Econometric Associates, Inc.

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555 City Line Avenue, Bala Cynwyd, Pennsylvania 19004 (215) 667-7350 Telex: 831609

February 6, 1978

U.S. House of Representatives
Subcommittee on Domestic Monetary Policy
Committee on Banking, Finance, and Urban Affairs
House Annex #2
Washington, D. C. 20515

Enclosed are my answers to the questions raised by Mr. Mitchell.

A. The Implications of Inflation for Long Term Economic Growth

Increasing inflation acts to depress long term economic growth by worsening the inflation/unemployment trade-off over time. Excessive stimulation of the economy does result in both high employment and high inflation in the short run. However, eventually this extra inflation reduces economic growth and places the country in a position where continued high employment can occur only at the price of continually escalating rates of inflation, a condition which is considered to be distinctly sub-optimal by those who have experienced it. For this reason, when the economy approaches full employment, we must be very careful to avoid excessive further macroeconomic stimulation.

B. Suggested Fiscal Policy Options for Increasing Inner-City Employment Opportunities

There are many actions which can be taken to increase employment opportunities for inner-city residents. The ones that I believe to be most important are listed below:

1. Continued economic growth. Without continued economic growth employment producing programs can only provide short term gains, most of which will tend to be at the expense of other sectors, a situation which is sub-optimal as well as unstable. Where possible, our first objective in redistributing income should be to enlarge the size of the pie, rather than reslicing the original pie.

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2. Increased Trageting of programs such as CETA and Local Public Works based upon need.

3. Adopting localized investment tax credits to encourage construction and rehabilitation of inner city areas. Most developed countries other than the United States have already adopted regionalized tax credit programs.

4. Granting wage subsidies for disadvantaged and low income workers. To derive maximum effect, this program should be set up so that the wage credits would flow right through to the employees, rather than be made a portion of the corporate income tax, as is done presently. Further effectiveness would result if these subsidies would only apply to jobs in which training, either on-the-job or for a portion of the day in a classroom, was an established part of the position. Again, many developed nations already have programs of this type.

5. Continued aid to minority and other small business. Traditionally, the lifeblood of cities and the clearest avenue for minority group self-help has been the growth of small businesses. Recently the establishment of a small business has become much more difficult. The federal government can help remedy this unfortunate situation by continuing and expanding existing programs designed to aid small business, and by establishing offices in each major city designed to help small businesses cope with government regulations. These offices would be federally financed business informaiton centers, presumably staffed by persons with business experience many of whom would probably be semi-retired. These persons could help aspiring small businessmen solve the problems of becoming established and coping with the vast array of impediments to a new business.

6. Increased direct action designed to increase part-time employment. The key problems of underemployment, teenage unemployment, and unemployment of other new entrants to the labor force can best be met through employment programs designed to meet these people's needs. In many cases these people would prefer part-time employment to full-time employment, a result of their existing responsibilities either in school or to their families. A comprehensive system of federally encouraged private sector part-time employment would impart needed job skills, training, and employment experience to these people within the framework of their existing lifestyles.

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Dealing with structural unemployment is one of the two most crucial problems facing this country. (The other is establishing a balance between domestic supplies of energy and our energy needs.) I wish you success in your efforts to direct and concentrate our nation's efforts upon this problem.

Sincerely yours,

Leon

Leon W Taub
Vice President

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Federal Reserve Bank of St. Louis

FIDELCOR, Inc. Broad & Walnut Streets, Philadelphia, Pennsylvania 19109 215 985-6000

LACY H. HUNT, Ph. D. - Vice President & Economist 985-8671

February 27, 1978

Subcommittee On Domestic
Monetary Policy
3154 House Annex 2
Washington, D.C. 20515

This letter is in response to your request of January 31, 1978 on additional questions for the hearing record.

FIDELCOR

(1) High and rising inflation tends to diminish long-term economic growth and hamper efforts for achieving full employment in the near-term. When the inflation rate rises, both consumers and businessmen tend to become more uncertain. Hence, consumers increase their rate of saving and businessmen initially tend to defer on investment projects. If an acceleration is prolonged, then businessmen may cancel capital investments. There are several channels whereby inflation serves to reduce investment in plant and equipment. A high rate of inflation makes it more difficult for businessmen to make cash flow projections for the future on the basis of current investments. The high inflation rate, moreover, tends to increase the uncertainty factor and, thereby, makes investment less than otherwise would have been the case. A rising rate of inflation will push long-term bond yields up and thus also serve as an impediment to investment. The high rate of inflation combined with the progressive structure of the personal income tax system tends to insure the rapid relative growth of the government sector of the economy. Since the governmental sector is typically a dis-saver, a high inflation rate serves to reduce aggregate saving. As the investment and savings process is inextricable, investment must decline. Consequently, I would not accept the notion that inflation is the price we must pay to achieve full employment.

(2) There are several fiscal policies that might be employed to increase meaningful employment opportunities for minorities in inner-cities. For one, the minimum wage law should not pertain to teenagers. The minimum wage law serves to price many teenagers out of the labor market. This is unfortunate since these teenagers are desperately in need of on-the-job training. Also, there are many jobs and functions that would be done in the private sector if the price were right. If there remains serious objection to voiding the

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minimum wage for teenage workers, the government might consider subsidizing the minimum wage for private employers who hire teenagers. Such a program, however, should keep the subsidies in line with the distribution of teenage employment problems. In other words, more subsidies should be paid on behalf of black teenagers than white teenagers, since the unemployment rate for this group is much higher. One of this country's most urgent needs is to address the unemployment problem for blacks and other minorities at the teenage level. Young workers must be made a part of the workforce while they still have the drive and incentive of youth. They must not be discouraged in these important and formative years.

Sincerely,

Lacy H. Hunt

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Irving Trust Company

One Wall Street
New York, N. Y. 10015

George W. McKinney, Jr.
Senior Vice President

February 6, 1978

Thanks for the opportunity to elaborate on the questions related to our January 30 testimony.

1) I believe inflation is destructive of long-term economic growth in almost any environment, but that it is particularly harmful to a highly complex industrialized economy such as ours. For one thing, social reaction to injustices and to uncertainties caused by inflation is likely to trigger changes that would modify and significantly weaken our economic structure.

The effects of inflation as a means of achieving full employment in the near term are similarly counterproductive. At any given point in time, there is a trade-off between inflation and unemployment. But it is the perceived rate of inflation which is relevant. Basic Keynesian pump priming will generally work if modestly rising prices cut the real wage below the minimum nominal wage workers are willing to accept. But, over time, people become aware that inflation is cutting their real wages, and they factor the inflation into their contracts and agreements. Thus the minimum nominal wage they will accept rises to offset their expectations of inflation. The end result is that inflation can work as a short-term stimulus only if it is accelerated geometrically so that actual inflation increases faster than people's expectations of inflation increase.

Increased inflation exacerbates all of the distortions that tend to occur in the normal course of the expansion phase of the business cycle. One illustration is business inventories. Inflation and expectations of further inflation exaggerate the natural tendency to overaccumulate inventories at the peak of the boom, tying up industrial capacity in the production of inventories instead of goods for consumption. For this and similar reasons inflation is likely to push an economy through the boom-bust phase of the cycle faster and on a wider scale than would otherwise be the case.

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Inflation is not the price we pay for full employment; inflation is a circumstance which makes it more difficult to attain and maintain full employment.

2) In response to this question, I am enclosing testimony which I presented on February 1 at the White House Conference on Balanced National Growth and Economic Development. Since it relates specifically to the urgent need for meaningful employment opportunities for blacks and other minorities, I hope you can include it in the record of your hearings.

Also enclosed is the Transcript of Proceedings you sent me. I have marked corrections or clarifications on most pages.

Cordially,

George

Subcommittee on Domestic Monetary Policy
Room 3154, House Annex #2
2nd and D Streets, N.W.
Washington, D. C. 20515

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February 6, 1978

PEOPLE AND JOBS

One of our nation's most glaring policy deficiencies is its failure to furnish as many employment opportunities as are needed by our young people and minority groups. We have no clear picture of our national objectives with respect to employment and related policies; our legislation does not reflect coherent standards for evaluating progress to ward those objectives we do articulate; we permit irrational emotional biases to take precedence over recognized economic principles.

OBJECTIVES

The following objectives, I believe, encompass the more important goals which should be pursued in formulating national policies dealing with employment and related subjects.

1. To reduce inflation. Employment policies are one aspect of the broader topic of the economic wellbeing of the nation's workers, and should be considered in that light. It would accomplish little to follow policies that would improve economic conditions for one group of citizens but that would cause equivalent or greater hardship for another. Inflation inevitably hits hardest the most defenseless of the nation's citizens: the old and retired, those living on fixed salaries or other fixed incomes, those whose incomes are inadequate and uncertain, those who can't afford to own their own homes.

The actual rate of inflation must exceed the perceived rate of inflation if it is to be successful as a job-creation device. Thus only a progressively higher inflation rate can reduce unemployment in the sense usually assumed for the Phillips curve. Ultimately the limits of such a policy are reached, and the uncertainties engendered by the inflation push unemployment to levels higher than would have existed in the absence of the inflation. In the long run, no demand management policy can reduce unemployment if it simultaneously increases inflation. Unemployment levels will never be satisfactory unless inflation rates can be reduced to satisfactory levels.

2. To reduce economic hardship for those with inadequate incomes. Economic hardship is a relative term. It can be reduced, but it can never be eliminated. Among other things, the standards by which we measure economic hardship shift continually upward as our living standards increase, so someone will always be judged by contemporary standards (and appropriately judged) to be suffering economic hardship.

Yet Americans are a compassionate people; we feel that everyone should have access to some minimum standard of living, regardless of his or her own economic capabilities. It is appropriate that our nation's aspirations for its poorest members should shift upward as the nation's

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productivity increases. And, to the extent feasible, a wide majority of Americans want those aspirations to be met.

3. To remove income differentials that stem from discrimination of any sort. The American conscience should not--must not--tolerate arbitrary limits to the participation of individuals in our economic life. But it's not just a matter of conscience alone. From an economic point of view, we cannot afford such discrimination. Whenever an individual is barred from participating fully in the nation's economic life, it shows up in his lower income and his lower standard of living. But the nation as a whole suffers an equivalent deprivation, because the person contributes less to the nation's production than he could and should, and the nation's output and consumption are lower because of the inefficient use of his talents.

4. To provide maximum opportunity for upward economic and social mobility for every individual member of our society. This objective is very frequently violated by socially conscious individuals (and legislators) who don't think through the implications of their policy recommendations. This is a living, growing, vibrant society. If this society and the individuals who make it up are to progress optimally, there must be flexibility for the new idea to create new markets and for the young entrant to break into old markets. Yet many of our laws and regulations protect the interests of those already well entrenched in their economic bailiwick, to the exclusion of the fellow who is thereby denied a job opportunity or a business opportunity. The classic example is the farm acreage allotment which takes on a capital value and can be sold as land is sold--by the person who already owned the farm, to the young person who would like to get into the farming business. Such legislation benefits the vested interest--it gives a windfall to the farmer who already has a farm--to the detriment of the newcomer who has to pay more to get into the club.

Class legislation typically inhibits individual upward mobility. As one of many examples, the present minimum wage law protects the members of large labor unions. By the same token, though, it artificially adds to unemployment among blacks, youths, and other new entrants who find it much harder to break into the labor force.

5. To value useful work as a desirable objective in itself. One of the tragedies of the Great Depression of the 1930s was the large number of broken lives it spawned. It does something terrible to a person's psyche to offer the world the best he can give and to find out through a series of rebuffs that it's not enough. Our current welfare system and our ineffectual approach to high unemployment rates among youths and minorities are needlessly scarring another generation of lives.

A year ago dramatic pictures in The New York Times highlighted the attitude of a large number of that city's disadvantaged youths toward work opportunities: 12,000 teenagers were photographed standing in line for hours in subfreezing temperatures to vie for a limited number of temporary jobs. If the work ethic in the nation is in trouble it's not because of the younger generation; by far the majority of them want the challenge of testing their mettle, the dignity of living as contributing members of society. But peer group acceptance is essential to the survival of any societal standard, and we need much more effective national leadership to ensure the continuation of a high level of respect for productive labor as a desirable attribute of the whole individual and of the whole society.

6. To preserve individual freedom as an end itself.

UNEMPLOYMENT AND INFLATION

Our nation seems baffled by the continuation of high levels of both unemployment and inflation. We haven't yet fully grasped the fact that, although they can be solved over time, there is no quick cure for these problems in today's environment. They are primarily the heritage of the Great Society and Vietnam and the resultant inflationary pressures here at home, together with the worldwide inflation of the late sixties and early seventies that culminated in the

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massive hike in oil prices. The structural imbalances that resulted cannot be exorcised quickly; it took a decade to get the world's economy this badly off balance and it will take some time to correct the problem.

Part of the problem is our unreasonably high expectations for overall economic performance. We don't appreciate the fact that real growth, real investment, and other important economic measures have been doing much better than average. Too much additional stimulus would choke off the expansion and bring about even higher rates of unemployment.

Under these circumstances, Government policies should be directed first toward slowing inflation by persistently limiting monetary and fiscal stimulus, while at the same time working determinedly to reduce to a minimum those frictions that have become a part of the problem of high inflation and high unemployment.

LIMITS TO DEMAND STIMULUS

Expansionary demand management policies today can be productive only up to a point. When we have succeeded in working the inflation rate down to a tolerable level, expansionary demand management will again be a feasible policy measure from time to time. In the interim, though, macroeconomic policies should be moderate. They should focus on gradually reducing the inflation rate over time.

This does not necessarily mean continued high levels of unemployment. Two things can be done which will reduce unemployment without incurring significant additional inflationary risks. First, we can take deliberate actions to bring about a favorable change in the trade-off between inflation and unemployment; we must shift the Phillips curve to the left. Reducing the inflation rate per se will tend to bring about this result over time, but the process can be hastened. Business, labor, Government, agriculture--all segments of our economy are permeated with barriers to employment and spurs to inflation. The Davis-Bacon Act and other Government measures that require artificial cost increases, arbitrary union procedures that limit entry into jobs or into the unions themselves, business practices that unnecessarily add to costs and prices: this Conference should recommend a determined effort to get rid of these and other frictions that worsen the inflation-unemployment trade-off.

Second, we can use targeted approaches to employment for those who otherwise would not have jobs. In this context, I have a specific suggestion to make later. However, we should take care to see that such programs are consistent with the objectives outlined above. Unfortunately, many programs and proposed programs do violence to the very objectives they are intended to achieve.

THE NEED TO USE ECONOMIC INCENTIVES

Perhaps the biggest single reason our employment policies have failed is because programs which are effective, useful, and logically based, fall victim to special interests. Our programs are initiated in the name of a worthy objective when the result is very different indeed. The recent significant increase in the minimum wage is a good example of both.

This measure was pushed by union leaders as a compassionate law that would ensure a decent level of living for all workers. What it does ensure is protection of the union members who have jobs, at the expense of black youths and others in high-unemployment categories. The high minimum wage systematically freezes them out of job opportunities that would otherwise be open to them, and blocks them from the opportunity to obtain on-the-job skills that would make it easier for them to get better jobs later. It also ensures a faster rate of inflation, as upward pressure on wages at the low end of the scale is passed up the line to higher paying jobs. Indexing the minimum wage extends this problem into the future and guarantees that both the inflation rate and unemployment rate will be higher in the years ahead than they would otherwise be.

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Instead of using economic incentives to accomplish out objectives, whatever they may be, we frequently and perhaps typically set up our programs so they must unnecessarily hurdle strong economic barriers. One of the most cogent arguments for this case was made by Council of Economic Advisors Chairman Charles Schultze in the Godkin lectures at Harvard University a little over a year ago. Yet Administration recommendations and Congressional initiatives continue to bypass the important potential for putting man's natural economic instincts to work to accomplish, rather than to impede, desired objectives.

One example, which shows up regularly, is the use of "need" tests that determine whether a person will be "in" or "out" of a program. Such tests are unavoidably inequitable (unless they permit benefits to taper off, or offer individual choice regarding participation) because there's always the fellow who just barely fails to qualify. The extra dollar of income that cuts a family off frm Medicaid is unnecessarily unfair as compared to the next-door neighbor who earns a dollar less than they do. More important, though, is what need tests do to individual initiative. People go to great lengths to maintain their incomes at the best possible level, and they will reasonably try to make sure they are eligible for a program if that is in their best interests. Thus need tests, if they result in all-or-nothing eligibility, almost seem to be designed to provide incentives for individuals to hold down their earned income in order to maximize their income supplements.

POLICY IMPLICATIONS

What are the policy implications of these observations?

1. Most importantly, Government policies should be considered as a whole. There is an urgent need for Government planning--not Government planning of the private economy, but Government planning of the business of Government. Government policies relating to unemployment should be considered in their entirety: employment opportunities, income supplements, taxing and spending programs. Only too frequently an individual program is evaluated according to its individual impact on the various segments of society. For example, evaluations of comparative income levels sometimes ignore payment in kind, noncash income supplements, and consider only the cash payments. Or an individual program will be evaluated according to whether it is progressive or regressive. It is virtually impossible to design specific programs so that each has the desired degree of progressivity; besides, the relevant factor is the impact of the whole system. The system should have a progressive impact on individuals' incomes (with a minimum number of discontinuities in that progressivity) but it is not at all necessary for individual programs to have similar characteristics. A negative income tax as a substitute for--not a supplement to--our present conglomerate of welfare programs would be a highly constructive step in this direction.

2. Programs should include as much individual freedom of choice as possible, to achieve maximum efficiency and maximum individual incentive. As a specific illustration, the effectiveness of our combined income assistance and employment programs would be markedly improved if income assistance payments were same in all parts of the nation. Geographic differentials have been justified on the grounds that they reflect differences in the cost of living. Such an argument flies in the face of rational economic analysis; differential payments motivate the recipient to stay in the high cost area, even though it may be and usually is an area where entry level jobs tend to be scarce. Over time, the number of recipients in the high cost areas tend to increase, not so much because they come there for that specific reason, but because there is less incentive for them to go elsewhere. Uniform payments would make it less costly for the recipient to move into a low cost area, or perhaps to go where he thinks a job might be found.

As an example, typical income assistance payments in New York City now exceed median earned income in some sections of the nation. Equal payments would help solve New York City's financial problems. They would simultaneously raise the standard of living in other areas as welfare recipients moved elsewhere and took with them incomes that would add to income flows in lower-cost, lower-income areas.

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3. Almost unlimited Federally sponsored training programs would be less costly than the current unemployment situation. The intolerably high unemployment among black teenagers and other disadvantaged groups is a critically dangerous problem for our society. It must be solved if our nation is to continue to move forward. If these young people are provided with skills in volume, they will ultimately find a way to use them. And the cost of training is small in comparison with the costs of idleness for more than one third of an important segment of our society.

4. Economic logic suggests that the Federal Government should at all times serve as a residual employer--not of the favored few who happen to be chosen for a program that embraces a specific number of persons, but as a residual employer of all who wish jobs at some rate of pay below the minimum wage paid by private industry.

The special circumstance that differentiates today's economic problems from those of a non-inflationary environment is that appreciably more macroeconomic stimulus will almost surely engender additional inflation, without doing much for the unemployment rate. Indeed, we can ultimately expect the unemployment rate to worsen if we overstimulate the economy. Therefore macroeconomic stimulus won't employ all those whom we would like to have jobs, and the wishful attempt to do it anyway would do more harm than good. If we keep at it, we can lower the inflation rate to a tolerable level over a period of time, and we can once again have an efficiently functioning economy. In the meantime, though, 35% of our black teenagers do not have and cannot get jobs. The Federal Government should fill the gap until the economy is able to absorb them into the private economy.

But how? The cost would be exorbitant if all who want jobs were hired at going wages. Therefore only a lucky few could hope to benefit from Government hiring programs, since the number covered would necessarily be limited. Those who would not be included would be as much without jobs as they were before, and their hardship would not be reduced. Then there are all sorts of problems relating to trigger points to start and stop such programs, to say nothing of the inevitable potential for political favoritism for those who are covered.

A compromise between desirable objectives is needed. A solution which permits individuals to choose whether or not to participate is to offer to all who are not employed by the private sector the opportunity for employment in public service jobs, but at wages below those paid in the private sector. As the private sector subsequently develops the capacity to employ more persons, they will automatically be drawn from the ranks of public service jobs, since private industry would pay more. There would be no problem of trigger points, for as economic circumstances improve and more get private jobs, public service payrolls would automatically be reduced. In future business cycles, residual Government public service jobs would routinely provide employment for those let out of private jobs when such jobs were needed, and just as routinely release them to the private sector when the need was gone.

Unfortunately, public service employment of submarginal employees at going wages must either be limited in number, which leaves some individuals exactly where they were before and is no improvement at all for them, or offer jobs to all comers in which case it is highly inflationary and in the long run self-defeating. Such measures as the Humphrey-Hawkins bill would do particular damage to the nation's employment and welfare objectives, since it requires the use of macroeconomic stimuli in an attempt to achieve an unrealistic quantitative unemployment target.

We need to provide more jobs today, particularly for minority youths. To provide them through aggregate demand stimulus, though, would be highly inflationary and would be self-defeating in that the jobs would not be forthcoming. The jobs should be made available through targeted employment programs. However, in order to provide the advantages to all who wish them, not to just a select few, the jobs should be available to all comers. And to avoid inflation, to keep the cost of such a program within bounds and to provide continuing incentive to move into private employment whenever it is available, those jobs should be available only at rates below those paid by private industry.

George W. McKinney

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APPENDIX III

PARREN J. MITCHELL, MD., CHAIRMAN
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U.S. HOUSE OF REPRESENTATIVES
SUBCOMMITTEE ON DOMESTIC MONETARY POLICY
OF THE
COMMITTEE ON BANKING, FINANCE AND URBAN AFFAIRS
NINETY-FIFTH CONGRESS
WASHINGTON, D.C. 20515

December 12, 1977

My Subcommittee on Domestic Monetary Policy is planning a review of the monetary policies which took place during 1977. I am very interested in obtaining your views on this subject.

In addition to any comments you would like to make, I would particularly like to know whether you think monetary policy was conducted effectively during the past year; the ways in which you think it could have been improved, if any; what recommendations for change you would suggest; whether you think the focus has been on monetary aggregates or interest rates, and whether you would change the focus. Of course, any other thoughts which you would like to share would be appreciated. Please send your response to Robert Weintraub, Staff Director, Subcommittee on Domestic Monetary Policy, Room 3154 House Annex #2, 2nd & D Sts. S.W., Washington, D.C. 20515.

Currently, my plans are to publish a compendium of the views of a select group of eminent economists on this subject, which we are now soliciting. We may also convene a panel early in the year to discuss the monetary policies of 1977. I will keep you apprised of our progress in reviewing recent monetary policy, and if I may, possibly call on you for further assistance early next year.

Thanking you in advance for your time in responding to this request, I remain,

Sincerely,

Parren J. Mitchell, M.C.

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GEORGE L. BACH
FRANK E. BUCK PROFESSOR
OF ECONOMICS AND
PUBLIC POLICY

January 20, 1978

The Honorable Parren J. Mitchell
Committee on Banking, Finance and Urban Affairs
U.S. House of Representatives
Washington, D.C. 20515

Dear Representative Mitchell:

In reply to your letter of December 12, I am pleased to comment briefly on monetary policy during 1977.

Given the difficulties it faced and the crossfire of pressures from different groups in the economy, I believe that Federal Reserve policy deserves reasonably high marks for 1977. Three issues seem to me to be uppermost in making such an evaluation.

1) Did the Federal Reserve strike about the right balance on the expansion-restraint issue? It is easy to argue that the Fed was not expansionary enough in view of the substantial unemployment during the year, or that it was over-expansionary in view of the continued inflation with more inflation probable for 1978-79. But the real economy grew about as fast as was consistent with continued stable growth (4.3 million new jobs is an impressive performance). And I think the Board deserves good marks for recognizing that there is no longer a simple tradeoff between inflation and unemployment in making monetary policy, and that. simply increasing the money stock faster would probably have done more to restimulate inflation than to reduce unemployment faster. I commend the Fed, too, for continually stressing the case for a gradual reduction in the growth rate of the monetary aggregates. Only widespread expectations of a stable, less inflationary growth will make such a result possible.

Second, has the Fed used the right tools in carrying out its stabilization policies? This comes down largely to the question of primary focus on the monetary aggregates or market interest rates. My conviction is that neither the Fed, the Administration, nor Congress can be counted on to "fine tune" the economy effectively. Even with the best of intentions, attempts at continuous fine tuning are likely to

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destabilize more than stabilize the economy. Thus, I believe the Fed should focus mainly on one of the monetary aggregates (I prefer the "reserve base" since the Fed can directly control that), operating with a rebuttable presumption of stable growth in the aggregate. If special circumstances in the money markets seriously threaten major, cumulative instability in the real economy, the Fed should temporarily act to restore financial and money market stability, but such an action should be the exception, not the rule. On the whole, I think the Fed has, perhaps understandably, placed too much emphasis on keeping short term rates stable, relative to focus on the monetary aggregates.

How to get the growth rate in the money stock back down to a less inflationary rate is a difficult question. To reduce inflation to, say 2 or 3 percent per annum will require a reduction in the money stocks growth rate by at least half. A firm but gradualist policy like that enunciated by the Board in 1977 is probably the best alternative. A case can be made for taking a short, sharp revision to further reduce inflationary expectations and wage-price behavior, but the costs seem to me too heavy to accept. To obtain wage-price behavior consistent with high employment and low inflation will require establishing a new set of economy-wide expectations of stabler prices and growth.

Third, is the Fed too"independent," producing disruptive lack of coordination between monetary and fiscal policy? I think the present degree of independence of the Fed is about right. Broadly speaking, the Fed should participate in developing the government's economic goals, and should basically go along with these goals. But it should have considerable independence in implementing the goals through monetary policy, while at the same time recognizing its inescapable responsibility to be concerned with effective financing of deficits which Congress and the Administration (perhaps mistakingly) incur. While some members of the Administration or the relevant Congressional committees may wish to dictate the details of monetary policy, this would seem to me a serious mistake. Monetary policy is a complex and detailed problem, and I know of no evidence to suggest that Congressional committees, or the White House and Treasury, can manage such policy more effectively than members of the Federal Reserve Board.

Federal Reserve officials have historically placed a little more emphasis on restraining inflation than have administrations and congresses. This is probably to the good, given the inflationary biases of Congress and Administrations--and indeed, was in the minds of the founders of the Fed when it was partially insulated from the day-to-day political process. I know of no evidence that during 1977 the Fed's special concern with

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inflation seriously disrupted the nation's economic stabilization policies. It is understandable that the Administration and some members of Congress may have been irked at some disagreements in detail, but these were not differences that led to disruptive weaknesses in overall stabilization policy. My main suggestion would be a somewhat closer day-to-day working relationship between the Fed, the White House and the Treasury, as has been true with a number of other Administrators since World War II.

Sincerely,

G.L. Bach

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DEAN WITTER REYNOLDS INC.
130 Liberty Street, New York, NY 10006 Telephone (212) 437-3000

February 14, 1978

Mr. Parren J. Mitchell, M.C.
c/o Mr. Robert Weintraub
Staff Director
Subcommittee on Domestic Monetary Policy
Room 3154 House Annex #2
2nd & D Sts. S. W.
Washington, D.C. 20515

Dear Mr. Mitchell:

Congress has made the single most important contribution to monetary policy in recent years, namely, the requirement that the Fed make public in advance its growth targets for M-1 and M-2. But the presumption has been that the Fed would more or less adhere to these self-imposed targets. Defacto changes in targets which became evident (say after 3 months) should therefore have been the subject of hearings. In short, congressional hearings should make clear the seriousness with which the oversight committee views failure to honor preannounced targets, while those who support or reject the Fed's new posture can be heard. This would reinforce the pre-notification procedure's basic message which is that monetary policy is too important to be framed in secret by the Fed with justification after the fact.

In table one, we have listed Fed targets and the actual levels achieved for M-2, since this is now the most significant measure of monetary growth, technical changes in corporate savings accounts' interchangeability for demand deposits having made M-1 a less reliable indicator. Clearly the Fed has not adhered to targets: M-2 growth has been at the extreme upper end or outside its target zone for the past year. In the following comments we view the significance of this prospectively, and from an historical perspective.

Money supply as measured by M-2 last grew at better than 9-9.5% rates in 1971-72. This posed no problems for maintaining real growth and employment in those years but, arguably, rapid M-1 and M-2 growth in this period set the stage for world-wide boom in 1973-74 and a speculation in raw materials that may have influenced the size of the oil price increase. Or to put the matter negatively, the severe inflation of 1973-1975 was not entirely a function of oil price increase: runaway money creation rates certainly played a part in exacerbating the situation.

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Yet the Fed's rhetoric in this period was unrelievedly "conservative" just as it has been more recently. This has led many to wonder if the Fed has been entirely "above board" in its dealings with Congress and with the many "publics" that are influenced by its policies. Alternatively, the lack of connection between the Fed's actions and its words has led others to the conviction that the money supply creation rate is out of control, that is, given the prevailing political environment, monetary policy is no longer an effective check on fiscal policy. This not only undermines confidence, but it may lead to expectational price boosts that would not be justified given the level of economic activity.

This view encapsulates a wide range of possible responses to recent Fed actions, and our "prospective" view must be equally brief. The accompanying charts show levels and changes in national debt and money supply (in terms of M-2). In 1971-1972, M-2 growth was far in excess of debt creation rates. In 1976-1977, the opposite has been true. Does this mean that, in one respect at least, the Fed is now doing a better job? Relatively speaking, yes. But as we move into 1978 and 1979, debt growth rates should rise. The Carter prosposals will result in a $73 billion deficit with off-budget financing included. In full employment terms, this is $37 billion in the third year of a recovery - not a source of confidence for dollar holders or for long term investors in job-creating plant. Furthermore, we are entering a period in which debt financing will increase with money creation rates also at high levels.

Of course the danger is that the Fed -- not wishing to undermine the good effects of tax cuts -- will monetize this debt at demoralizing rates as 1978 draws to a close. The prospects for 1979 -- which the Fed's actions seek to insure -- are therefore put in jeopardy. Many observers who anticipate no thoroughgoing examination of this threat by Congress's oversight committees, therefore anticipate a crunch in 1979 coming on the heels of the dollar crisis. This would lead to recession not just in the United States, but in a world that is increasingly unstable politically. What would be the impact on Europe? On the frail economics of the third world? Fears of this sort have already had the effect of depressing another major source of job-creating long-term capital, namely, the stock market. Many people feel that the situation is already so far advanced that the real monetary option is now to monetize enough debt to simply erase the rate buildup -- inflationary consequences be damned.

In view of this increasing loss of confidence, (1) we urge public hearings to examine monetary policy in conjunction with its chief conditioning agent, namely, fiscal policy over which Congress has some control. (2) We also urge that deviations from target growth for the monetary aggregates be explained -- and hopefully justified -- once the deviations have become apparent. (3) We compliment the Congress on its wisdom in experimenting with prenotification in the monetary policy area. This can lead to major improvements on the way we make not only monetary policy, but also fiscal policy in the years to come.

My Best Regards,

Arnold X. Moskowitz

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TABLE 1

ANNUAL MONEY GROWTH RATE TARGETS

	M-1		M-2	
Dates	Target	Actual	Target	Actual
2nd Qtr 75 - 2nd Qtr 76	5.0 - 7.5%	5.2%	8.5 - 10.5%	9.6%
3rd Qtr 75 - 3rd Qtr 76	5.0 - 7.5	4.6	7.5 - 10.5	9.3
4th Qtr 75 - 4th Qtr 76	4.5 - 7.5	5.6	7.5 - 10.5	10.9
1st Qtr 76 - 1st Qtr 77	4.5 - 7.0	6.0	7.5 - 10.0	10.9
2nd Qtr 76 - 2nd Qtr 77	4.5 - 7.0	6.0	7.5 - 9.5	10.6
3rd Qtr 76 - 3rd Qtr 77	4.5 - 6.5	7.3	7.5 - 10.0	10.9
4th Qtr 76 - 4th Qtr 77	4.5 - 6.5	7.4	7.0 - 10.0	9.6

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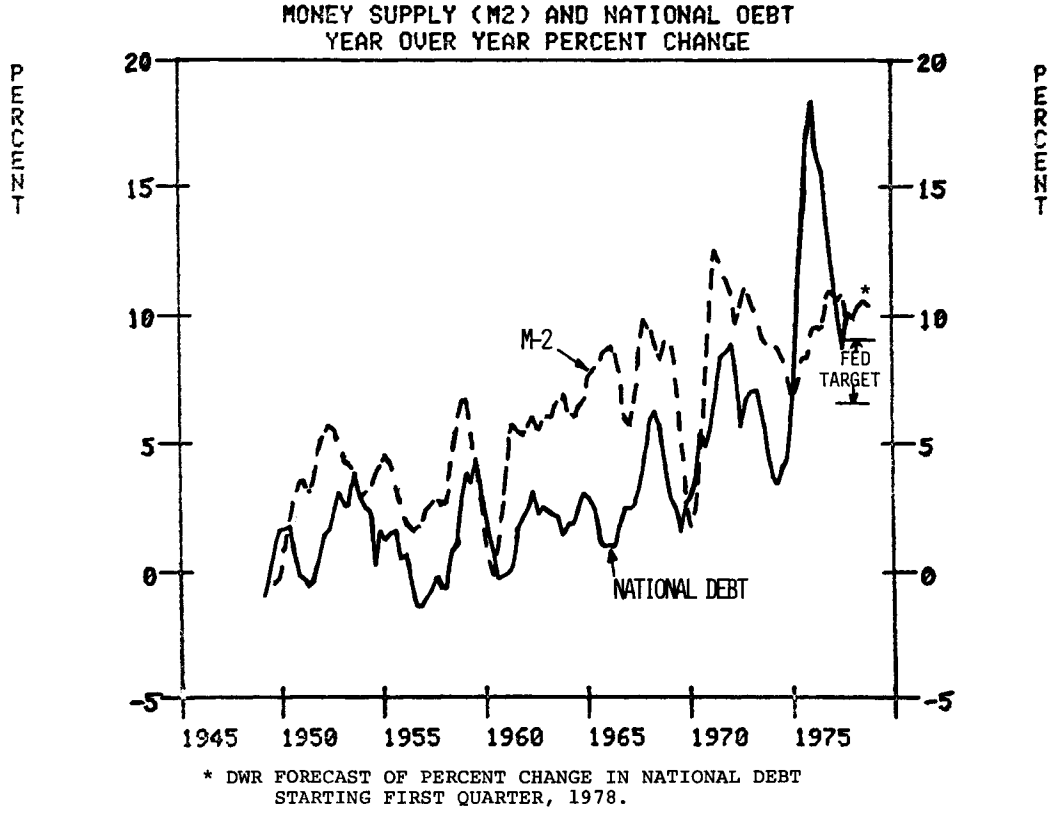

* DWR FORECAST OF PERCENT CHANGE IN NATIONAL DEBT
STARTING FIRST QUARTER, 1978.

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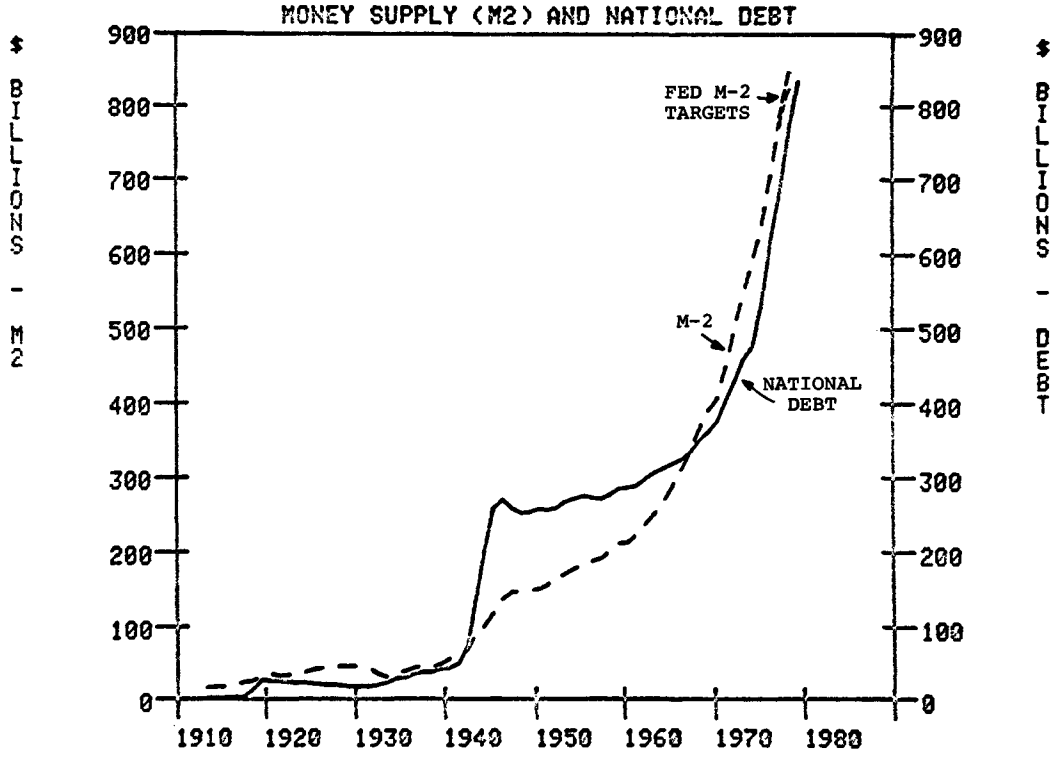

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THE JOHNS HOPKINS UNIVERSITY
BALTIMORE, MARYLAND 21218

DEPARTMENT OF POLITICAL ECONOMY
(301) 338-7600

January 13, 1978

Subcommittee on Domestic Monetary Policy
Room 3154 House Annex No. 2
2nd and D streets S.W.
Washington, D.C. 20515

This letter is in reply to Congressman Mitchell's request of December 12 for my views on the monetary policies employed in 1977. The points he asked about provide an excellent point of departure.

1. Whether monetary policy was conducted effectively during the past year.
No, not as well as it could and should have been. There was too much emphasis on the short run, and not enough on the long run.

2. Ways in which monetary policy could have been improved.
Consistent with the previous point, the central emphasis belongs on the long-run effects of monetary policy. In particular, if inflation is to be stopped, and if market interest rates are to be returned to their traditional ranges of 3 to 5 percent, it will be necessary to maintain over the long run an average rate of growth of the money stock somewhere in the vicinity of 1 to 3 percent a year. In 1977, M_1 grew at 7 percent, while M_2 and the monetary base grew at 9 percent.

3. Whether the focus has been on monetary aggregates or interest rates.
It seems clear that the focus of action has been on interest rates, for the Federal funds rate was kept rather stable, while the growth rates of the monetary aggregates were allowed to move substantially above the ranges announced in advance as targets by the Federal Reserve.

4. Whether the focus should be changed.
Yes, it should be placed upon the monetary aggregates. The reason is related to the problem of myopia in monetary policy, mentioned above. Market interest rates can indeed be held within a narrow range for a time by monetary policy, but only by permitting large variations in the growth rate of monetary aggregates, which will create or worsen economic disturbances in the future. In contrast, if the growth rate of monetary aggregates is kept <u>low</u> on the average (to assure a steady price level in the long run), and is kept approximately <u>constant</u> (to minimize disturbances to the economy), then the fluctuations of interest rates, though not completely absent, will be small, rarely if ever outside the range of 3 to 5 percent, and will have no serious ill effects.

Monetary policy is related to fiscal policy. If the Federal budget has a large deficit, as at present, that deficit must be financed somehow. In the long run, the only two ways of financing a continuing deficit are by borrowing from the public and borrowing from the Federal Reserve. Borrowing from the public is not seriously inflationary, but if done on a large scale, it has the ill effect

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of bidding up interest rates and crowding out the private investment that is needed to maintain and increase productive capacity. Borrowing from the Federal Reserve creates an increase in the monetary base and hence in the money stock, and, if carried to excess as in 1977, makes price stability impossible. Hence large deficits over the long run are undesirable.

Empirical evidence is accumulating to support these propositions about monetary policy and its effects.

(a) A steady rate of growth of the money stock, at whatever rate, will create a steady inflation at about the same rate (actually slightly slower, because some of the new money goes to satisfy the increased demand for real holdings of money as the economy grows). In particular, a steady growth of the money stock at about 1 to 3 percent a year will produce price stability.

(b) A new permanent steady growth rate of the money stock, higher than in the preceding several years, will result in temporarily higher output and employment for perhaps 2 or 3 or 4 years, followed by a new permanently higher steady inflation rate. Similarly, a new permanent steady growth rate of the money stock, lower than before, will result in temporarily lower output and employment, followed by a new permanently lower steady rate of inflation.

(c) If monetary policy is used to try to maintain output and employment permanently above the levels they would have under stable prices, continuously larger doses of increased growth rate of the money stock are required. The result is continuously accelerating inflation, which is unacceptable to public opinion. Then, when monetary policy is altered to slow the inflation, the effect is to worsen or create a depression, as in 1974-75.

(d) Market interest rates under long-run inflation will be higher than under price stability. This is because borrowers and lenders include in their calculations an interest premium to compensate for the decline in value of the dollar during the term of the loan.

These propositions strongly suggest that monetary policy ought to be conducted with a view to the long run objective of price stability. If this is done, then, after an adjustment period to recover from past mistakes, we can achieve not only price stability, but also low interest rates, and also less severe economic fluctuations than we have brought upon ourselves in recent years. On the other hand, if we continue to attempt to use monetary policy to achieve short-run expansionary goals immediately, we will create inflation for the long run, and we will create a series of future short runs that will be worse than what we can attain if we choose an appropriate long-run policy now.

I take the liberty of enclosing a copy of an article I wrote for the November issue of Johns Hopkins Magazine dealing with these matters.

Sincerely yours,

Carl F. Christ

Carl F. Christ
Abram G. Hutzler Professor
of Economics

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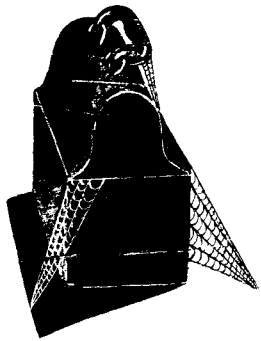

Since 1973, America has experienced the worst unemployment rates since the Great Depression of the 1930s, and the worst peacetime inflation in memory. We have had inflation rates exceeding 12 per cent a year, and unemployment rates approaching 9 per cent of the labor force. The "economic misery index," that is, the sum of the inflation rate and the unemployment rate, rose to 20 per cent in 1974; it is still high, 13 per cent. By contrast, from the end of World War II until about 1967, it averaged roughly 7 per cent.

Is it necessary to endure high rates of both unemployment and inflation from now on?

The answer is no. We can bring inflation to a stop, and we can avoid severe bouts of unemployment, like 9 per cent. But we cannot keep the unemployment rate from rising occasionally above 6 or 7 per cent. In fact, we probably cannot even hold the long-run average unemployment rate *down* to 6 or 7 per cent—*unless* we make some important changes in labor and welfare policies. More about those later.

Why has our stabilization policy been such a fiasco for the last decade? In my view, it has been because public officials only understood how to reduce unemployment in the short run; they failed to understand the complex relations between policies affecting unemployment and inflation, long range.

In 1960, they began to use easy-money policies to stimulate the economy and cut down on unemployment. They did not realize that the desirable effect on unemployment would last only a few years, while the long-run result would be to increase the rate of inflation. By 1974, when the inflation rate reached 12 per cent, the public outcry was so great that inflation became the number one priority, and easy-money policies were reversed. The result was the deepest depression since the 1930s. The inflation rate did, however, come down dramatically, reaching 5 per cent by 1976. The unemployment rate fell from 9 per cent to 7 per cent; but then, after some relief from inflation, concern about unemployment caused monetary policies to be eased again, before inflation was halted. Inflation is now running at about 7 per cent. There is danger that monetary policy will be eased again, and that we will go through another cycle like the last—except that we will start the next one with an inflation already moving.

This process resembles what happens when a crowd of passengers on an excursion boat all runs to the starboard side to look at something; the boat begins to lean over to starboard. Afraid of capsizing, everyone runs over to the port side to counteract the threat. Of course, the boat not only rights itself, but continues to roll until it leans to port. Again afraid of capsizing, the crowd rushes back to starboard, and the cycle continues. It would be better to sit still and stop rocking the boat.

Inflation is not necessarily bad, for if inflation were to occur at a steady rate for a long time, everyone would come to expect it and would adjust to it. As long as the rate of inflation were less than, say, 50 per cent a year, *steady and correctly anticipated* inflation would pose no particular problem. Rental contracts would have escalator clauses. Loan contracts would be written at a rate of interest higher than the inflation rate, to provide the lender a return in terms of real purchasing power. Pension plans, too, could be written with escalator clauses.

If inflation becomes very rapid, it imposes a burden even if its rate is predictable. Money is an extremely efficient device for conducting trade, but if its value depreciates too fast, people will stop using it, and will turn to barter and to shorter pay-periods. In the great German inflation of 1921-23, prices rose a thousandfold during the peak month. Workers clamored to be paid twice a day, and spent their wages as soon as paid; during that month, the German people reduced the amount of real purchasing power they kept on hand—in the form of money—by 97 per cent.

It is useless, however, to debate various rates of predictable inflation. In sad fact, if inflation is allowed to occur at all, it occurs at a varying rate and is correctly anticipated by almost nobody. Therefore, not knowing what prices they can sell their products for tomorrow, firms cannot calculate what to pay today for equipment, labor, and raw materials. Home buyers do not know what house to buy, at what mortgage interest, because they cannot predict the real purchasing power of the payments they promise to make. Employees and employers do not know what kind of pension plan will be fair to both. Suppose a tenant and landlord expect inflation for the next ten years to be at 7 per cent, and agree to a ten-year lease with rent rising 7 per cent a year. Then the dollar rent in the tenth year will be double the initial dollar rent. If the inflation stops, the tenant will be cheated, because the real purchasing power of his rent will have doubled by the tenth year. If the inflation rate rises to 14 per cent, the landlord will be cheated, because the purchasing power of the rent he receives in the tenth year will be cut in half. Thus inflation at changing rates—which means effectively any inflation—is bad even if it is mild, because it cannot be correctly anticipated. Unpredictable inflation clouds long-term transactions with uncertainty, which inhibits the smooth functioning of the economy. And it causes unfair transfers of wealth between creditors and debtors.

What causes inflation? Experience shows that it is always associated with a rapid rate of growth of the stock of money in the economy. No rapid inflation has ever continued for long without a rapid increase in the money stock. And no substantial period of price stability has ever occurred in the presence of a rapid increase in the money stock.

In America, a stable price level calls

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for a long-run growth rate of the money stock at about 1 to 3 per cent a year. Some small increase is needed because the population is growing, so there are more people every year who want to keep some money on hand; and also because real income per person is growing, so that each person wants to keep a little more money on hand than the year before. But if the money stock grows faster than about 1 to 3 per cent a year on the average, we have inflation. Since 1972 there has been 9 per cent growth per year in the money stock (defined to include currency plus commercial-bank checking and savings deposits), and inflation has been at 8 per cent a year. From 1948 to 1960, the money stock grew at 3 per cent a year, and inflation held at 2 per cent a year.

I'd like to emphasize one point here: An increase in the rate of growth of the money stock does reduce unemployment, *but only temporarily*. Over the long run, the policy that is needed to hold the average inflation rate to zero is independent of the policy needed to reduce the average rate of unemployment. Monetary policy is appropriate for inflation control, and labor market policy for reducing unemployment. The two policies neither reinforce nor interfere with each other, in the long run.

What causes unemployment? Break the question into two parts. First, what causes *fluctuations* in unemployment? Since World War II, it has ranged between 3 and 9 per cent of the labor force. Unemployment rises whenever the total demand for goods and services drops, relative to the economy's capacity to produce. And unemployment declines whenever total demand rises, relative to capacity. Demand in the private sector normally fluctuates, as consumers decide how and when to spend their incomes, and as business firms decide how and when to expand their plants, equipment, and inventories. Government influences total demand directly, by its own decisions about purchases of goods and services for programs such as defense, foreign aid, medical care, and so on. Government also influences total demand indirectly, by changes in taxes and income-transfers, because these influence the spendable income of the private sector.

The second part of the unemployment question is, what determines the *average level* of unemployment in the long run? This is the level about which unemployment fluctuates, up and down, in the short run. From 1900 to 1929, unemployment averaged 4.7 per cent of the labor force. From 1948 to 1960 it averaged 4.6 per cent. (Of course it was much higher in the Great Depression, and much lower during World War II.) From 1961 to the present it has averaged 5.4 per cent.

The average level of unemployment, leaving aside business cycles, depends on the job-seeking behavior of workers and the hiring and layoff behavior of employers. When a worker enters the labor force, or loses her (or his) job, she must decide what kind of job to look for, and whether to accept or reject each particular offer. These decisions depend on what other uses she has for her time, and what resources she can fall back on until she finds an acceptable job. A worker's decision whether to quit an unsatisfying job depends on the same factors. These factors do not depend on the long-run average rate of inflation. Similarly, a firm's hiring or layoff decisions are based on whether each worker's contribution to output is expected to justify the cost of hiring and paying her, which depends hardly at all on the long-run average rate of inflation.

MONETARY POLICY is the branch of government policy that controls the stock of money and its rate of growth. Monetary policy, then, is crucial for controlling inflation. If inflation is to be stopped, monetary policy must see to it that the money stock does not grow rapidly. Congress has delegated the conduct of monetary policy to the Federal Reserve System.

Research shows that when monetary policy increases the growth rate of the money stock, the first effect is a temporary boom, an increase in business output and employment which dies away in a few years. The later effect is an increase in the rate of inflation, which does not die away. Conversely, a decrease in the rate of growth of the money stock causes the same effects in reverse: first a temporary depression of output and employment, followed by a reduction of the inflation rate that does not die away.

Fiscal policy is the branch of government policy that controls government expenditures, taxation, and the difference between them (the deficit, if expenditures exceed taxes, or the surplus, if the other way around). Congress controls fiscal policy.

Research on fiscal policy shows that, provided the growth rate of the money stock is kept constant, an increase in government spending (or a cut in taxes) in real terms creates a temporary boom in output and employment, and little effect on inflation. And a cut in government spending (or a tax increase) in real terms creates a temporary depression in output and employment, and little effect on inflation.

Experience shows, both here and abroad, that it is not possible to devise monetary and fiscal policies that will hold unemployment permanently below the normal level, without incurring ever-accelerating inflation. Experience also shows that no society will tolerate ever-accelerating inflation.

The most promising monetary policy, therefore, is to keep the growth rate of the money stock *slow* and *steady*. One to 3 per cent a year is about right. *Rapid* growth of the money stock over any long period is

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bad because it will guarantee inflation. *Varying* growth of the money stock is bad because it will rock the economic boat, producing booms and depressions.

The most promising fiscal policy is to run budget deficits during recessions, and small surpluses in booms. This oscillation can easily be made automatic, by setting government tax schedules and expenditure programs at the right levels, then leaving them alone. In a boom, incomes rise and more taxes are collected, which moves the budget toward surplus. In a recession, incomes fall and less taxes are collected, while expenditures for unemployment compensation increase. This moves the budget toward deficit. Thus fiscal policy will automatically exert a stimulating effect during recessions, a retarding effect during booms.

Why not deliberately cut tax rates, increase government spending, and increase the growth rate of the money stock when a depression is coming, in order to head it off? And why not raise taxes, cut back government expenditures, and cut the growth rate of the money stock when a boom is coming, in order to keep it from getting out of hand? A fine idea, if public officials could see far enough ahead and act quickly enough. But sad to say, fiscal policy makers cannot often reverse their field inside of six months (though monetary policy makers can); the employment effects of a change in fiscal or monetary policy do not get fully underway for a year or a year and a half; business depressions usually last about a year or a year and a half; and we cannot accurately predict the arrival of the next business downturn or upturn a year or two ahead of time. So an attempt to head off the next depression is likely to come *too* late, and aggravate the next boom instead. Similarly, an attempt to soften the next boom is likely to be too late, and exacerbate the next depression instead. Such maneuvers are another case of rocking the boat.

America does not struggle alone with inflation; other countries have it too, some much more badly than we do. Does their inflation make it hard for us to control ours?

That depends on our foreign currency exchange system. Until 1971, we kept the value of the dollar fixed in relation to other currencies. We did so by buying dollars with gold or foreign currency whenever their price threatened to rise, and selling dollars whenever their price theatened to fall. This is called maintaining a fixed exchange rate; one of its effects is to help inflation move across international borders. Before 1971, when a customer country had inflation and we did not, our goods looked cheap. To take advantage of the bargain, they had to buy dollars to send here in payment. But since we did not allow the value of the dollar to rise, we had *to increase* the supply of money to meet their demand; we had to print the dollars they wanted to buy. And thus we imported their inflation.

Since 1971, however, we have not maintained our exchange rate at any particular level. We have allowed the exchange rate between dollars and other currencies to be set by the bids and offers of Americans who want to buy foreign goods and securities, and of others who want to buy American goods and securities. This is called a flexible exchange rate; its effect is that inflation is not transmitted across international borders. If other countries have rapid inflation and we choose not to, then their citizens will buy fewer dollars per unit of inflated foreign currency. Their inflation will not be imported by us.

What policies could be used to reduce average unemployment, in the long run? There are five important possibilities. The first would be to improve job skills. The second would be to improve the functioning of labor markets by providing better information about the availability of jobs and labor. No one disputes that both are good to do. The other three are more controversial. Indeed, I do not support all of them.

The third would be to abolish the minimum wage law. Under current law, it is illegal to hire people at less than minimum wage, now $2.30 per hour or $4,600 for a year of 50 weeks at 40 hours a week. There are responsible people who are ready, willing, and able to work, and who would prefer to work for $2.25 an hour rather than not to work at all. But they do not have the choice. Whenever the minimum wage is raised, it leads firms to fire (or not hire) workers whose services, though valuable, are not as valuable as the wage that Congress has said is the lowest that may be paid. Unfortunately, as I write Congress is engaged in raising the minimum wage again, probably to $2.65 an hour or $5,300 a year. Of course the minimum wage helps those who remain employed. It is obvious that if a firm can afford (and has) two employees at $2.30 an hour, but can afford only one at $2.65, then a rise in the minimum wage to $2.65 will harm the one who is fired, but will benefit the one who is kept on. Less obviously, the rise in the minimum wage also benefits

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skilled workers, even those who are paid much more than the minimum. It does so by removing the possibility that a firm will hire several low-wage unskilled workers to do a clerical job, for example, that could also be done by one skilled worker with a computer.

The fourth measure would be to replace the present welfare system with a negative income tax. Under present law, a welfare recipient who gets a job is required to declare his earnings to the welfare administrators, who are required to cut his welfare allowance by the entire amount of the earnings. Thus there is no financial incentive for a person on welfare to take a job unless it pays more than the welfare allowance, which many part-time jobs do not. Under the negative income tax, each family having no income would pay a negative tax, that is, would receive a payment from the US Treasury. The amount might be, say, $1,000 a year per person, or per adult-equivalent person. Then each such family, if it earned an income, would have to pay part of its earnings in taxes but could keep the rest. If this tax rate were, say, 50 per cent for a family of four earning $3,000, the family's income after tax would be the sum of $4,000 of negative tax, plus 50 per cent of the $3,000 earned, for a total of $5,500. That family would then have a financial incentive to work at a job that paid $3,000, whether part-time or full-time. The main advantage of the negative income tax over the present welfare system is that it would provide incentive for more people to work. Furthermore, it would be much cheaper and simpler to administer.

The fifth measure would be to reduce the generosity of the weekly payments made to unemployed people. Unemployment compensation in America is based on the wage received for previous work, so that a highly paid person gets more unemployment compensation than a person who had been earning low pay. In Britain, until recently, the amount of unemployment compensation was virtually the same for everyone, being a fraction of the normal income of an unskilled worker. British unemployment rates were considerably lower than ours for many years. Then Britain changed her unemployment compensation system to make it similar to ours, with benefits roughly proportional to previous

wages. This was no help to the unskilled, of course, but it gave a big hike in unemployment compensation to skilled and highly paid workers. The result was a substantial increave in British unemployment. The reason, clearly, is that when the financial loss from a spell of unemployment is reduced, people feel they can afford to look longer and more carefully for a new job. As a result, unemployment increases.

Of these last three measures, I support the abolition of the minimum wage law and the replacement of welfare by the negative income tax. I do not support the reduction of unemployment compensation. For one thing, our family structure is not as capable of dealing with such problems as it was a century ago. For another, unemployment is largely influenced by forces beyond the control of the individual worker; it seems only just to share the burdens of unemployment among all taxpayers, whether unemployed or not. However, we must realize that the average level of unemployment will be higher with such a system than it was without it.

WE ARE now ready to return to the complex relations, long-run and short-run, between policies that affect inflation and unemployment. We have seen that the growth rate of the money stock must be slow on the average over long periods, in order to insure zero inflation over long periods. And it must be steady, in order to avoid rocking the boat with booms and depressions. Therefore, monetary policy must provide a slow and roughly constant rate of growth of the money stock.

Even though a rise in the growth rate of the money stock will stimulate employment in the short run, this policy should not be followed. Why not? Because the effect on employment will soon wear off, and will be followed by an increase in the rate of inflation. Then, to slow that inflation, the growth rate of the money stock will have to be reduced, which will increase unemployment again. This is the story of American policy beginning in 1960. The easy money policies of 1960-73 did give us low unemployment in 1966-69, but not thereafter. And the inflation that they caused gave rise to restrictive monetary policy in 1974-75, which drove unemployment up to almost 9 per cent in the spring of 1975. The easy money policies of 1960-73, together with their aftermath, did not really succeed in reducing unemployment: they merely postponed it from 1966-69 until 1975 and 1976.

The stabilization policies followed in 1948-1960 could be improved upon, yet they were highly successful in comparison with those followed since 1960. In 1948-60 the growth of the money stock was kept slow and fairly steady. Automatic fiscal stabilizers were in effect. The inflation rate was about 2 per cent, a rate which gave concern at the time but looks awfully good to us now. Unemployment rose mildly in the recessions of 1949, 1954, and 1958, but did not exceed 6.8 per cent for any calendar year.

There is no doubt that we can eliminate inflation if we adopt a monetary policy that provides for growth of the money stock at an average rate of 1 to 3 per cent, and that we cannot do so if we permit rapid monetary growth. We can reduce the severity of business cycles if we keep the monetary growth rate steady, instead of allowing it to decline in depressions and rise in booms, as it has done for 50 years and more.

The real question is whether we will have the wisdom to forego the quest for short-term gains, and to choose a more stable long-term path. If we do, we will find a more satisfying series of short runs.

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HOOVER INSTITUTION
ON WAR, REVOLUTION AND PEACE
Stanford, California 94305

January 17, 1978

Subcommittee on Domestic
Monetary Policy
Room 3154 House Annex No. 2
Second and D Streets, S.W.
Washington, DC 20015

We are responding jointly to Congressman Mitchell's letter of December 12 requesting comments on the conduct of monetary policy in 1977 and recommendations for changes in 1978.

Several years ago we organized the Shadow Open Market Committee, a group of professional economists from industry and universities who meet semi-annually to discuss current economic policy and to make policy recommendations. In March 1977, the Committee recommended that the growth rate of money--currency and demand deposits--be held to an annual rate of 4½ per cent, a rate of growth at the minimum of the Federal Reserve's recommended range. By September, it was apparent that the growth of money was above the Federal Reserve's maximum. The Committee recommended steps to remove part of the excess and to return to a 4½ per cent growth rate. Copies of the Committee's recommended policy statements in 1977 are enclosed.

The principal reason that the Federal Reserve exceeded their targets, and ours, is that the Federal Reserve uses inefficient and ineffective methods of controlling money. They concentrate on short-term interest rates.

The Federal Reserve will not control money or monetary aggregates unless they adopt new procedures. The focus on short-term rates of interest should be abandoned.

As long as the Federal Reserve retains present operating procedures and does not make well-known changes in rules and operating procedures that facilitate control of monetary aggregates, there is considerable doubt about their intentions. There is very little evidence that the Federal Reserve has taken the steps required to carry out effectively H. Con. Res. 133 and subsequent legislation.

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We believe that substantially greater focus on monetary aggregates and reductions in the growth rates of the aggregates are part of an effective economic policy to reduce inflation and unemployment.

Sincerely yours,

Karl Brunner

Allan H. Meltzer

AHM:awc

Enclosures

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SHADOW OPEN MARKET COMMITTEE
Policy Statement and Position Papers

September 19, 1977
PPS - 77-6

1. Shadow Open Market Committee Members - September 1977
2. SOMC Policy Statement, September 19, 1977
3. Position Papers prepared for September 1977 meeting.

   THE FEDERAL BUDGET - Rudolph G. Penner, AEI

   FINANCING THE GOVERNMENT DEFICIT - Robert H. Rasche, Michigan State U.

   BRIEFING FOR THE SOMC - Wilson E. Schmidt, Virginia Polytechnic Institutete

   THE DILEMMA OF INFLATIONARY POLICIES - Karl Brunner, University of Rochester

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SHADOW OPEN MARKET COMMITTEE

Meets Monday, September 19th, 1977, 9:00 a.m. to 4:00 p.m. at the Princeton Club, 15 West 43rd Street, New York, New York.

Members

Professor Karl Brunner, Director of the Center for Research in Government Policy and Business, Graduate School of Management, University of Rochester, Rochester, New York.

Professor Allan H. Meltzer, Graduate School of Industrial Administration, Carnegie-Mellon University, Pittsburgh, Pennsylvania.

Mr. H.Erich Heinemann, Morgan Stanley & Company, Inc., New York, New York.

Dr. Homer Jones, retired Senior Vice President and Director of Research, Federal Reserve Bank of St. Louis, St. Louis, Missouri.

Dr. Jerry Jordan, Senior Vice President and Chief Economist, Pittsburgh National Bank, Pittsburgh, Pennsylvania.

Professor Thomas Mayer, University of California at Davis, California.

Dr. Rudolph Penner, American Enterprise Institute, Washington, D. C.

Professor Robert Rasche, Department of Economics, Michigan State University, East Lansing, Michigan.

Professor Wilson Schmidt, Department of Economics, Virginia Polytechnic Institute, Blacksburg, Virginia.

Dr. Beryl Sprinkel, Senior Vice President and Economist, Harris Trust and Savings Bank, Chicago, Illinois.

Dr. Anna Schwartz, National Bureau of Economic Research, New York, New York.

Dr. William Wolman, Senior Editor, BUSINESS WEEK, New York, New York

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Policy Statement
Shadow Open Market Committee
September 19, 1977

The policies that produced sustained recovery, rising employment and lower inflation have ended. Government spending is growing again at a faster rate than the economy. The growth rate of money — currency and demand deposits — has returned to the high levels of 1968, 1972 and early 1973. The budget deficit is rising.

Prospects for the economy in 1978 and 1979 as a result appear less attractive than when this Committee met last March. Inflation is expected to increase next year and the growth of real output is expected to fall. The reasons for slower growth and higher inflation differ, however. Capacity utilization is high in many industries, and real growth must slow to the trend rate of capacity growth — three to four percent per year. Accelerating inflation and an enhanced risk of recession are mainly the result of the inappropriately expansionary monetary policy that the Federal Reserve pursued during the past two years, and particularly during the past six months.

Increased money growth in 1977 has restricted the choice of policies for 1978 to three principal alternatives. None of the three is attractive, but there are important differences. At its meeting today the Shadow Open Market Committee discussed these differences and recommended that the Federal Reserve return to a policy of eliminating inflation gradually, while minimizing the risk of a large recession.

Three Options

The Federal Reserve has three options. (1) It can continue on the path of rapid money growth that has prevailed in 1977, (2) It can accept the errors of the past year while immediately restoring the policy of slowing inflation, (3) Or in some measure it can correct for the excessive money growth of the past year, and once again restore a policy of ending inflation.

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The first option minimizes the risk of recession in 1978, but would result in increased inflation. By maintaining the recent high rate of money growth, real growth might temporarily be higher than otherwise, but at the cost of higher inflation later. As inflation increases, the demands to do something about inflation increase. Controls on wages and prices would become more likely. But controls, if adopted, would ultimately prove to be useless against inflation. Shortages of goods, services, and materials used in production would be the inevitable result. Sooner or later money growth would be reduced as part of a new, anti-inflation policy. This option adds to real growth in 1978 at the cost of higher inflation. This policy would squander the progress that has been made in restoring stability. The benefits of this option seem small when compared to the costs.

The second option would be to accept higher inflation as an unavoidable, but temporary, consequence of excessive money growth. Money growth would be reduced to an annal rate of 4% starting from present levels. This policy means that the Federal Reserve's summer errors would be translated into a recession. Output growth under this policy would probably be less than the trend rate.

The third option is to partially correct the summer bulge in the money stock. This bulge can be partly eliminated without severe consequences for real growth because the economy has not yet adjusted to the higher level.

At the previous meeting of this Committee, in March 1977, we recommended that the growth rate of money be held between 4% and 4½% during the year ending in the first quarter 1978. The growth rate of money for the second and third quarter has been over twice the rate we recommended. The annual rate of money growth is far above the 5¼% midpoint of the target chosen by the Federal Open Market Committee, November 1976, and reaffirmed at subsequent meetings. By their standards, as well as ours, the growth rate of money has been excessive.

This Committee has affirmed repeatedly that stable growth, lower inflation, and recovery from recession can be achieved together if proper policies are chosen. The Federal Reserve's 1977 excesses may mean that a recession will once again follow when it attempts to reduce inflation.

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Recommendations

The inordinate growth of money in the last six months stemmed from two episodes. In March and April, Federal Reserve credit was increased rapidly to keep interest rates from rising; consequently the money stock jumped. But this only postponed the rise in interest rates to the end of April.

Again in June and July, Federal Reserve credit growth was accelerated to keep short-term interest rates from rising and the stock of money rose rapidly. But the rise of interest rates was only postponed one month.

The Federal Reserve has not been able to prevent a rise of short-term interest rates this year. It has only been able to obtain slight delays of rate rises. And it has done this only at the expense of losing control of the amount of Federal Reserve Credit and the money stock.

The failure of the Federal Reserve to reach its targets is not an accident. Excessive money growth has been the result of inappropriate procedures for controlling the stock of money. The Federal Reserve has continued to concentrate on short-term changes in interest rates and has ignored the movements of the monetary base and other determinants of the stock of money. The result has been excessive money growth in periods of expansion, and insufficient money growth in recession.

This Committee has warned repeatedly that current procedures for controlling money are inadequate. The result of those procedures is that stable high output has not been achieved; inflation has increased; price and wage controls have become more likely; and the risk of returning to a stop and go economy is greater.

In addition to the change in procedures, the Shadow Open Market Committee recommends that the summer bulge in money be removed by reducing the current level of the money stock by $4-billion, the reduction to be accompanied by an announcement that the step has been undertaken to return the money stock to the level it would have reached if the most recent error in monetary policy had not occurred. Subsequent to the correction, money growth should resume at a constant annual rate of 4½%.

A stop-go monetary policy is not inevitable. We urge, again, that the Federal Reserve refrain from trying to control short-term interest rates. It should not take the Federal Funds rate as its operating target. Instead, it should adopt procedures to directly control money. If it does so, the Federal Reserve is fully capable of achieving its announced targets for money growth.

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The return to stability with rising real income cannot be achieved by monetary policy alone. The growth rate of government spending is high and rising. A rising share of resources absorbed by government means fewer resources for private investment, slower growth of private output and fewer jobs in the private sector.

We project that the budget deficit for fiscal 1978 and the borrowing by off budget agencies will require the private sector to absorb about $60-billion in new government securities. This amount is much larger than appropriate under current conditions. We recommend that nothing further be done to increase the budget deficit and government borrowing in 1978 and that the budget deficit be reduced in 1979. The Congress and Administration should adopt a program to limit the growth of government spending, so as to achieve and maintain the balanced budget promised by the Administration for fiscal 1981.

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THE FEDERAL BUDGET

A Report Prepared for the Shadow-Open Market Committee

Rudolph G. Penner
American Enterprise Institute

Background

Table 1 shows the evolution of the 1977 and 1978 Budgets from the "lame-duck" recommendations submitted by President Ford in January 1977 through the official July 1977 estimates of the Carter Administration.

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Table 1

Budget Recommendations, Ford and Carter, Fiscal Years 1977 and 1978

(billions of dollars)

		1977			1978		
	1976 Actual	Ford (Jan.)	Carter (Feb.)	Carter (July)*	Ford (Jan.)	Carter (Feb.)	Carter (July)*
Outlays	$365.7	$411.2	$417.4	$406.4	$440.0	$459.4	$462.9
Receipts	299.2	354.0	349.4	358.3	393.0	401.6	401.4
Deficit	$ 66.5	$ 57.2	$ 68.0	$ 48.1	$ 47.0	$ 57.7	$ 61.5

* In the July estimates, refunds under the earned income credit which had earlier been defined as an outlay were redefined to be reductions in receipts. This has the effect of lowering 1978 receipts and outlays by $0.9 billion.

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Through the first six months of 1977, changes in the economic assumptions, technical estimating changes, and Congressional actions, all influenced the budget totals, but the most important changes were the result of shifts in Presidential policy. The most significant Presidential initiatives were as follows:

.The Ford recommendations provided a major net permanent tax cut of $14.6 billion for 1978 compared to the levels implied by constant tax law. Outlays were cut $5.4 billion from current policy levels.

.Prior to taking office, President Carter announced his own "stimulus package" as a substitute for the Ford tax cuts. The package consisted of minor permanent tax cuts, a major temporary tax rebate worth $11.4 billion, and increases in spending on accelerated public works, public service employment, countercyclical revenue sharing and training programs. This package was worth $15.7 billion in 1977 and $15.9 billion in 1978.

.In February, President Carter submitted a more complete set of revisions to the Ford Budget. The net result was an increase in Ford's recommended 1977 deficit from $57.2 to $68.0 billion while the 1978 deficit was increased from $47.0 to $57.7 billion. The increase in the deficits was less than the value of the stimulus package primarily because of the rejection of the Ford tax cut. Carter also assumed that his package would lead to a somewhat more ebullient economy, and made other minor program changes and changes in the estimates.

.In April, the re-acceleration of the economic recovery and developing Congressional hostility to the rebate proposal led to its withdrawal by President Carter.

As shown in the table, the withdrawal of the rebate combined with the net impact of the policy initiatives and re-estimates significantly reduced the July estimate of the 1977 deficit compared to that shown in the February Budget Revisions. However, those portions of the stimulus package that were retained have a major spending impact in 1978, and as a result the deficit increases by $13.4 billion in that year. Because the Carter estimates presume a continuing strong recovery, which would reduce the deficit significantly given constant policies, the increase in the unified deficit between 1977 and 1978 represents a strong discretionary shift toward an expansionary fiscal policy between the two years.

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This shift appears somewhat less significant if national income accounting (NIA) definitions are used to compute Federal expenditures and revenues. The NIA Budgets consistent with Carter's July estimates are provided in Table 2.

Table 2

President Carter's July Budget Estimates on a National Income Accounting Basis, Fiscal 1977 and 1978

(billions of dollars)

	1977	1978
Expenditures	417.2	469.8
Revenues	365.4	415.3
Deficit	51.8	54.0

It should be emphasized that although the $2.2 billion increase in the NIA Budget deficit seems small, it still represents a significant shift toward expansion in discretionary policy. One can get a highly imperfect measure of discretionary shifts using revenues and expenditures calculated as if the economy were at full employment. Official full employment estimates have not been provided by the new Administration, but my own crude estimates suggest that the full employment deficit rises by more than $15 billion between 1977 and 1978 on an NIA basis.

All of the above is based on the Administration's July estimate of the Budget. No forecast of Budget totals is completely reliable. The following section explores some of the most important estimation problems in order to develop somewhat more precise forecasts of the Budget's likely impact over the next few quarters.

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Estimating Problems

While monetarists, fiscalists, and rational expectations theorists can engage in lively debates regarding the impact of the budget on the economy, there is no denying that the economy has a major impact on budget totals. On the outlay side, changes in the unemployment rate have a major impact on unemployment benefits; changes in interest rates alter the cost of the national debt; and changes in the rate of inflation have a major impact on outlays on indexed programs such as social security, food stamps, school lunches, etc.

The sensitivity of unified budget outlays to hypothetical changes in various economic variables is provided in Table 3 for the 1977 Budget.

The revenue side is even more sensitive to economic changes. A one percentage point change in the forecast of money GNP in fiscal 1977 would affect revenue estimates by more than $4 billion with the exact amount highly dependent on how the change affected personal income (for personal income taxes), corporate profits (for corporate taxes), and wages and salaries (for payroll taxes).

For the purposes of the analysis in this paper the Administration's July economic forecast will be accepted. This is shown in Appendix Table A.

Even if the economic forecast underlying budget estimates is precisely correct, there is plenty of room for error. For example, corporations have considerable discretion regarding the timing of their tax payments out of given corporate profits; one is never sure what proportion of the eligible population will claim benefits in entitlement programs; and in recent times, OMB has been bedeviled by overestimates of spending for non-entitlement programs--the so-called "shortfall" problem.

In February, the Carter Administration estimated 1977 unified outlays at $416.5 billion. Definitional changes, involving the earned income credit, and the withdrawal of the rebate lowered this figure to about $413 billion. However, the July update estimates outlays at only $406.4 billion. This reduction of more than $6 billion is primarily due to the shortfall problem. The very latest official estimate lowers 1977 outlays further to $404 billion and it is quite possible that actual outlays will be two or three billion lower than this figure.

There is no simple explanation for this phenomenon and the following attempt at a description of the problem must be regarded as being highly oversimplified. OMB has had a tendency to overestimate spending for a very long time, but the problem did not attract much public attention until the shortfall became especially large during fiscal 1976 and the transition quarter. While a large number of random events conspired against OMB in 1976 and made the problem especially serious, there are a number of continuing political and administrative factors which create a very strong bias toward overestimation.

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Table 3

Sensitivity of FY 1977 Budget Outlays to

Economic Assumptions
(billions of dollars)

	Addition to Outlays
Inflation (effect on indexed program only)	
One percentage point increase in CPI level by:	
First quarter, CY 1976	$1.1
Third quarter, CY 1976	0.4
First quarter, CY 1977	0.2
Interest Rates	
One percentage point increase* by:	
January 1, 1976	$2.3
July 1, 1976	1.8
October 1, 1976	1.3
January 1, 1976	0.8
July 1, 1977	0.1
Unemployment Rate (unemployment assistance only)	
One percentage point increase for fiscal year	$2.5

*The increase is assumed to be for short-term rates with a somewhat smaller increase in long-term rates.

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Whenever Congress undertakes a new policy direction at the behest of an Administration there is a strong tendency on the part of the Executive Branch to claim that it will be implemented posthaste. This is especially true when the policy is aimed at some perceived national "emergency" as in energy or in fighting unemployment. For example, it was claimed that the accelerated public works program would be implemented with far greater alacrity than was assumed by most experts, but the official claims had to be duly reflected in the Budget.

Even when there are no political pressures of this type, the bureaucracy has a difficult time adjusting to policy shifts. The spending of money requires a great deal of work. Proposals have to be studied; contracts have to be negotiated and signed; etc. There is a pervasive human tendency to believe that more work can be accomplished within a certain time period than is practically possible. Typically, insufficient allowances are provided for vacations, illnesses, and the myriad of other things that can go wrong.

As experience builds with a new program direction the outlay forecasts should become more precise, and there is some evidence that this is now occuring in the defense sector. That sector had to live with severe budget stringency in the post Viet Nam era and it was slow to adjust to large increases in procurement allowed in the 1976 and 1977 budgets. While significant defense shortfalls will occur in the 1977 budget, it appears likely that the gap will be closed somewhat in 1978. However, in that year the bureaucracy will still be struggling with the implementation of the relatively new stimulus programs, and a significant shortfall is likely relative to program size, particularly in the public works component of the package.

As a result of such factors, it has already been noted that 1977 unified outlays are likely to be around $401 or $402 billion. Outlays in 1978 could be seven or eight billion lower than the $462.9 estimated in July even if the Administration's economic forecast and policy stance remains constant.

However, because both 1977 and 1978 outlays will fall short of the July estimates the increase in the deficit between the two years will be only slightly lower than was discussed earlier.

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Short-Run Fiscal Policy Implications

In order for there to be no shortfall from the July estimates in the NIA budget for 1977, expenditures would have to soar at an annual rate exceeding forty percent in the last quarter of the fiscal year, that is, the third calendar quarter of 1977. This is clearly unreasonable and no one expects it. While quarter-by-quarter estimates of the shortfall are treacherous, to say the least, I guess that, despite the shortfall, there will be a major surge in spending during the third and fourth quarter of this calendar year as the stimulus programs get rolling--albeit behind schedule. Again, the tentative nature of any estimate must be emphasized, but it is not unreasonable to expect annual rates of growth of NIA spending between 15 and 20 percent during the last half of this calendar year with a deceleration to the seven to ten percent level in the first three quarters of calendar 1978.

It would, however, be unwise to conclude that the expansionary impact of the surge in spending over the last half of this year will be as great as is suggested by these estimates. If the acceleration occurs, it will, in large part, be due to extraordinary rates of growth in the grants component of the NIA budget. Virtually, the entire stimulus package is financed by grants and is implemented at the state and local level. Although the accelerated public works and public service jobs components of the package have been designed to reduce the extent to which the funds can be used to undertake projects that would have been undertaken in any case at the state and local level, considerable "substitution" is sure to occur anyway. Thus, to some degree, these programs simply reduce state and local deficits or raise surpluses at the expense of the Federal deficit. This is even more true of the counter cyclical revenue sharing component of the package. As a result, the surge in grants is unlikely to have the same expansionary impact as would a similar surge in the purchases or transfer component of the NIA budget.

Long-Run Fiscal Policy Issues

President Carter has promised to balance the Budget in fiscal 1981. Barring an economic slowdown which would cause the abandonment of this promise, he will have to adopt a fairly stringent 1979 Budget if his 1981 goal is to have any hope of realization. OMB has revealed that for planning purposes it is using a 1979 outlay figure of about $500 billion. Such planning figures seldom endure until the final Budget is presented, but if this one should happen to hold, the implied real increase in spending over the July estimates for 1978 is less than one percent. A 1978 shortfall of seven to eight billion would raise the implied rate of real growth in 1979 spending to over two percent, but still implies great stringency between the two years.

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Over the longer run, the nature of the Administration's tax reform package will be of significant importance to the long-run budget outlook and to the allocation of resources. In this regard, the proposed net revenue loss associated with tax reform may be as important as the compositional changes in the tax structure.

Since the Korean War, the ratio of total Government receipts to GNP has been held remarkably constant. There is no clear trend in the ratio and its average since 1953 has been 18.6 percent, exactly the level achieved in fiscal 1976. To maintain relative stability in the ratio, numerous discretionary tax cuts have been necessary to offset the effect of inflation and real growth pushing income taxpayers into higher and higher tax brackets.

Because of the current high inflation rate, constant tax law implies a very rapidly increasing tax burden, because taxpayers are pushed into higher brackets at a much faster rate than they were in the past.

In 1978 the expected ratio of receipts to GNP is 19.6 percent or only slightly above the historical average of 18.6 percent. Given the Administration's economic projections it will rise to almost 22 percent by fiscal 1981 if tax laws remain unchanged. Returning the 1981 ratio to the 19.6 percent prevailing in 1978 would require a massive tax cut of over $60 billion in 1981 dollars. There is a clear conflict between the historical tendency for the Congress to keep the ratio of receipts to GNP relatively constant and the Administration's desire to obtain the revenues necessary to facilitate budget balancing in 1981.

The announced goal of the Administration is to hold outlays to 21 percent of the GNP in 1981 compared to the 22.6 implied byd the July estimates for 1978. A balanced budget obviously implies that receipts will have to equal 21 percent of GNP and they have not reached this level since the Korean War--although they came close during the Viet Nam War. Whether or not the Congress will accept the implied increase in the tax burden will be one of the more interesting fiscal policy questions of the next three years. All of this, of course, accepts the relatively optimistic economic projections of the Administration. This is not the place for a detailed critique of those projections, but any slowdown in the recovery could cause the dream of a balanced budget to be postponed for many years.

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Appendix Table A

President Carter's July 1976 Economic Forecasts and Long-Run Projections
(Calendar Years: dollars in billions)

	Actual	Forecast			Projection		
	1976	1977	1978	1979	1980	1981	1982
Gross national product							
Current dollars:							
Amount	1,692	1,883	2,106	2,345	2,592	2,836	3,081
Percent change	11.6	11.3	11.9	11.3	10.6	9.4	8.6
Constant (1972) dollars							
Amount	1,265	1,330	1,399	1,468	1,545	1,621	1,690
Percent change	6.1	5.1	5.3	5.0	5.2	4.9	4.3
Incomes (current dollars)							
Personal income	1,375	1,526	1,698	1,894	2,097	2,294	2,493
Wages and salaries	890	991	1,105	1,231	1,366	1,495	1,624
Corporate profits	148	173	199	223	246	268	291
Prices (percent change)							
GNP deflator:							
Year over year	5.1	5.9	6.3	6.1	5.1	4.3	4.2
Fourth quarter over fourth quarter	4.6	6.5	6.1	5.9	4.6	4.2	4.2
CPI:							
Year over year	5.7	6.5	6.0	5.9	5.0	4.3	4.3
December over December	4.8	6.9	6.1	5.7	4.5	4.3	4.2
Unemployment rates (percent)							
Total:							
Yearly average	7.7	7.0	6.3	5.7	5.2	4.8	4.5
Fourth quarter	7.9	6.6	6.1	5.5	5.0	4.6	4.4
Insured[1]	6.4	5.1	4.2	3.7	3.2	3.0	2.8
Federal pay raise, October (percent)	4.8	6.5	6.5	6.5	6.0	5.5	5.0
Interest rate, 91 day Treasury bills (percent)[2]	5.0	4.9	5.0	5.0	5.0	5.0	5.0

1) Insured unemployment as a percentage of covered employment; includes unemployed workers receiving extended benefits.

2) Average rate of new issues within period. The forecast assumes continuation of current market rates.

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FINANCING THE GOVERNMENT DEFICIT

By
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The following comments are divided into essentially two parts. In Section I, an explicit financing relationship for the U.S. government is derived, which relates the deficit or surplus (unified budget) plus the deficit or surplus of off budget agencies to changes in the net sources base and other factors. I have included a discussion of what items are involved in these other factors, and identified the items which must be forecast in order to make a projection of the impact of a projected deficit or surplus in the private capital markets under different assumptions about monetary policy. I welcome any comment on the appropriateness of the categories which I have devised, and/or the techniques which I propose to forecast some of the components. In addition, I would appreciate any helpful suggestions on forecasting the component of the relationship related to foreign transactions.

In Section II, I have made some comments on things which I see as significant factors in recent financing, and make some rough guesses as to what the coming fiscal year may bring.

I. Components of the Financing Identity and Some Forecasting Proposals

At various meetings in the past, I have tried a number of semi-systematic presentations of the relationship between the government deficit or surplus and various components of the financing problem. I have finally made the effort to trace down a systematic relationship between changes in the net source base and the deficit or surplus. The relationship is derived from two basic identities: the first the so called means of financing identity data for which the available in various Treasury publications, and the second the balance sheet of the Federal Reserve System which is presented in the Consolidated Statement of Condition in the Federal Reserve Bulletin. Several other minor definitions also enter tino the computations. The details of the development are presented in the Appendix to this paper. The data for fiscal years 1974-1976, and quarterly thereafter, are presented in Table 1. It should be noted that all data are derived from changes in end-of-quarter stock figures and are seasonally unadjusted, hence they are not compatable with the average of daily figures, seasonally adjusted data which are usually cited.

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It seems to me that the goal of this type of investigation is to be able to attempt to project the amount of financing through private credit markets which will be associated with a projected deficit and proposed (or projected) growth paths of the base. As can be seen from Table 1, in reality this does not amount to a straightforward subtraction of the change in the base from the projected deficit, as the issue is typically presented in the textbook discussion of the subject. There are a large number of other components in the relationship, some of which have been and can be quite important in at least short run financing developments. I shall first try to identify what is in the various groupings which I have developed and then discuss how they have affected recent financing and speculate on some future developments.

The first category is an approximation to the volume of funds raised by the Treasury in credit markets from private sources. It is the total amount of Treasury and Agency debt issued outside of the Treasury less the change in debt holdings by the Federal Reserve and Foreign official institutions. The latter is not quite accurate, as it excludes changes in holdings of agency debt by such institutions, since I have been unable to find any published source in which this information is tabulated separately. It is also possible that since this is an attempt to measure on a net basis, changes in acceptances held by the Federal Reserve System (which now appear in category VII) should be subtracted from this grouping.

The second, third and fourth categories are self explanatory. The fifth, which involves foreign transactions probably needs some explanation, particularly with respect to the treatment of "swaps." When the Fed engages in "swap" operations, the two accounts which are involved are the other assets of the Federal Reserve System (denominated in foreign currencies) and foreign deposits at the Federal Reserve. For example, when the Fed obtains foreign currencies in a "swap" operation, it increases both other assets and foreign deposits.[1] Thus, category V is unaffected by foreign currency swap operations.

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1) See Federal Reserve Bank of New York, Glossary: Weekly Federal Reserve Statements, p. 18.

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Categories VI and VII are also fairly clear. Category VIII warrents some explanation, since a number of the items are not familiar, and the definitions are not easily available. First, other cash and monetary assets of the Treasury includes Treasury Cash and the Gold Balance as sub items. Thus, VII essentially includes net cash and monetary assets of the Treasury which involves basically time deposits, some cash items in process of collection, and some miscellaneous transit items. The other two categories which are difficult to identify are Miscellaneous Treasury Liabilities and Miscellaneous Treasury Assets. Much of what is included in these entries is of the nature of float.[2] However, there are two important exceptions which arise out of the pecularities of the book valuation of Treasury securities.

The book valuation of all government securities is at par, not at issue price. Hence, the discrepancy between the book value of the debt issue (changes in which are indicated under I above), and the actual revenue raised from a debt sale has to be accounted for somehow. This is handled in the miscellaneous asset and liability accounts. If debt is sold at a discount (as for example with a Treasury Bill auction, then the outstanding value of the debt is increased by the par value of the bills on the books of the Treasury, and the discount is entered as a miscellaneous asset account entitled "deferred interest (discount) on marketable United States Treasury securities." On the other hand, if a note or bond is issued at a premium, then the par value of the issue is added to the value of the outstanding debt, and a miscellaneous liability item entitled "deferred interest (premium) on public debt subscriptions, United States Treasury" is increased by the amount of the premium. I have been unable to determine if these miscellaneous accounts are left unchanged until the time that the debt issue is retired, or if some schedule is used to allocate the discount or premium into interest paid over the life of the security. Judging from the accounting practices of the Federal Reserve, which also carries its government securities at par value, I suspect that the premium or discount is gradually phased out over the life of the security.[3] In any case, the changes in these categories, particularly the asset item have been substantial at times in the recent past, and their character is such that their behavior should not be the random kind of behavior that can be expected from the float type items which comprise the remainder of the entry.

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2) See the Combined Statement of Receipts, Expenditures and Balances of the United States Government.

3) See Federal Reserve Bank of New York, Glossary: Weekly Federal Reserve Statements, p. 13, "Other Liabilities and Accrued Dividends."

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The final category is that of deposit funds. Deposit funds are defined as:

> combined receipt and outlay accounts established to account for receipts that are either (a) held in suspense temporarily and later refunded or paid into some other fund of the government upon administrative or legal determination as to the proper disposition thereof, or (b) held by the government as a banker or agent for others and paid out at the direction of the depositor. Such funds are not available for paying salaries, expenses, grants, or other outlays of the government.[4]

I have made a preliminary attempt to reconcile the identity which I have derived with the published information in the Flow of Funds data. I am rather pessimistic that the Flow of Funds source will ever prove useful in tracking down the identity. Some of the items just cannot be identified in the Flow of Funds data; some of the published categories combine items from different categories which I have defined (though this is probably surmountable with the use of unpublished data), and most troublesome of all, in places where the categories would seem to match up, the numbers frequently are completely dissimilar (even when looking at the seasonally unadjusted flows in the Flow of Funds accounts). I intend to pursue this investigation somewhat further, but it may prove that to obtain any sort of time series on the various elements of the financing process, the original sources will have to be painstakingly pulled together.

What about forecasting of the impact of the projected deficits on domestic credit markets? One category, the net source base, is close to the monetary base concept which is of major concern to this committee. We can project our desired growth of this aggregate, or we can project our best guess estimate of what actually will occur, given the existing management techniques for monetary policy. A second category which seems to warrent some consideration from the perspective of economic theory is the foreign transaction category, V. I think that this grouping comes pretty close to the concept which is referred to as the balance of payments in the literature on the monetary theory of the balance of payments, though not being an expert in that area, I may be mistaken. In any case, I would like some discussion of how forecasts of this component could be developed.

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4) Combined Statement of Receipts, Expenditures and Balances of the United States Government, 1976, p. 3.

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The remaining items of the identity have large random behavior about which there is very little that economic theory can tell us. It seems to me that these are things for which a pure time series approach to forecasting, such as that of Box-Jenkins is not only highly useful, but also highly appropriate.

II. Some Issues in Recent Government Financing

With the exception of the transition quarter, a common characteristic of the last several years has been the fact that the government has had to go to the private capital markets for considerably less than the total financing which is has required. In part this is due to the rapid growth of the monetary base with which we are all familiar. An additional factor which has made an important contribution is the item which I have entitled changes in Foreign Transaction Balances. In particular, over the last four quarters tabulated in Table 1, over six billion dollars of the deficit has been financed by increases in this item. For the most part this reflects increases in Foreign Official holdings of U.S. Government securities. In the two prior fiscal years, foreign official holdings of U.S. Government securities increased by four billion dollars. Thus, the recent rate of increase reflects a doubling of the rate of acquisition. I suspect that these may reflect changes in holding by the Germans and Japanese for the most part, but I have to confess that I have not tracked things down, and I shall defer to other expertise in this area. The one thing which seems clear is that there is considerable management of the float going on, and if anything it has increased substantially in recent months.

What impact on the private capital markets can be expected in the coming fiscal year? The present official projections of the fiscal 1978 budget deficit are in the neighborhood of 60 billion dollars. In addition, something has to be added for off budget agencies. The major contributors to the off budget deficit are the postal service and the Federal Financing Bank. In the recent past, the deficit in this category has been reduced somewhat because of unexpectedly favorable experience on the part of the postal service. Judging from recent pronouncements, and the political opposition to cost cutting innovations such as the abolition of Saturday delivery and the consolidation of rural postal facilities, the recent experience cannot be extrapolated into the future. Therefore, it is likely that something of the order of 10 billion should be added for required off budget financing. If we scale down the official budget deficit estimates somewhat to account for the positive serial correlation of the OMB forecasting errors in the recent past (the so called budget underruns), then it seems appropriate to conclude that something approaching, but probably not exceeding 70 billion dollars of financing will be required over the next fiscal year.

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The net source base amounted to about 120.6 billion dollars (seasonally unadjusted) at the end of June, 1977. If we assume a growth rate of the order of six percent per annum for the next fifteen months (on the assumption that this is a likely outcome, not a desirable outcome), about seven billion would be financed by increases in the base (given growth in the money stock over the last two months, this might be regarded as too high for a likely outcome, although care should be taken to distinguish growth in the monetary base in the last few weeks because of increases in borrowing which does not count in the net source base). If we assume that changes in foreign transaction balance increase at somewhere between the four billion annual rate of 75-76, and the eight billion rate of recent months, and further assume that the net impact of the remaining components is of the order of one billion dollars one way or the other, then the total borrowings which will be required in the private capital markets can be projected at somewhere around 55 to 60 billion dollars.

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APPENDIX

Derivation of the U.S. Government Financing Identity

The basic identity and data for the financing requirement are found in the Monthly Treasury Statement of Receipts and Expenditures, and in the Federal Reserve Bulletin.[1] The first relationship is found in a table entitled "Means of Financing." This equation indicates that the

Unified Budget Deficit (+) or Surplus (-)

plus	Transactions not applied to the current year's deficit or surplus
equals	Changes in U.S. Government and Agency Securities held by the Public (net of securities held as investments by government accounts)
plus	Change in accrued interest payable on public debt securities
plus	Changes in deposit funds
plus	Changes in miscellaneous liability accounts of the Treasury
less	Changes in U.S. Treasury Operating Cash (including balance held at Federal Reserve Banks + Tax and Loan account balances + demand balances held at other depositories)
less	Changes in total holdings of SDR's net of changes in SDR certificates issued to Federal Reserve Banks
less	Changes in gold tranche drawing rights
less	Changes in other cash and monetary assets
less	Changes in miscellaneous asset accounts of the Treasury

1) Other helpful, though not necessarily complete or accurate tables can be found in the monthly Treasury Bulletin. Additional sources of information of a fiscal year basis are the Annual Report of the Secretary of the Treasury and the Combined Statement of Receipts, Expenditures and Balances of the United States Government. The latter is the most comprehensive, informative, and probably the most accurate.

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The second identity is the balance sheet of the Federal Reserve System found in the Consolidated Condition Statement. This identity can be solved for the Treasury Balances with the Federal Reserve System and substituted into the Means of Financing identity. Two additional identities are useful:

(1) Gold Stock = Gold Certificates held by Federal Reserve Banks + Balance of Gold

(2) Treasury Cash = Federal Reserve Notes held in the Treasury + Treasury currency held in the Treasury.

Finally the definition of Transactions not applied to current year's deficit or surplus is required. This is perhaps the most elusive component of the whole problem; as far as I can discover, the only place where the data are regularly published is in the Monthly Treasury Statement. This aggregate consists of:

Deficit (+) or Surplus (-) of Off Budget Agencies (including the Federal Financing Bank in recent years)

plus Seigniorage

plus Increment on gold

plus Net gain/loss from U.S. currency valuation adjustment

plus Net gain/loss from IMF loan valuation adjustment (starting fiscal 77)

plus Change in interest receipts on government accounts to accrual.

Manipulation of these identities gives the nine categories listed in Table 1, where the components of each category are as follows:

I. Borrowing from Private Capital Markets
   - Ia. (+) Borrowing from the Public
   - Ib. (-) Changes in Federal Reserve Holdings of U.S. Government Securities
   - Ic. (-) Changes in Federal Reserve Holdings of Agency Issues
   - Id. (-) Changes in U.S. Government Securities Held by Foreign Official Institutions (from Table 3.13, Federal Reserve Bulletin. Foreign official holdings of agency issues are not published separately)

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II. Change in Net Source Base
- IIa. (+) Change in Member Bank Desposits at Federal Reserve Banks
- IIb. (+) Change in Currency in Circulation
- IIc. (-) Change in Member Bank Borrowings from the Federal Reserve

III. Change in Federal Reserve Float
- IIIa. (+) Change in Deferred Availability Cash Items
- IIIb. (-) Change in Cash Items in Process of Collection

IV. Change in U.S. Treasury Cash Balances
- IVa. (+) Change in Tax and Loan Account Balances
- IVb. (+) Change in Balances at Other Depositories (demand)

V. Change in Foreign Transaction Balances
- Va. (+) Change in Foreign Deposits at the Federal Reserve System
- Vb. (-) Change in other Federal Reserve Assets Denominated in Foreign Currencies (swaps)
- Vc. (+) Change in U.S. Government Securities Held by Foreign Official Institutions
- Vd. (-) Change in the U.S. Gold Stock
- Ve. (-) Change in SDR Holdings
- Vf. (-) Change in Gold Tranche Drawing Rights
- Vg. (-) Change in Loans to IMF (fiscal 1977 only)

VI. Change in Interest Accruals
- VIa. (+) Change in Accrued Interest Payable on U.S. Government Securities
- VIb. (-) Conversion of Interest Receipts on Government Accounts to Accrual

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VII. Change in Excess of Miscellaneous F.R. Liabilities over Miscellaneous Assets
- VIIa. (+) Change in Other Deposits at Federal Reserve Banks
- VIIb. (+) Change in Other Liabilities of Federal Reserve
- VIIc. (+) Change in Federal Reserve Capital Accounts
- VIId. (-) Change in Other Federal Reserve Loans
- VIIe. (-) Change in Acceptances Held by Federal Reserve Banks
- VIIf. (-) Change in Bank Premises and Operating Equipment
- VIIg. (-) Change in Other Federal Reserve Assets (excluding those denominated in foreign currencies (swaps)

VIII. Change in Miscellaneous Treasury Accounts
- VIIIa. (+) Change in Treasury Cash
- VIIIb. (+) Change in Balance of Gold
- VIIIc. (+) Change in Misc. Treasury Liability Accounts
- VIIId. (-) Change in Other Cash and Monetary Assets of the Treasury
- VIIIe. (-) Change in Misc. Treasury Asset Accounts
- VIIIf. (-) Seigniorage
- VIIIg. (-) Increment on Gold
- VIIIh. (-) Net Gain of Loss From U.S. Currency Valuation Adjustment
- VIIIi. (-) Net Gain or Loss From IMF Loan Valuation Adjustment
- VIIIj. (-) Change in Treasury Currency Outstanding

IX. Change in Deposit Funds
- IXa. (+) Change in Allocations of SDR's
- IXb. (+) Change in Other Deposit Fund Balances

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TABLE 1

		FISCAL YEARS 1974	1975	1976	TQ 1976	76 IV	77 I	77 II
	Unified Budget Deficit (+) or Surplus	3460	43604	65605	12700	22785	18692	-8620
Plus	Off Budget Agency Deficit (+) or Surplus	2675	9546	8016	2005	-415	4269	-106
Equals	Total Financing Required	6135	53150	73621	14705	22370	22961	-8726
	Sources of Financing							
I.	(+) Borrowing from Private Capital Markets	-2146	40422	67069	14813	15011	16495	-11269[a)]
II.	(+) Changes in Net Source Base	9890	5897	9413	-577	3403	2076	-305
III.	(+) Change in F.R. Float	-249	506	-1786	580	396	-685	48
IV.	(-) Change in U.S. Treasury Cash	-2298	-4424	1045	1258	-2842	597	-811
V.	(+) Change in Foreign Transaction Balances	-3863	2805	2046	851	1325	2161	2475[a)]
VI.	(+) Change in Interest Accruals	46	399	915	144	1207	-647	477
VII.	(+) Change in Misc. F.R. Accts.	214	-2202	-85	433	178	595	-138
VIII.	(+) Change in Misc. Treasury Accts.	-35	319	-1884	-319	-2642	3582	-557
IX.	(+) Change in Deposit Funds	-19	597	-1024	34	657	-33	-262

a) Preliminary - Based on two months data on Foreign Official Debt Holdings.

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BRIEFING FOR THE SHADOW OPEN MARKET COMMITTEE

By
Wilson E. Schmidt*

There has been a great deal of excitement over our international transactions in the last six months.

There has been fear that our excess of imports over exports could not last, that it has caused or would cause a depreciation of the dollar which leads to inflation, that it causes unemployment, and that it stimulates protectionist pressure in the United States. There has been continued pressure on the part of the U.S. Government to stimulate the two other supposed locomotives of the world economy, Germany and Japan. And there has been concern about the repayment of our credits to foreigners and our ability to repay our debts.

Actually, very little of importance happened that is worth noting, with one exception.

The exception is that the International Monetary Fund in April backed off its notion of norms or zones for exchange rates for the purpose of guiding countries' exchange rate inter ention over four-year periods with its implicit danger of fixing rates. Instead the new rules continue to call for intervention to prevent disorderly markets, though, as Dr. Burns has indicated, no two men can agree on what such conditions are (a view expressed in my September 1975 SOMC paper), so this is hardly a meaningful guideline but few would interpret it to be the equivalent of target zones. The new rules also call upon the members to avoid manipulating exchange rates to prevent effective balance of payments adjustment or to gain an unfair advantage. Again it is hard to know what this means and the Fund has said "difficult judgments will have to be made." In any event, zoning is gone.

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The amount of intervention chiefly by the G-10 countries in the six months ending in July hit a record high of $7 billion per month against an average of about $4 billion since the float began. But the data do not reveal how much of this was sustained, unidirectional intervention, as against mere diddling with the rates. U.S. intervention fell from $3.2 billion in the six months ending January 1977 to $1.5 billion through August 1977, though these are crude estimates. Much more persuasive and heartening is the rise in the proportion of world trade by countries whose currencies are not maintained within relatively narrow margins in terms of any currency, group of currencies, or composite of currencies. On the basis of 1975 world imports, the proportion has risen from 43% at the end of 1975 to 52% at the end of 1976 and now to about 55%. (This figure understates the amount of trade subject to floating; all imports by countries that fix on something from countries that fix on nothing, so that the imports are subject in fact to floating, are excluded from the numerator, e.g., imports by Germany, Belgium, and the Netherlands from the U.S.)

Most attention has been given to our excess of imports over exports of $15 billion during the first half of the year. The Secretary of the Treasury reportedly has projected this to reach $25 billion or maybe a bit more for the year. Little attention has been given the inflows of capital and other transactions that must offset it under the floating exchange rate system.

During the first half of the year, the growth in foreign official assets in the U.S. was $11.4 billion, covering three-quarters of the trade balance. About $9.7 billion was placed in U.S. Government securities, equal to almost half of the increase in Federal debt outstanding, thereby easing the Treasury's need to finance the budget deficit from the private sector or the Fed. It is difficult to tell how much of this constitutes direct intervention in the foreign exchange markets. Not an insubstantial part of the growth in foreign official assets must be attributed to interest income on those assets - if one assumes a 6% yield, $3 billion over the first half of the year, leaving $8.4 billion to be explained otherwise during the first half of the year. In 1976, the OPEC countries accounted for somewhat more than half of the increase in our liquid foreign official liabilities. This held true for the first

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quarter of 1977 also. But in the second quarter, their share fell to under 15% and the portion attributable to industrial countries rose to over three-quarters. While there are no data, this sharp shift probably reflects the efforts of the UK, Italy, and France to increase their gross international reserves by intervention in the foreign exchange market, buying dollars and thus preventing a depreciation of the dollar.

The trade figures have exhilarated some people, especially some in the Department of Commerce which has programs to stimulate exports that are under attack. The Department is now even talking about a basic deficit. One high Commerce official is quoted as stating that it will take us a decade to get back into equilibrium, as if equality of exports and imports implies equilibrium. It is hard to justify costly export promotion schemes when we finance a large part of our imports with loans at zero real rates of interest, that is after allowing for the effect of U.S. inflation on the nominal returns in dollars to foreigners.

On the other hand, the trade balance has depressed others. One distinguished economist worries that we will not be able to repay our external debts. But since our interest payments to foreigners slightly more than offset our interest income from foreigners, it is hard to see that the United Sates is anywhere near the parlous condition to the weakest LDCs when the average LDC has a ratio of debt service to exports of 16%.

Others believe that the trade deficit has depressed the dollar which in turn causes inflation. Without accepting the proposition that depreciation of the dollar leads to inflation, we need only note that the average value of the dollar in terms of 46 main trading countries fell by six tenths of one per cent from the beginning of the year through the end of July. What seems to have caught the public's eye is the substantial appreciation of the market and the yen, but of course those two currencies are not the whole story.

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Still others are concerned with the growth of protectionist sentiment at home because of the trade balance. Labor in particular has been pressing for protection. But such efforts are likely to lead to little for labor as a whole. Though the estimates are dated, the amount of labor contained in a million dollars of our exports is just about the same as the amount of labor contained in a million dollars of U.S. production that competes with imports. The imposition of import restrictions might help labor in the protected industry but the consequent reduction in imports will lead to an appreciation of the dollar which will deter our exports by a similar amount, hurting labor in the export industries.

Finally, there are those who complain that the trade imbalance destroys jobs and slows the growth of GNP. It is doubtful that this fear is well founded. The evidence suggests that changes in money are more important and more lasting by far than changes in the federal budget (and thus, by inference, more important than changes in the trade balance) in determining the level of aggregate demand. Since our international transactions cannot affect the stock of money and the monetary base because we are floating, the relationship between our trade balance and the state of employment is very weak and short-lived.

In another unimportant development, the Administration continues to push its locomotive theory, pressing the surplus countries, such as Germany and Japan to expand domestic demand. A 1% increase in the combined GNP of Germany and Japan would cause the rest of the world's output to rise by only 12/100 of 1% with fixed exchange rates. With floating, the impact will be even smaller.

The next Administration push will be to obtain congressional support for the Witteween facility, a fund of approximately $10 billion to be loaned in almost equal shares to the International Monetary Fund by the industrial and the OPEC countries. The issue here is adjustment versus financing of deficits. The loans under the new facility to countries in balance of payments difficulty will be of longer maturity (up to seven years) than the normal Fund loans (up to five years). By and large, the world has sought to meet the challenge of the OPEC surpluses by borrowing to cover them rather than simply letting the oil producers hold and invest the currencies they have gained. The longer adjustment is delayed, the harder it is to achieve. The new facility on this test appears to be a continued step in the wrong direction.

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The Dilemma of Inflationary Policies

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Position paper prepared for the 9th meeting of the Shadow Open Market Committee

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I. The Re-Emergence of an Old Problem

Over recent years inflation has dominated the official attitude and pronouncements of the Federal Reserve Authorities. This attitude was expressed by the Federal Reserve's management of new procedures developed under House Concurrent Resolution 133. The Resolution recommends that the Federal Reserve Authorities pursue a policy of monetary control conducive to longer-range stability of the price-level. For two and a half years the Federal Reserve announced in quarterly Hearings before the Senate or House a target range for the monetary growth rate with the average money stock observed in the quarter preceding the Hearings serving as the basis for this targeted monetary growth. Thus, monetary policy was formulated in terms of a target range containing the acceptable paths of the money stock.

Under the circumstances changes in the target range apparently reflect modifications in the course of policy. They seem to signal the general trend in monetary affairs to be expected over the near future. The information collected in Table 1 presents the official signals conveyed to the public since the middle of 1975. The target range guiding growth paths for M_1 and M_2 drifted generally lower. The upper boundary for M_1 was lowered from 7.5% to 6.5% and from 10.5% to 9.5% for M_2. The lower boundary of the range for M_1 was lowered from 5.0% to 4.5% and from 8.5% to 7% for M_2. At one single occurrence (in November 1976) the Federal Reserve raised the upper boundary on M_2. They simultaneously lowered, however, the upper boundary placed on M_1. The official actions can also be described by the changes in the mean growth between the upper and lower boundary. The mean path for M_1 was lowered over the past two years from 6.25% to 5.5% and from 9.5% to 8.25% for M_2.

The trend summarized in Table 1 apparently nudges the inherited rate of inflation to lower levels. We seem to be assured a persistent decline in the magnitude of inflation over the period 1977/79. The Shadow Open Market Committee noted this pattern in previous sessions. It also approved the generally modest rate of monetary growth maintained in the average over a 12 month period. It expressed, however, some concern about the violatile behavior of monetary growth

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observed within one year. It also warned that the Federal Reserve's internal procedures were ill suited to execute an effective monetary contol. The traditional mode of implementing policy would remain, in the Shadow Committee's view, an uncertain and unrealiable instrument for the purposes defined by the House Concurrent Resolution 133. The Committee emphasized, moreover, the potential drift built into monetary growth as a result of the peculiar targeting techniques evolved by the Federal Reserve Authorities.

Table I: The Target Range on Growth Rates for M_1 and M_2

12-MONTH GROWTH RANGE TARGETS: M1			
Congressional Hearing Date	Base Quarter Of the Forecast	Targeted M1 Growth Range For Next 12 Months Range	Average
5/77	Q1 77	4.5 to 6.5%	5.50%
2/77	Q4 76	4.4 to 6.5%	5.50%
11/76	Q3 76	4.5 to 6.5%	5.50%
7/76	Q2 76	4.5 to 7.0%	5.75%
5/76	Q1 76	4.5 to 7.0%	5.75%
2/76	Q4 75	4.5 to 7.5%	6.00%
7/75	Q2 75	5.0 to 7.5%	6.25%
5/75	3/75	5.0 to 7.5%	6.25%

12-MONTH GROWTH RANGE TARGETS: M2			
Congressional Hearing Date	Base Quarter Of the Forecast	Targeted M2 Growth Range For Next 12 Months Range	Average
5/77	Q1 77	7.0 to 9.5%	8.25%
2/77	Q4 76	7.0 to 10.0%	8.50%
11/76	Q3 76	7.5 to 10.0%	8.75%
7/76	Q2 76	7.5 to 9.5%	8.50%
5/76	Q1 76	7.5 to 10.0%	8.75%
2/76	Q4 75	7.5 to 10.0%	8.75%
7/75	Q2 76	8.5 to 10.5%	9.50%
5/75	3/75	8.5 to 10.5%	9.50%

SOURCE: Federal Reserve Bulletin

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The potential dangers posed by the Federal Reserve's institutional inheritance emerged this year with a sharper focus. We also possess at this stage a sufficient segment of observation in order to assess the basic trend in our monetary affairs. Table II summarizes the relevant information bearing on our problem. The crucial aspect deserving our attention is the remarkable acceleration in M_1 and M_2 maintained since the second half of 1974. The growth rate of M_1 more than doubled and the growth rate of M_2 increased by almost 70% over the past three years. Monetary growth rates computed between corresponding months in successive years, between average values of successive two-quarter periods or between shifting two-quarter intervals reveal the same basic pattern. We observe over two and a half years a positive drift persistently raising monetary growth.

Table II: Accelerations and Decelerations in M1 and M2

Period	% Growth	Period	% Growth
QI:76 to QII:77	6.5	QI:76 to QII:77	10.7
QI:75 to QI:76	4.8	QI:75 to QI:76	9.4
QII:74 to QI:75	3.1	QII:74 to QI:75	6.3
QII:73 to QII:74	5.7	QII:73 to QII:74	8.7
QI:72 to QII:73	8.0	QI:72 to QII:73	10.0

SOURCE: Federal Reserve Bank of St. Louis

An inspection of the data so far available for the current calendar year confirms this pattern. Monetary growth in the second quarter exceeded substantially the upper target boundary even without the pressures to finance a tax rebate. There also exist indications of continued excessive monetary growth during the third quarter. Moreover, the week ending with August 17, 1977, shows a money stock 7.1% above the value in the corresponding week in 1976. We also note that monetary growth over successively shorter intervals all ending with the central week in August exhibit an accelerating pattern. An increasing growth exceeding the upper target boundary dominates the observations accruing since our last meeting in March 1977. The data in Table III effectively summarize the problem. In a similar vein the growth rate of M_2 exceeded in recent months the upper target

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boundary for the respective magnitude.

Table III: Annual Growth Rate of M_1 Over Different Periods in 1977

To the Average of Four Weeks Ending:	COMPOUNDED ANNUAL RATES OF CHANGE, AVERAGE OF FOUR WEEKS ENDING: 8/18/76	11/17/76	1/19/77	2/16/77	3/16/77	4/20/77	5/18/77	6/15/77
2/16/77	5.0	3.7						
3/16/77	4.9	3.8	0.4					
4/20/77	6.1	6.0	5.4	9.6				
5/18/77	6.5	6.5	6.4	9.5	11.9			
6/15/77	6.0	5.8	5.4	7.5	8.5	5.2		
7/20/77	6.8	7.0	7.1	9.0	10.1	8.7	8.4	
8/17/77	7.1	7.3	7.4	9.2	10.1	9.0	8.9	12.5

SOURCE: Federal Reserve Bank of St. Louis

II. The Fragile State of Anti-Inflationary Policies

In 1963/64 Allan Meltzer and I concluded in a study on Federal Reserve Policy-Making prepared for the House Committee on Banking and Currency that the negative association between actual monetary management and professed policies reflected the central problem of Federal Reserve policy-making. This negative association was produced in past decades by a systematic misinterpretation of monetary actions and the prevailing monetary state. The underlying conception about the monetary process governing the Reserve institution's approach for over fifty years unavoidably determined the misinterpretations of events observed during the 1930's, the 1950's, and into the 1960's.

This systematic misinterpretation seems barely the appropriate explanation of the current developments described in the previous section. The discrepancy between anounced policy and actual monetary growth is probably attributable to the operation of internal implementation procedures well adjusted to the old conception prevailing until the middle 1960's centered on free reserves and money market conditions. The disposition to failure built into the traditional implementation is occasionally activated by an institutional inheritance stressing interest rate policies and emphasizing orderly money markets. This inheritance is re-enforced by regular Congressional pressure insisting that the Federal Reserve apply its resources to maintain interest rates at a low level. Lastly, we also note that the targeting technique actually practiced by the Federal Reserve Authorities offers supplementary opportunities for the built-in disposition of failure.

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Our recent experience thus reveals that the execution of effective monetary control designed to lower the rate of inflation requires attention to institutional implementation beyond broad announcements. It also involves a continuous political struggle with the inflationists in Congress and the Administration. It is unfortunate in this context that the advocates of inflationary policies rarely acknowledge this implication of their proposals. The inflationary consequences are usually hidden beyond a package of worthy intentions directed towards lower interest rates, lower unemployment, or larger government expenditures. And once inflation emerges as a result of such endeavors, aggravated by even higher interest rates and barely lowered unemployment, there always will exist opportunities (and $ incentives) to direct public attention away from the relevant causes of the new inflationary burst. The interaction between media and political process tends to spin a web of deceit and ignorance covering the nature of the ongoing inflation. It follows that a persistent pattern of anti-inflationary policies may have a comparatively low political survival value. It certainly requires substantial courage and determination by the policy-makers involved in monetary affairs.

III. The Dilemma of Monetary Policy

What are the implications of recent monetary trends? We suppose for this purpose that monetary growth (M_1) proceeds into 1978 at an annual rate of about 7%. At this rate the underlying "permanent" inflation rate will measure around 6% p.a. The actual rate of inflation will be higher, however. The acceleration of monetary growth will raise longer-run inflationary anticipations, and thus the actual inflation rate observed in 1978 would contain a temporary acceleration component. I expect that this revision of inflationary anticipations would add (temporarily) one to one and a half percentage points to the actual rate beyond the permanent inflation rate, i.e., the rate of inflation observed next year under the circumstances will be about 7% - 7.5%. My estimate of the growth rate of nominal GNP for 1978 under the same circumstances is around 10.5% p.a. The growth rate in real GNP would therefore subside in the context of the recent monetary growth path to about 3% - 3.5%.

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This estimated trend forms the basis for two alternative scenarios of monetary policy. The first scenario involves a reversal of the pattern emerging in the recent past. It would lead the Federal Reserve back to a determined anti-inflationary course. Suppose that this is expressed by a monetary growth of about 4.5% for 1978, i.e., a monetary growth along the lower boundary of the last announced target range. The growth in nominal GNP along this monetary path would be (at the most) about 8.0% and will probably be 7% - 7.5%. But the permanent inflation rate in 1978 remains in the range between 5% and 6% as a result of the past monetary acceleration. Moreover, revisions of inflationary anticipations may still be more affected by the recent acceleration and the persistent uncertainties imposed by the Carter Administration. The actual rate of inflation would probably stay above 6% under the circumstances. It follows that real growth subsides to a figure below 2%. A substantial retardation in economic activity with probably even a minor decline for about one quarter seems unavoidable in the context of this scenario. The reversal in policy to an anti-inflationary stance should thus be expected to produce a mini-recession and a corresponding increase in the rate of unemployment.

The second scenario describes a very different policy. It assumes an essentially accommodating behavior on the part of the Federal Reserve Authorities. Such behavior would be designed to appease Congressional pressures directed at interest rates and unemployment. It would also appease the inflationist groups within the Carter Administration. An accommodating policy could barely settle along a monetary growth path of 7% discussed above. Even along this path real growth subsides and the unemployment rate remains above 6%. The second scenario thus foresees an acceleration in monetary growth beyond 1% to, say 8.5%. The permanent inflation rate increases to 7% -7.5% and the actual rate bulges along an accommodating monetary path temporarily to a range around 8% - 8.5%. The rate of real growth would thus be confined to a range of about 4% - 4.5%. An accommodating policy may thus be expected to raise somewhat the level of real growth. But inflation would definitely accelerate with corresponding increases over the whole range of interest rates.

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Accommodation could, of course, continue beyond 1978. The effect on real growth rapidly declines, however, and the spillover of nominal expansion raising inflation probably increases. Inflation approaches on this course in 1979 a threshold of double digit figures. With Presidential elections less than two years away, the probability of "forceful financial leadership" increases again. At some stage accommodation will end and new efforts will be made to cope with the recent burst of inflation. The ensuing reversal in monetary policy unleashes a substantial retardation of economic activity. This retardation would probably lower output over several quarters and also raise at least one year the rate of unemployment.

The tacit abandonment of anti-inflationary policies by Congress, the Carter Administration, and the Federal Reserve Authorities created an unfortunate but unavoidable dilemma for monetary policy. Our relevant choice is between a reversal in policy now or a reversal at a later stage. A reversal now brings forth a mini-recession in 1978 at an inflation rate of 6% - 6.5% and lower inflation rates beyond 1978. The delay of the reversal means that we eventually reap a larger recession in activity at a substantially higher rate of inflation requiring a much longer time period to tame inflation.

The ongoing debate about the proper course of financial policies offers an alternative formulation of the relevant options. It is frequently argued that the social costs associated with an anti-inflationary policy are too large. A wiser course involving a comparatively negligible social cost, it is suggested, accepts the prevalent inflation and accommodates monetary policy correspondingly. The social cost of an anti-inflationary monetary policy is well established. The assessment of the first scenario fully acknowledges this fact. The issue between the two options does not center on this acknowledgement but on the proper recognition of the social costs associated with a course of permanent and accommodating inflation. The advocates of permanent inflation argue that the social cost of this second option is quite negligible, essentially associated with the lower level of real money balances resulting from higher anticipated inflation. The argument advanced implicitly assumes that an accommodating policy of permanent inflation can be reasonably expected to follow a stable path. This assumption seems essentially naive and seriously faulty. It fails to appreciate the political context of financial policy-making. This context produces two sets of events which raise the social cost associated with a policy of permanent inflation to substantial levels.

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The first set of conditions refers to the increasing likelihood of an erratic and unstable inflation. An accommodating policy of persistent inflation introduces pervasive incentives into the social system to explore opportunities for accelerating wage and price setting as a means of competitive wealth transfers in the expectation that the emerging price-wage policies will be validated (in the average) by an accommodating policy. Such explorations in price-wage policies tend to exploit the political process to generate an appropriate accommodating stance in financial policies. It follows under the circumstances that a permanent policy of accommodating inflation will experience repeated waves of increased inflation. We also observe, moreover, that every major acceleration in price movements introduces new political opportunities and raises political rewards for the supply of "leadership in the fight against inflation". This pattern has been observed in many countries all over the world on repeated occasions. The resulting shifts in financial policies unleash the unavoidable retardation of economic activity expressed by a decline in output and rising unemployment. A policy of permanent inflation very likely produces, therefore, sequences of substantially accelerated price movements intermittently interrupted by declines in output and higher unemployment. An accommodating inflation policy may thus easily produce two or three recessions, combined with continued inflation, over a ten-year span. The current value of the costs determined by the future series of recessions forms a first component in the relevant social cost of permanent inflation.

The first set of conditions yields still another cost component in our tabulation. The increasing uncertainty bearing on the course of financial policies over the next two or three years affects the price-wage contracting on labor and output markets in a manner probably raising the natural level of unemployment. The current value of the future stream of social costs associated with a higher natural level of unemployment forms the second strand in the total social cost to be considered.

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The second set of conditions fostered by a policy of accommodating permanent inflation determines two more cost components. The experiences of many countries indicate the rising probability of price-wage controls, or controls over interest rates, as inflation accelerates. Such controls occur in a variety of shifting forms. They usually affect the quality and volume of output and longer-range investment programs. They lower incentives to produce and dampen the willingness to expand productive facilities. The magnitude of these effects depends on the particular controls and their mode of administration. Controls and political institutions replacing market mechanisms also raise the level of uncertainty bearing on the crucial rules of the game confronting agents in the private sector. Obscure rules with shifting interpretations and frequent changes in rules affecting a broad range of a firm's activities emerge from the operation of political institutions' "controlling" wages, prices, and interest rates. The combined effect operating via incentives and uncertainty lowers the level of normal output for given levels of inputs, raises the natural level of unemployment, and lowers the real rate of growth associated with any level of output. The current value of future reductions in normal output and of lowered growth in real output form the third and fourth component of the total social cost associated with an accommodating policy of permanent inflation. The social cost of persistent inflation involves thus substantially more than some "negligible esoteric consideration" based on economizing responses in the use of money induced by higher anticipated rates of inflation. At least one of the four components of the total cost resulting from an inflationary policy is of the same nature as the social cost of an anti-inflationary policy. It expresses the welfare loss associated with temporarily lower output. A crucial difference between a determined anti-inflationary policy and its inflationist alternative should be noted in this context. A single, once and for all and temporary loss occurs in the case of anti-inflationary policy. The alternative unleashes a series of repeated losses due to the inherent instability of inflationist policies. The comparative advantage of an anti-inflationary program increases with the inclusion of the three additional cost components associated with the inflationist policies. A determined effort to remove inflation over the next four years will certainly involve some costs to our society. But I submit as my considered judgment that the social cost of an inflationist course in our financial policies substantially exceeds the cost of an anti-inflationary monetary policy.

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IV. The Recommendation

Three times within the past ten years, the Federal Reserve Authorities abandoned opportunities to curb inflation. The mini-recession of 1966/67 rapidly retarded the price movements set in train in 1965. A stable course of moderate policies in 1967/68 would have brought the U.S. economy back to a stable price level. This opportunity was lost in a pronounced shift towards an expansionary policy in early 1967. This policy resulted to a major extent from intentions to moderate the incipient increase in interest rates. Thus emerged the inflationary burst observed in 1968/69.

The shallow recession of 1970 broke the momentum of price movements. This opportunity was not exploited by the Federal Reserve Authorities. A continuous acceleration of monetary growth from early 1970 to the middle of 1971 contributed to maintain the inherited rate of inflation. An anti-inflationary course was initiated by the Federal Reserve Authorities with President Nixon's "New Economic Policies" and again abandoned in the spring of 1972. The consequences became visible several months before the OPEC-ECLAT in the Fall of 1973.

And now looms a fourth opportunity lost. Monetary growth drifted increasingly towards the wrong track. We inherited thus a situation which precludes an easy and comfortable solution. All our options involve more or less unpleasant consequences. The Shadow Committee should certainly urge that the Federal Reserve Authorities return to a moderate growth path along the lines suggested in our previous recommendations. These recommendations were determined by our objective to restore over several years a stable price level. The return to our original growth path may be executed in two distinct modes. In one case the Federal Reserve Authorities follow a growth path of 4.5% until the end of 1978 based on the observed average for the third quarter of 1977. In the other case the Federal Reserve Authorities move the money stock until the first quarter 1978 back to the growth path implicit in the Shadow Committee's proposal made in March 1977 and proceed subsequently along this growth path. I submit at this stage without further discussion the first mode to the Shadow Committee's attention. The Committee's attention should also be directed, once more (remember Cato's Ceterum censco...), in view of recent developments, to the proper implementation of an effective monetary control.

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The social cost of the recommendation is immediately visible. But the public should recognize the larger cost of a permanent drift into inflation. The cost of the Latin-Americanization of the U.S. economy is substantial indeed. This cost is distributed over the future, however, and policy-making appears to operate with a pronounced myopic bias. The disregard of future costs will not exorcise them and most of us would still experience the unfortunate consequences of an inflationist policy. The U.S. economy and our welfare would be better served with a determined program initiated now and maintained over four years to lower monetary growth to a level compatible with a stable price level. This was, at some occasion, the intention of House Concurrent Resolution 133.

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Policy Statement

Shadow Open Market Committee

March 7, 1977

For the past several years the Administration and the Federal Reserve have pursued policies that fostered recovery, increased employment and reduced inflation. The economy is now closer to the long-term goal of high employment without inflation than many believed possible a year or two ago.

Currently, statements by the Administration and actions of the Administration and the Congress suggest that this approach has ended. Emphasis appears to have shifted to the system of priorities and fine tuning based on the mistaken belief that policymakers can reduce unemployment without increasing inflation. Fine tuning, whenever it has been tried, has resulted in higher inflation and often higher unemployment.

At its meeting today, the Shadow Open Market Committee took note of some disquieting policy proposals and actions. These include (1) a package of stimulants to bring about a short-term blip in employment and consumption, but little encouragement to capital formation -- a crucial determinant of productivity increases that sustain long-term growth of employment and standards of living; (2) proposed changes in taxes and in minimum wages that increases unemployment and reduce incentives to work; (3) pressure on foreign governments to inflate their economies in the hope of gaining support for inflationary policies in the United States; (4) an increased growth rate of money, currency and demand deposits that stimulates the economy now, but raises the rate of inflation in future years.

We do not accept the view that capital formation can be encouraged only by stimulating consumption expenditures. Lagging investment is more likely to

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revive if businessmen can confidently look forward to an environment in which government deficits do not absorb $100-$150-billion of private sector savings in the next two years. Real savings would then be available to finance expenditures on plant and equipment.

It is miguided to attempt to stimulate consumption expenditures by expansive monetary and fiscal policies in response to supply cutbacks in a period such as the extremely cold winter of 1976-77. Production of money is no cure for the shortfalls in the production of goods.

If the proposal to raise minimum wages is adopted, this will lead to higher unemployment, particularly for new entrants into the labor force. The result will be to increase pressure on the Federal Reserve to increase the monetary growth rate and ultimately to raise the inflation rate.

We should refrain from pressuring foreign governments to inflate their economies. They are better judges than we are of their own national interests.

A return to high employment without inflation will not be achieved by fine tuning the economy. It is doubtful that employment and output will be increased, on average, during the next three to five years, by a policy of increasing employment now and slowing inflation "later." A lasting recovery with low inflation can be achieved if, instead of fine tuning, we proceed gradually to achieve both boals; higher employment and a stable price level.

The Committee recommends that the growth rate of money -- currency and demand deposits -- be held in the range of 4 to 4-1/2% for the next year. A 4 to 4-1/2% rate of monetary growth would bring the stock of money to approximately $320-billion in the third quarter 1977 and to $326-billion in the first quarter 1978. These projections are made from the average $313-billion that

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would have prevailed in first quarter 1977 if our previous recommendations had been followed. Currently, we anticipate an average money stock of $315-billion for the first quarter, so the policy we recommend requires the Federal Reserve to offset the recent surge in money and then maintain a less inflationary policy.

The Choices Before Us

We recognize that the policy we recommend reduces the measured growth rate of money, temporarily, by removing the recent bulge in money growth. From 4th quarter 1976 to 4th quarter 1977, our proposal brings the growth of money to approximately 4-1/2%, near the lower end of the Federal Reserve target for money, but is still far above the rate ultimately required to achieve price stability. The recommended rate of growth is one percentage point lower than the growth rate endorsed by Chairman Reuss of the House Banking Committee and more than thirty members of Congress.

A more rapid growth of money in the next few quarters might possibly lead to a temporary increase in employment and real product.

The effects of higher monetary growth are not, however, limited to the response of output in 1977 or 1978. Increased monetary growth raises actual and anticipated inflation. The increase in inflation is not immediately apparent but would become apparent in 1978 and 1979. Once again, we would be faced with the choice we had in 1966, 1969, 1974 and in the intervening years -- to accept more inflation or to shift "priorities" from reducing unemployment to reducing inflation. Guidelines and guideposts -- under old or new names -- will neither reduce inflation nor change the outcome.

The choice before us is to trade a short-term increase in employment for higher longterm inflation, or to gradually but steadily move toward high employment without inflation. The Administration and much of the Congress appear to have chosen a course that will lead to higher inflation.

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The Federal Reserve flirts with the prospect of supporting the policy by increasing the rate of monetary growth.

The rate of monetary expansion consistent with high employment and stable prices is in the neighborhood of 2% per year. Higher rates of monetary expansion move us away from our long-term goals and increase the difficulty of restoring full employment and ending inflation.

SHADOW OPEN MARKET COMMITTEE MEMBERS

Prof. Karl Brunner, Director of the Center for Research in Government Policy and Business, Graduate School of Management, University of Rochester, Rochester,NY.

Prof. Allan H. Meltzer, Graduate School of Industrial Administration, Carnegie-Mellon University, Pittsburgh, Pa.

Mr. H. Erich Heinemann, Morgan Stanley & Company, Inc., New York, N.Y.

Dr. Homer Jones, retired senior Vice President and Director of Research, Federal Reserve Bank of St. Louis, St. Louis, Mo.

Dr. Jerry Jordan, Vice President and Chief Economist, Pittsburgh National Bank, Pittsburgh, Pa.

Prof. Thomas Mayer, University of California at Davis, Calif.

Prof. A. James Meigs, Dept. of Economics, Claremont Men's College, Claremont, Calif.

Prof. Wilson Schmidt, Dept. of Economics, Virginia Polytechnic Institute, Blacksburg, Va.

Dr. Beryl Sprinkel, Senior Vice President and Economist, Harris Trust and Savings Bank, Chicago, Ill.

Dr. Anna Schwartz, National Bureau of Economic Research, New York, N.Y.

Dr. William Wolman, Senior Editor, BUSINESS WEEK, New York, N.Y.

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HOOVER INSTITUTION
ON WAR, REVOLUTION AND PEACE
Stanford, California 94305

January 25, 1978

The Honorable Parren J. Mitchell, Chairman
Subcommittee on Domestic Monetary Policy
Committee on Banking, Finance and Urban Affairs
U.S. House of Representatives
Washington, D.C. 20515

Dear Congressman Mitchell:

This is in reply to your letter of December 12, 1977 asking for my views on the conduct of monetary policy during 1977.

Monetary policy during 1977 was not in my opinion conducted effectively. This year offered a splendid opportunity to make a small step in the direction of reducing the monetary pressure toward inflation. That situation was recognized by the Federal Reserve Board in its announced targets for the growth in monetary aggregates. These targets were reduced modestly. Had the announced targets been achieved, the Federal Reserve System would have deserved applause for an excellent policy. Unfortunately the targets were not achieved. While the target rates were reduced, the actual rates of monetary growth increased: this was true of the monetary base and of M_1 though not to the same extent of M_2. Indeed for the base and M_1, it is necessary to go back to the monetary expansion that preceded the double-digit inflation of 1974 to observe comparably high rates of growth. As a result, we have, for the fourth time in the past fifteen years, paid the cost of a recession to stem inflation and then thrown away the prize by starting off on a new inflationary path (see attached Newsweek column, "Why Inflation Persists," Newsweek, October 3, 1977).

The failure of the Fed to achieve its targets was linked directly, in my opinion, to its continued attempt to ride two horses at the same time--monetary aggregates and interest rates--and to its obsolete operating techniques that use the federal funds rate as an operational tool. The effect of trying to hold down interest rates in the short run at the cost of unduly high monetary growth rates will be to raise interest rates in the longer run as inflation increases and raises the inflationary premium embodied in interest rates.

My major recommendation for change is one that I have made repeatedly--in testimony before your committee and in the public press: the single-minded adherence by the Federal Reserve to its proper objective, control of the quantity of money; the abandonment of the futile attempt to control interest rates; the adoption of more effective techniques of controlling the

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monetary aggregates that use as the key operating instrument the volume of the monetary base or of unborrowed reserves, rather than the federal funds rate.

Your committee will perform a great public service if it can promote these changes.

Sincerely yours,

Milton Friedman

Enclosure

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By Milton Friedman

Why Inflation Persists

Nearly three years ago, I wrote in this space: "Four times in the past fifteen years we have started on a cure for inflation. Three times we have abandoned the cure before it had time to complete its task—in 1963, 1967, 1971. Each time, the result has been a higher plateau of inflation, producing a new attempt at a cure. Will we make the same mistake the fourth time in 1975? Or this time, will we have the courage and the wisdom and the patience to see the cure through?" (NEWSWEEK, Nov. 4, 1974.)

ABANDONING THE CURE

As of today, the answer is that we have made the same mistake a fourth time. Once again, we have paid the cost of a recession to stem inflation, and, once again, we are in the process of throwing away the prize. From a high of more than 12 per cent in 1974 (from December 1973 to December 1974) inflation fell to less than 5 per cent (December 1975 to December 1976). It has now risen sharply, may temporarily recede as we work through the bulge produced by the special problem of the hard winter, but then, I fear, will resume its upward march, not to the "modest" 6 per cent the Administration is forecasting, but to at least several percentage points higher and possibly to double digits again by 1978 or 1979.

There is one and only one basic cause of inflation: too high a rate of growth in the quantity of money—too much money chasing the available supply of goods and services. These days, that cause is produced in Washington, proximately, by the Federal Reserve System, which determines what happens to the quantity of money; ultimately, by the political and other pressures impinging on the System, of which the most important are the pressures to create money in order to pay for exploding Federal spending and in order to promote the goal of "full employment." All other alleged causes of inflation—trade union intransigence, greedy business corporations, spendthrift consumers, bad crops, harsh winters, OPEC cartels and so on—are either consequences of inflation, or excuses by Washington, or sources of temporary blips of inflation.

There is one and only one basic cure for inflation: slowing monetary growth. But that cure is easier to state than to put into effect: witness our repeated abandonment of the cure. The Fed is supposedly independent. But, as Dooley said of the Supreme Court, "It follows the election returns." Its behavior reminds me of nothing so much as the remark attributed to a U.S. Army officer in Vietnam, "We destroyed the village in order to save it." Similarly, the Fed refrains from using its independence because it is afraid of losing it.

Listen to Chairman Arthur F. Burns in testimony to the House of Representatives (July 29, 1977):

"The trend of growth in monetary aggregates, I regret to say, is still too rapid. Even though the Federal Reserve has steadily sought during the past two years to achieve lower ranges for monetary expansion, the evolution of its projections has been extremely gradual; indeed, at the pace we have been moving [*note: with respect to projections, not behavior*] it would require perhaps a decade to reach rates of growth consistent with price stability. I must report, moreover, that despite the gradual reduction of projected growth ranges for the aggregates during the past two years, no meaningful reduction has as yet occurred in actual growth rates."

Meaning: promises have been in the right direction but too modest; performance has been in the wrong direction.

THE PERFORMANCE OF THE FED

The following table documents Chairman Burns's description of performance: the high rates of monetary growth from 1971 to early 1973 fostered the inflation that peaked in 1974. The sharply lower monetary-growth rates from 1973 to 1975 produced the serious recession of 1974-75 and the subsequent tapering off of inflation. The sharp rise in early 1975 sparked the recovery; the slowdown in late 1975 produced the economic pause in the second half of 1976 that played such a prominent role in the Ford-Carter election battle. Since then, monetary growth has been rising, not falling, and is now about back where it was in 1972.

Recent Rates of Monetary Growth (per cent per year)

	M_1	M_2
December 1971 to January 1973	9.3	11.4
January 1973 to February 1975	4.5	7.7
February 1975 to June 1975	9.5	12.0
June 1975 to December 1975	2.8	7.0
December 1975 to June 1976	5.8	10.5
June 1976 to August 1977	7.1	10.9

M_1 = currency plus adjusted demand deposits; M_2 = M_1 plus commercial bank time deposits other than large CD's

Inflation will not be stopped by words, only by actions. At the moment, we have the worst of two worlds. Nominal independence of the Federal Reserve without its effective exercise permits Congress and the President to evade responsibility for the creation of money to finance large government deficits. The power of Congress to legislate and of the President to approve such deficits without explicit responsibility for the resulting monetary growth gives the Federal Reserve an excuse for its inflationary behavior.

Again, let me quote Chairman Burns, this time from a speech on Aug. 13, 1977, proclaiming "The Importance of an Independent Central Bank":

"Theoretically, the Federal Reserve could thwart the non-monetary pressures that are tending to drive costs and prices higher by providing substantially less monetary growth than would be needed to accommodate these pressures fully. In practice, such a course would be fraught with major difficulty and considerable risk. Every time our government acts to enlarge the flow of benefits to one group or another the assumption is implicit that the means of financing will be available. A similar tacit assumption is embodied in every pricing decision, wage bargain, or escalator arrangement that is made by private parties or government. The fact that such actions may in combination be wholly incompatible with moderate monetary expansion is seldom considered by those who initiate them."

FISH OR CUT BAIT

It matters little whether the Federal Reserve is unable or unwilling to exercise its independence in deeds as well as words. In either case, let us be done with the fiction that "independence" is somehow or other a bastion against inflation. Let us put the responsibility for the rate of monetary growth—and therewith for the subsequent rate of inflation—squarely and openly on the Administration and Congress. Instead of simply requiring the Federal Reserve to *report* its "projections" or "targets" for monetary growth, let the Congress require the Fed to *achieve* specified rates of monetary growth (or specified levels of the quantity of money) within specified ranges of tolerance. That would combine responsibility and power. It would also enable the ordinary citizen to know whom to hold accountable for inflation.

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MORGAN STANLEY INTERNATIONAL
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1251 Avenue of the Americas
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January 27, 1978

Subcommittee on Domestic Monetary Policy
Room 3154, House Annex #2
2nd and D Streets, S. W.
Washington, D. C. 20515

Please convey my thanks to Mr. Mitchell for his letter of December 12, referring to the plans of his Subcommittee on Domestic Monetary Policy to review the monetary policies which were applied during 1977. He invited me to submit my view on this subject.

I should like to say at the outset that in general I found little to criticize in the stance of monetary policy during 1977. It was a year in which the economy continued to move ahead at a good pace - and although both inflation and unemployment remained undesirably high, some modest improvement was registered in both of these factors. Despite their improvement, however, they did continue to pose a difficult dilemma for the monetary authorities, and it seems to me that the Federal Reserve handled this situation with considerable courage and skill. I was especially pleased by their ability in the past few months to achieve a reasonable balance between rapid money growth rates and rising interest rates.

With inflation frequently constituting a major cause of unemployment in the longer run, it might be argued that a central bank could fight both evils by concentrating rather single-mindedly on an anti-inflationary posture. But clearly a central bank cannot close its eyes to the short-run adverse effects, on production and employment, of an anti-inflationary policy if it is pushed to extremes. The central bank should always approach such a situation with caution and humility, recognizing that there is only so much that monetary policy by itself can accomplish in combatting these evils. Last year probably too much was expected of monetary policy, when greater emphasis might have been placed by the government on "structural" approaches to the unemployment problem and on long-term measures, whether of tax policy or otherwise, to increase productivity and discourage excessive wage and price increases.

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While I was rather well satisfied with monetary policy's performance, as I have indicated, I did not and do not feel happy with certain aspects of the techniques employed. Specifically, I mistrust the use of short-term targets for the money aggregates as a reliable intermediate objective through which to achieve the System's basic goals, such as diminished inflation, stronger economic growth, and reduced unemployment. Certainly the money aggregates are very important data that should be watched carefully, but equal attention must be paid to basic statistics on the course of the real economy, conditions in the credit markets (including interest rates, credit aggregates and market atmosphere), international developments, and general evidence of public confidence or lack of it. My own view is that the System in recent years has placed too much stress, in its policy statements and publications, on the setting of rather precise target ranges for money growth over relatively short time periods. I think this has given a false impression of precision, when in fact such short-run statistics are subject to serious misinterpretation, whether because of faulty seasonal adjustments or unexplained changes in depositors' habits or a variety of haphazard developments. Unfortunately, the credit markets have seized on these statistics as reliable signals of System policy or future policy intentions, and to some extent the System may have aided and abetted such misuse of the data, whether intentionally or otherwise. The academic community must also share the blame for this state of affairs, and I would not exempt government officials to whom these money aggregates have offered a simple "handle" whereby to judge or criticize monetary policy. Unfortunately, there is no simple handle to monetary policy.

To put the matter another way, I have always felt that sound central banking must rely essentially on wise judgments based on experience and careful examination of all the available relevant data. Effective policy can be seriously jeopardized by attempts to rely too heavily on mechanical formulas.

I hope that these comments may be of some interest in connection with the review being undertaken by Mr. Mitchell's Subcommittee.

With kind personal regards,

Yours sincerely,

Alfred Hayes

Alfred Hayes
Chairman

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BANK OF AMERICA

WALTER E. HOADLEY
Executive Vice President

January 9, 1978

Mr. Parren J. Mitchell, M. C.

Subcommittee on Domestic Monetary Policy
Room 3154 House Annex #2
2nd & D Sts. S.W.
Washington, D.C. 20515

Dear Mr. Mitchell:

I'm glad to respond to your request for my views on monetary policy in 1977. As a matter of general policy I must say, however, that I am really not interested in "Monday morning quarterbacking," particularly, when the future is so much more important. This is especially true when the U.S. economy is being massively affected by structural changes which are highly disruptive of conventional approaches to economic policies.

As for monetary policy in 1977, I would have much preferred --

1. Less preoccupation with efforts to meet arbitrary targets for monetary aggregates and more sensitivity to tracking actual and expected changing conditions in the real world economy.

2. More attention to the weakening U.S. dollar and the instability it has created throughout the financial markets of the world.

I would always commend the Federal Reserve for its determination to restrain inflation which the U.S. voters rightly judge to be our number one national problem for the future. My concern, however, is that monetary as other major policies formulated in Washington more and more tend to reflect excessive "macro mentality" and succeed in confusing and frustrating grass roots people as well as often negating, in fact, the achievement of many of the desired policy objectives.

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We now have a confidence crisis in our country -- not an economic crisis. Hence, how and why policy is made, announced, and implemented are at least as important as what the policy change itself may be.

Sincerely,

Walter E. Hoadley
Executive Vice President

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FIDELCOR, Inc. Broad & Walnut Streets, Philadelphia, Pennsylvania 19109 215 985-6000

LACY H. HUNT, Ph. D. - Vice President & Economist 985-8671

January 6, 1978

Subcommittee on Domestic
Monetary Policy - Room 3154
House Annex #2
Second & D Sts., S.W.
Washington, D.C. 20515

FIDELCOR

This is in response to the recent letter from Congressman Mitchell requesting my views on domestic monetary policy during 1977.

I am strongly convinced that the growth rate of 7.4% in M1 in the past 12 months is too fast if our objective is to hold the U.S. inflation rate below 6%.

While it is true that monetary growth slowed in November and December, this is more of an illusion than fact. The narrow money stock increased by only $1.2 billion between October 26 and December 28, while M2 rose by $6.3 billion. Although this slower growth may seem a welcome respite from the extremely fast expansion of the prior six months, it should be noted that large denomination CDs, which are excluded from the M1 and M2 measures, rose by $8.8 billion. This steep rise in CDs served to depress the time deposit ratio and, therefore, pushed the money multiplier to the lowest levels of the year. Consequently, the slowdown in M1, M2 and M3 in the fourth quarter occurred while the M4 and M5 monetary aggregates accelerated.

In view of non-monetary factors operating in 1977, it is not surprising that short-term interest rates advanced by 200 basis points while long-term yields increased by 80 basis points. This is suggested by four basic factors. First, aggregate credit demands in absolute terms and relative to gross national product were at record levels during 1977. A main explanation for the strong growth in the credit demands for 1977 was due to a substantial step-up in U.S. Treasury borrowing. Second, banking

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sector liquidity deteriorated significantly during the year as the commercial banks were called upon to supply an increasing share of the rapid credit growth. Third, corporate sector liquidity declined in 1977 in response to a substantially slower growth in economic earnings, which in turn, reflected that corporate costs begin to rise more rapidly than prices. Fourth, inflationary expectations of investors accelerated during 1977, and particularly as the year drew to a close.

In summary, an overly accommodative policy of the Federal Reserve last year undoubtedly served to moderate an upward move in interest rates that was propelled by fundamental and non-monetary forces. This overly rapid rate of monetary growth during 1977, however, is likely to be reflected in more inflation in 1978 and years to come.

I have enclosed the Fidelity Economics Bulletin for the past three months in which I discuss these, and related subjects.

Sincerely yours,

Lacy H. Hunt

Lacy H. Hunt
Senior Vice President
& Economist

Enclosures

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THE FIDELITY BANK

December 30, 1977

THE DEFICIT FINANCING TASK IN 1978

by

Lacy H. Hunt
Senior Vice President & Economist

This month:

Funding $60 Billion Of New Treasury Debt

The Capital Spending Lag

Are Stocks Cheap?

The Last 1978 Forecast Of 1977

Funding $60 Billion Of New Treasury Debt

In calendar year 1978, the federal government could sell approximately $60 billion of new public debt securities in order to fund its deficit. This compares with net new issues of $53 billion in the 12 months ended in November. Since our 1978 estimate is without allowance for a proposed tax cut, the actual financing could be even higher. In addition to the new issues of direct Treasury obligations, the federally sponsored agencies such as the Federal National Mortgage Corporation, the Federal Home Loan Banks and other similar enterprises are likely to issue $16 billion of new debt, $13 billion more than in the past 12 months. Four factors suggest these increased debt offerings are likely to intensify upward pressures on money and capital market yields and diminish the flow of funds into private ventures.

First, total credit demand growth is already at peak levels. In the third quarter, net external funds raised by the nonfinancial sector, as measured in the flow of funds accounts, were at a record $370 billion annual rate. In the third quarter of this year, net funds raised were 19.3% of GNP. During the peak of the prior cycle in the first quarter of 1973, the ratio of net external funds to

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GNP was 16.8%. In fact, the credit-to-GNP ratio in the second quarter of this year moved slightly above the 1973 peak. Credit raised relative to the broad M3 money stock was 27.8% in the third quarter, well above the 24.7% peak registered in early 1973. Second, in 1978 the Treasury will have an extremely large refinancing task because $52.7 billion of privately held marketable coupon issues will mature. This compares with $35.2 billion in 1977, $30.8 billion in 1976 and $18.1 billion in 1975. Privately held securities exclude those owned by Fed and official accounts.

Third, there are signs of decreasing banking liquidity. The ability of commercial banks to meet future increases in credit demands has diminished. From late April to early December, weekly reporting commercial banks increased large denomination CDs by $15 billion while they were net sellers of Treasury securities. For all banks, the loan-to-investment ratio in November was 2.42, up sharply from 2.17 in November 1976. Finally, manufacturing liquidity, as measured by the Federal Trade Commission, decreased dramatically this year. In the third quarter, cash and equivalents as a percentage of current assets fell to 14%, the third consecutive drop and down from 17% in the fourth quarter of 1976. The current and quick ratios also declined in the third quarter, continuing their irregular slide that began in mid-1976.

Perhaps the single most important issue facing the financial markets in 1978 is who will buy the $60 billion of new Treasury debt. The implications of funding this debt will vary significantly, depending on who ultimately purchases the debt. As suggested by economic theory, there are different consequences of selling U.S. government debt to (1) the Federal Reserve, (2) the foreign commercial banks, (3) the U.S. commercial banks and (4) the principal nonbank financial institutions and the domestic nonfinancial sector.

A sale of Treasury debt to the Federal Reserve would be equivalent to funding the Treasury debt with the creation of highpowered money. In essence, there would be no difference between this transaction and simply running governmental printing presses in order to pay for the deficit. As such, financial market pressures are not likely to develop when government debt is sold directly to the Fed. Theoretically, the Federal Reserve could buy all of the new Treasury debt. There are, however, practical limits to the degree of Fed support to the Treasury market since Fed purchases would tend to stimulate aggregate demand while supporting an increased expansion in monetary growth. If the M1 money supply, for example, were to grow by 7½% or $24 billion and the money multiplier were 2.6, (the same as this year's average ratio of M1 to the monetary

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base), then the Fed might purchase $9 billion of Treasury securities next year. If, on the other hand, the Fed were to purchase $12 billion of new debt, the money supply might then grow by $31 billion or at a 9½% annual rate. Hence, by buying only $4 billion dollars more of Treasury debt, the Fed would raise money supply growth an additional two percentage points.

In certain respects, foreign central bank purchases of U.S. Treasury securities are similar to those of the Federal Reserve. Foreign central banks can also purchase Treasury securities at the stroke of the bookkeeper's pen. However, foreign central bank purchases have been determined largely as a consequence of the trade balance of the United States and the performance of the dollar vis-a-vis other major currencies in the foreign exchange markets. When the U.S. dollar has depreciated against the German mark, for example, to a greater extent than was deemed desirable by the German policy makers, the Bundesbank printed German marks in order to buy U.S. dollars and then it reinvested those acquired dollars in U.S. government securities.

In 1971 and 1972, years where the dollar was under attack in the foreign exchange markets, foreign central banks increased their holdings of U.S. governments by $20 billion and $18 billion, respectively. In the first eleven months of this year, foreign central bank holdings of governments increased by an estimated $25 billion, a record amount. Most of these investments resulted from currency support operations by Germany, Japan and the United Kingdom. As the 1971 and 1972 experience has taught, foreign commercial bank demand for Treasury securities is governed by a self-limiting process. Eventually, our excess aggregate demand and excess monetary growth was transmitted to the rest of the world. The 1971-1972 support operations of the foreign governments resulted in sharply faster monetary growth of foreign currencies. The faster monetary expansion, in turn, produced additional economic growth and higher inflation. Thereby, inflation in the United States was transmitted to the rest of the world. Simultaneously, the falling dollar raised prices of imports into the U.S. market while lowering export prices of U.S. goods in foreign markets. By mid-1973, after a lengthy lag, the dollar stabilized in the exchange markets and foreign demand for U.S. Treasury securities abated considerably.

In recent months, monetary growth in Germany, the United Kingdom and several continental European countries has begun to surge in response to foreign currency support operations. Also, the decline of the dollar has begun to enhance the competitiveness of U.S. products at home and

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abroad. These factors should ultimately serve to reduce foreign demand for U.S. Treasury securities at some point in 1978. Our estimate is that foreign demand for U.S. Treasury securities may only amount to $15 to $20 billion in 1978.

The U.S. commercial bank demand for government securities is somewhat similar to Federal Reserve demand. If the commercial banks have excess reserves, they may utilize these excess reserves to purchase government debt provided the Federal Reserve does not act to offset the increased utilization of excess reserves. If the commercial banks do not have excess reserves and they wish to purchase Treasury debt securities, then they must sell other assets. In view of recent trends, it is not likely that the commercial banks may be adding to their holdings of Treasury securities in 1978. Between June and November, commercial banks reduced their holdings of Treasury securities by $10.3 billion. The fact that banks have been selling relatively expensive CDs in order to cover their growing credit demands clearly suggests that this process is not about to be reversed. We estimate that the U.S. commercial banks may reduce their holdings of governments another $10 billion next year.

The crux of the deficit funding problems for 1978, therefore, falls into focus. There are $60 billion of new Treasury securities coming to market and the net demand from the Federal Reserve, foreign central banks and U.S. commercial banks may total less than $15 billion. This would result in the Treasury having to fund $45 billion of debt with the private nonbank sector of the economy. Under this assumption, there is basically no difference between the funding of the deficit for the Treasury and that of funding the deficit for a large corporation. Although the Treasury is the nation's first borrower, new issues of debt would require higher interest rates and necessitate a transfer of resources from the private sector to the public sector. In other words, it is very likely that deficit financing in 1978 will set up the classical crowding out phenomenon. Next year, short- and long-term yields might rise 125 basis points and 60 basis points, respectively.

In summary, the Treasury debt financing task looms as one of the major issues for 1978. The costs of running large and continuous budget deficits will become quite obvious unless economic activity and private credit demands weaken significantly. In fact, in the past two months, there has been a sharp rise in bond yields although the Federal Reserve policy was accommodative and Treasury bill yields actually declined. This experience suggests that bond market participants are already beginning to respond

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to the pressure of the mounting new supplies of Treasury debt. The 1978 experience should provide ample demonstration that a tax cut without a comparable reduction in government spending is no true tax cut.

The Capital Spending Lag

The prospect for higher long- and short-term interest rates in 1978 is especially discouraging in view of the pronounced lag in capital spending in this cycle. Table I documents the severity of the capital spending slump. This table shows the ratio of real new plant and equipment expenditures relative to real consumption outlays. Plant and equipment outlays are deflated by the wholesale price index for machinery and equipment since this series seems to best correspond to what businessmen say are their actual costs for new plant and equipment. The investment-to-consumption ratio has declined from a peak of 13% in 1966 and 1967 to around 10% this year, a decline of nearly one-third. We now consume almost $10 for every dollar we reinvest in productive outlays, compared with an $8 figure in 1966 and 1967.

This should not be surprising in view of the decline of real corporate profits since 1966. Corporate profits after taxes in 1972 dollars with adjustment for inventory gains and the difference in depreciation between historical and replacement costs have declined since 1965 and 1966. In the first three quarters of this year, real profits were slightly less than $50 billion compared with $61.6 billion in 1965 and 1966. Corporate profits this year are only slightly better than the average corporate profits from 1964 through 1976. This year, economic profits are averaging only 6.6% of total corporate domestic income. This figure is well below the 1964 to 1976 average of 8.6% and the 1965 high of 13%.

In view of the capital spending lag, the proposed $25 billion tax cut for 1978 is something of a mixed blessing. Without question, corporate profits are under pressure and as a result, the reinvestment rate in this country is lagging badly. From that viewpoint, corporate tax relief is needed. However, the decrease in federal income taxes will at the same time, work to lower corporate profitability in investment through other channels. The enlarged deficit will heighten inflationary pressures, increase money and bond yields and this will reduce corporate earnings. Also, the heavier Treasury borrowing will diminish the flow of credit into new plant and equipment expenditures. Thus, in the final analysis, it would be pure happenstance whether the so-called tax cut is beneficial to the corporate

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sector.

Are Stocks Cheap?

There are occasional reports from brokerage houses and other commentators that stock prices at these levels contain "real value." It is commonplace in many of these analyses to point out how precipitously the price earnings ratio has declined in the past 15 years or so. The earnings figures are, however, based upon reported figures, not true profits. This raises the question of whether the price earnings ratio has declined significantly in real terms in the past 15 years and whether, in fact, there is great value for current equity purchases.

To provide a viewpoint on this question, we have calculated the price earnings ratio for the Standard and Poor 500 Index on the basis of corporate profits after taxes in 1972 dollars and adjusted for inventory gains and underdepreciation. Perhaps not surprisingly, we find that in the first three quarters of this year the ratio of equity prices to real earnings was about two or identically the same average that prevailed from 1964 to 1977. In fact, the third quarter of 1977 figure was only slightly below the average and considerably above the ratio that existed from 1964 to 1967. Even this revised price earnings ratio may be overstated. Arthur Burns, Chase Econometrics and several others have calculated that the government adjustment for underdepreciation is far too low.

The Last 1978 Forecast Of 1977

There are several changes in our current forecast. We now expect real GNP to increase by 4.1% in 1978, compared with 4.9% this year. This slight increase from my previous forecast for 1978 of 3.7% reflects the combined effects of upward adjustments to consumer spending along with a downward revision to plant and equipment investment and minor changes to inventory investment and net exports.

For next year, we expect consumption expenditures to rise by 9.0%, down from a 10.6% gain in 1977. Investment in plant and equipment expenditures are now predicted to rise by 10.3% next year, off from 14% this year. This change is necessitated by the latest Commerce Department survey on plant and equipment spending plans. This survey indicated only a 9% rate of advance during the first half of the year. We anticipated that total government expenditures will rise by 13.4% next year, compared with 9.4% in 1977. Housing starts should average 1.85 million units, versus 1.96 this year. The housing sector still seems to

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possess some upward momentum. Permits rose again in November and future mortgage commitments of the savings and loan associations have continued to move up at a healthy pace in recent months. Nevertheless, housing starts should peak in the first quarter of the year, and then trend down during the rest of 1978 in response to diminishing flows of funds into the thrift institutions.

We continue to forecast that new car sales will drop in 1978. Total car sales are expected to be 10.7 million units in 1978, a decline of 500,000 units. Sales of domestic automobiles are expected to decrease by only 200,000, to 8.9 million. The automobile market has already begun to exhibit weakness. This is not surprising. Sales of big ticket items, such as cars, generally peak well before the downturn of the overall economy. Inventory investment is expected to be about $20 billion in 1978, compared with around $18 billion this year. Net exports are still anticipated to improve, however, the gain is somewhat less than in our prior forecast. We look for a $4.3 billion net export deficit, $4.6 billion less than this year. The main reason for this adjustment is that the flow of Alaskan oil has been somewhat slower than we anticipated. Moreover, imports of oil have accelerated in response to governmental efforts to stockpile oil.

The pattern of expected growth in 1978 remains as in our previous forecast. We expect that growth will average between 4% and 5% in the first two quarters of the year before dropping sharply in the second half of the year. By the fourth quarter of 1978, we anticipate that the overall growth of the economy will be essentially stagnant. The downturn of the economy late next year will be due to factors we have previously discussed. The inflation rate is rising. This will, in turn, diminish the growth in real income and liquidity and thereby set the stage for the economic downturn. Other cyclical forces will be at work late in the year. Consumers will be more overextended in terms of their debt obligations, productivity will have moderated sharply further and pressure in labor and product markets should be more evident.

We have not assumed a tax cut in our own forecast. Perhaps such an assumption is an error. We would note, however, that tax cuts have never come on as advertised. The tax cuts that were initially proposed in 1962 were not enacted until 1964. The tax rebates of 1975 came later than expected and the tax rebates of 1976 never materialized. Also, we believe that inflationary pressures will be more intense at mid-year than now. Thus, there remains some likelihood that policy makers will perceive that the downturn is, in fact, due to the rising inflation.

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TABLE I

ANALYSIS OF NEW INVESTMENT TO CONSUMPTION RATIO AND

REAL EQUITY PRICE EARNINGS RATIO, 1964-1977

Year	Ratio: New Plant & Equipment Expenditures To Consumption* (Percent)	Corp. Profits After Taxes With IVA and CCADJ (Bil. 1972 $)	Ratio: Corp. Profits After Taxes** To Domestic Corp. Income (Percent)	Ratio: S&P 500 Index To Corp. Profits After Taxes** (Ratio)
1964	11.3	52.4	11.9	1.553
1965	12.2	61.2	13.0	1.441
1966	13.2	62.9	12.6	1.355
1967	12.8	58.5	11.4	1.571
1968	12.2	55.6	10.2	1.775
1969	12.8	47.8	8.3	2.047
1970	12.6	36.3	6.3	2.293
1971	12.0	41.0	6.9	2.397
1972	12.1	50.5	8.1	2.162
1973	12.6	48.2	6.9	2.228
1974	12.5	27.0	3.2	3.068
1975	10.6	38.1	5.9	2.261
1976	10.1	46.8	6.7	2.180
1977	10.3	49.7	6.6	2.025
1977 I	10.2	43.8	5.9	2.324
1977 II	10.3	49.9	6.6	1.984
1977 III	10.4	55.5	7.3	1.767
Average 1964-76	12.1	48.2	8.6	2.025

* New Plant and Equipment Expenditures deflated by the Wholesale Price Index for Machinery and Equipment, 1972 = 100.
** With IVA and CCADJ.

SOURCES: U.S. Department of Commerce, Bureau of Economic Analysis; U.S. Department of Labor, Bureau of Labor Statistics; Standard & Poor's Corporation.

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THE FIDELITY BANK

November 28, 1977

MORE INFLATION ON THE HORIZON

by

Lacy H. Hunt
Vice President & Economist

This month:

Price Level Determinants

More On Social Security

Forecast Update

The Energy Debate

Price Level Determinants

Evidence is mounting that inflationary pressures are likely to be more intense in 1978 than this year. This stems from our assessment that six main price level determinants are turning adverse. First, productivity is moderating sharply because less efficient plant, equipment and labor are now being used to meet incremental demand. In the past four quarters, private productivity rose by 1.8%, substantially less than the 5.2% pace of the prior six quarters (i.e. the first part of this expansion). In view of the prolonged slump in capital spending, a continuing erosion of productivity gains is likely.

Second, wage demands have accelerated rapidly in recent months and are considerably greater than a year ago. In the 12 months ended in October, the hourly earnings index for production workers on private nonagricultural payrolls rose by 7.8%. This was a percentage point faster than for the comparable figure last October. In the year ended in October, manufacturing wage rates were up 8.4%. The seemingly high unemployment rate is a misleading indicator of labor market conditions. Reports of shortages of skilled workers are more frequent, help wanted advertising is within a fraction of its prior

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cyclical peaks of 1973 and 1969, and initial unemployment claims were at a yearly low in mid-November. Salary costs will be boosted further in early 1978, when the minimum wage and those tied to it go up significantly. Third, costs of fringe benefits will rise dramatically next year in response to higher unemployment and social security taxes as the government attempts to avert bankruptcy of the old age benefits system.

Fourth, the dollar has declined precipitously against virtually all other major currencies. This is serving to boost costs for a wide variety of consumer goods and industrial products. The trade weighted measures of the international value of the dollar understate the importance of the decline of the dollar on the foreign exchange markets. This is because the dollar has appreciated vis-a-vis the Canadian dollar and the Mexican peso. Since many of the transactions with Canada and Mexico are based on the dollar, as this trade is between subsidiaries of the same U.S. companies, the full effect of the Canadian and Mexican depreciation has not been realized.

Fifth, monetary growth has been extremely quick. In the past six months, the rate of money growth has been faster than in any comparable span of 1968, 1972 or 1973, periods where money expansion led to spiraling inflation. It seems the Fed has, in effect, decided not to average down the faster monetary growth of the second and third quarters. The growth targets established for the fourth quarter are so liberal that they do not imply averaging down. Thus, the Fed has eased monetary policy operations and purchased short-run stability in interest rates at the expense of longer-term instability and inflation. Although the money supply has been sluggish in the month of November, this is typical for this month. Moreover, the monetary base has accelerated sharply. In the past two months, the base has grown at a very swift 11.4% pace, substantially faster than the year-to-year gain of 8.8%.

Sixth, in one of the little noticed recent developments, the budget deficit deepened dramatically in the third quarter. On a national income accounts basis, the federal budget deficit was at a $59.5 billion annual rate, up sharply from a $40.3 billion rate in the second quarter. The increased deficit was due to a sharp acceleration in the growth of expenditures. Expenditures rose at a 22.4% rate in the third quarter, compared with an 8% rate of increase in the second quarter.

In view of the likely build-up of inflationary pressures in 1978, it is still reasonable that the cyclical

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peak of the economy will occur late in 1978 or in 1979. Whether one will evolve then and whether the downturn will qualify as a legitimate recession hinges on critical monetary and fiscal policy decisions yet to be made. A continuation of recent large gains in money would undoubtedly lengthen the recovery. However, such money growth would eventually result in substantially higher increases in inflation and interest rates, and then a hard landing. But, if the Fed stabilizes monetary growth on a continuing basis, the next downturn may be relatively mild. A further enlargement in the budget deficit might serve to extend this expansion. This approach also would be counterproductive for the long-run. The larger deficits would serve to heighten inflation, increase interest rates and could eventually lead to a more severe downturn.

In other words, the options currently facing the economy and its monetary and fiscal policy managers are no longer easy ones. Additional measures of stimulation will be increasingly less reliable. They will work only for the short-term and at the expense of substantially more inflation over the longer-term. The coming experience could once again demonstrate that high and rising inflation is the precursor of downturn and advancing unemployment.

More On Social Security

Last month, as an alternative to higher payroll taxes, we proposed extending the full eligibility age of the social security system in order to avert bankruptcy of the system. Several asked whether this would lead to additional overall unemployment. Some felt older workers might remain in the workforce and that job opportunities for younger employees would be reduced and unemployment would rise. A complete analysis of extending the full eligibility age suggests the unemployment rate might actually fall rather than rise. First, the inflation set off by the higher social security taxes is avoided. Second, there is no reduction in the standard of living of those paying the higher taxes and their demand for consumer goods. The higher social security taxes, which would come off the top, would reduce demand for a wide variety of consumer goods. This would, in turn, lead to higher unemployment. Third, and most importantly, the unemployment rate is a function of long-term economic growth which, in turn, is a function of long-term productivity. Since the older workers, who remain on the job are likely to be quite experienced at their job, it is reasonable to assume that their average productivity would be higher than typical new workers. With overall productivity higher, longer-term

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growth would be greater and the unemployment rate would, on average, be lower.

Forecast Update

Our forecast for the near-term and for 1978 is virtually unchanged. We expect real gross national product (GNP) to rise at a 4.2% rate this quarter, followed by a 4.8% pace of expansion in the first quarter of next year and growth tapering off over the final three quarters of 1978. We project about 5% real growth this year and 3.6% next year. We anticipate that the consumer price index (CPI) will rise by 7.2% next year, 0.6 of a percentage point faster than this year. The implicit price deflator is projected to go up 6.4% in 1978, versus 5.5% this year. We anticipate total automobile sales of 10.5 million in 1978, 0.7 million less than this year. We look for 8.7 million in domestic car sales, compared with 9.3 million in 1977. Thus far in the new model year, domestic car sales have been running at a 9.3 million annual rate. Although this was in line with our prior forecast, it is clear that the new model cars have been initially well received. We anticipate housing starts of 1.91 million units for 1978, 50,000 units less than this year. We expect the unemployment rate will average 6.9% in 1978, 0.2 percentage points less than this year.

On the interest rate front, we anticipate that the federal funds rate will average 6.7% for the fourth quarter and the first quarter of next year. This stems from our interpretation of where the Fed has recently set its monetary targets. We continue to anticipate a rise of 100 basis points in the second and third quarters of the year. In view of this scenario for short-term interest rates, the newly issued "Aa" utility note should rise to slightly more than 9% by the third quarter of next year, about 70 basis points higher than current levels.

One area where we do anticipate improvement in the economic outlook next year is the trade balance. Foreign sales of agricultural products seem likely to rise and the prices of these products have also gone up in recent months. This stems from poor crops in the Soviet Union and China. The sharp decline of the dollar against the Japanese yen and the German mark should serve to slow imports of these countries to the United States. The appreciation of the yen has greatly improved the competitive posture of the redesigned small American cars and the new four-door Chevette seems to be encroaching on the Japanese car market in the United States. Also, the flow of Alaskan oil is

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becoming more steady. Thus, we expect that the deficit on net exports of goods and services will be only $1.3 billion in 1978, compared with $8.5 billion this year. This would imply that the trade deficit might be $23 billion next year, compared with $30 billion this year.

The Energy Debate

The energy debate currently going on in Congress is so critical to the future of this country that some comments from an economic perspective are in order. The President deserves substantial credit for stating bluntly the stark facts about the nation's energy crunch and for presenting them in the most somber of tones. This is no temporary situation that can be brushed aside by piecemeal efforts or by occasional exhortations to conserve. The President is also to be commended in that his program accepts the basic principle that domestic energy prices must rise to world prices and in line with true replacement value. Basic economics teaches that energy conservation and efficient use of fuel can not be accomplished without fair market prices.

But, what the President does not recognize is that government controls and interference are an important cause of our current predicament. Natural gas prices have been controlled by the Federal Power Commission since the mid-1950s. These price controls have been inefficient and they are terribly outmoded. Moreover, the below market prices, which have been a by-product of the controls, have discouraged the production and search for new natural gas. While the President is willing to allow somewhat higher prices, he plans to extend the system of price controls. This approach is not desirable. Instead, controls should be dismantled entirely on all new gas wells. Prices will rise on the incremental supply gradually. More importantly, the higher prices will bring on new supplies that can sustain our standard of living. The new supplies will encourage the drilling for methane trapped in coal, for the geopressured methane that exists at depths of 15,000 feet or more, and for natural gas in the more remote offshore and mountainous regions of this country.

Some of the President's statements on the issue of natural gas deregulation have been less than helpful. In a news conference several weeks ago, the President charged that the oil and gas producers were trying to "stage the biggest rip-off in history." In his recent nationally televised address, he repeated that the oil companies

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"wanted immediate and permanent deregulation of gas prices which would cost consumers $70 billion or more between now and 1985." Earlier statements indicated that decontrol would be useless because little gas remains to be found. These statements suggest a misunderstanding of the issues at hand. Total deregulation of all natural gas has simply not been proposed. Price deregulation is advocated only for the new gas that has not yet been discovered. If the President's assumption is correct, that little additional new gas is likely to be discovered, the higher prices would apply to only a small increase in quantity and no rip-off could occur.

As the President requested, the House of Representatives passed a bill that would set a ceiling at $1.75 per thousand cubic feet (MCF) on new natural gas. The Senate, however, voted to deregulate new gas. The House version is not in the interest of the American consumer. Deals are being made to import liquified natural gas from Algeria and Indonesia at $3.50 per MCF and Canadian and Mexican natural gas above $2.00 per MCF. Hence, if controls on new gas are retained, domestic supplies would continue to shrink and imports of a natural gas from foreign producers would rise. This would worsen the trade balance and longer-term inflationary pressures would be more severe.

Recognizing that domestic oil prices are below world prices, the Administration proposes a wellhead tax that would bring domestic prices in line with world prices. In the guise of raising the domestic oil prices to the world level, this wellhead tax could constitute the largest peacetime tax increase in the history of the United States. Instead of adding the complication of a new tax and the associated paraphernalia, it would be far better to phase out all price controls and let the market raise prices to the world level. This would provide domestic oil companies with the same incentive to produce oil which our buoyant demand insures for foreign producers. If the market is allowed to set the price, this would bring forth additional supplies and provide energy companies with the earning base to develop alternative supplies. This, in turn, could lead to lower prices in the future. But, if the cost to the consumer rises due to a tax increase, the price of oil will rise now and permanently, since production would not be forthcoming. Fortunately, the Senate defeated the wellhead tax. Now, there is a possibility that the wellhead tax may be combined with the plowback provision, so that the tax would be reduced to the extent that the producers use the money for exploration and development of new oil. Although the plowback provision combined with the tax may be the ultimate political solution, the market approach is still the best.

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THE FIDELITY BANK

October 28, 1977

EXCESSES

by

Lacy H. Hunt
Vice President & Economist

This Month:

Creeping In

The U.S. economy has plodded through a difficult year. This year's inflation rate is likely to be a full percentage point faster than in 1976, while the pace of real growth should fall well below that of last year. After May, the unemployment rate stopped declining. Since early January, short-term interest rates have advanced 200 basis points and bond market yields have risen 50 basis points. The stock market has experienced its worst performance since 1974. Business confidence is at a low ebb, the massive trade deficit is at an unprecedented level and the dollar has been thoroughly drubbed in the foreign exchange markets. A national energy policy has still not been determined. Tax reform measures that could undermine longer-term capital formation seemingly lurk in the background. The governmental budget imbalance is huge and larger deficits are promised as a cure-all for any potential problem. The Federal Reserve either lacks the will, ability or political clout to stabilize monetary growth at a noninflationary pace.

The drift of recent economic developments clearly paints a picture of an economy with problems and worries on its mind. One major reason for the turn of develop-

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ments, and one that we have discussed in previous issues, is that the current expansion has begun to demonstrate the properties of the final phase of a business cycle expansion. Another explanation is that a number of excesses have started to appear.

There are numerous factors that suggest this recovery is in its final stage. First, this expansion is aging. In October, the U.S. economy ended the thirty-first month of this growth period. This time span is within eight months of the longest peacetime recovery of the postwar period and only three months less than the average of these expansions. Second, productivity growth is moderating sharply because less efficient plant, equipment and labor are now being used to meet incremental demand. Third, the automotive and housing sectors are in the vicinity of their prior peak levels of demand. Automobile sales this year should be nearly as high as in the previous peak year of 1973. While housing starts are below the peak levels of 1972 and 1973, they are above the peaks in 1968 and 1969. In 1972 and 1973, however, starts were bolstered by federally subsidized units and substantial overbuilding. This suggests these factors can provide little additional thrust to the economy. Fourth, investment in plant and equipment is beginning to accelerate. While plant spending is not all that's desired, it is being compensated for by strength in state and local government spending. Finally, the stock market has dropped sharply this year. The stock market is not so fickle as to sell off 20% for no fundamental reason.

The other main explanation for the malaise is that excesses have begun to emerge. While the current economic expansion has not witnessed a quadrupling of oil prices, substantial overbuilding of inventories, shortages and commodity speculation; a careful analysis of the current scene does suggest that early signs of some excesses have begun to appear. Although these imbalances are in an embryonic stage and could still be reversed without significant repercussions, they are present, nevertheless. Five such imbalances can be identified.

First, in spite of the high unemployment rate, there are increasingly more frequent reports of shortages of skilled workers. The index of help wanted advertising is within 5.5% of its 1973 peak and only 2% from within the 1969 peak. Second, there has been real estate speculation in California and in other parts of the West and Southwest. An overhang of unsold new housing units is developing in parts of California. There are shortages of certain building

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materials and prices of these items have risen substantially.

Third, the dollar has declined sharply against the Japanese yen, the German mark and most other European currencies. This is likely to boost costs for many consumer goods and industrial products. The large trade deficit and the speculative outflow from the dollar has led to a sizeable accumulation of short- and intermediate-term liabilities in the hands of the foreign central banks. Rising gold speculation suggests excess liquidity may be developing in international financial markets.

Fourth, the budget deficit is clearly excessive for this stage of the recovery. Earlier in the postwar period, compensatory fiscal policy was practiced. In other words, budget deficits were used to stimulate the economy during prior recessions and early in previous expansions. But as earlier expansions matured, budget deficits were reduced sharply and were generally relatively small in order to avoid overheating. In fact, in most cases the budget was in surplus. We are currently entering the eleventh quarter of this expansion. At this period in the 1954-1957 expansion, the Eisenhower budget was in surplus. The same was true for the comparable Kennedy budget in the 1961-1965 expansion. By the eleventh quarter of the 1970-1973 inflationary expansion, the budget was in deficit by only $6 billion as the Nixon Administration was practicing something known as "impounding." The budget deficit for the next year will be at least $50 billion and perhaps as much as $70 billion, amounts that are substantially more than this year.

Fifth, monetary growth is becoming excessively rapid. The most recent two-quarter growth rate for the narrow money stock exceeds the fastest two-quarter period in either 1968 or 1972 or early 1973. The money growth of these prior years necessitated restraint in 1969, 1973 and 1974 in order to overcome spiralling inflation. In the past two quarters, M1 has grown at a 9% rate, compared with rates of 8.7% and 8.2% for the second halves of 1972 and 1968, respectively. The most recent growth in the monetary base is still a shade lower than for the high period in early 1973, but it is substantially above the late 1968 rate. The same holds for the M2 and M3 money stocks. The growth in the monetary base is now more rapid in this recovery than it was in the comparable 30 months of the 1970-1973 expansion. M1, M2 and M3 have increased slightly less in the past 30 months than in comparable periods of 1970 to 1973. The differences are, however, very modest. In the past 30 months, M1 is up 16.7%, versus 19.7% in the comparable

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period from 1970 to 1973, while M3 is up 33.6% in the last 30 months, only 1.2 percentage points less than in the prior expansion. A continuation of such large gains in money would permit the economy to expand further through 1978 and into early 1979. However, such growth in the monetary aggregates would bring with it substantially higher increases in inflation and interest rates than we are forecasting. Hence, if the Fed fails to contain money growth, a hard landing in 1979 would be inevitable. On the other hand, if the Federal Reserve acts to bring down the monetary growth rates quickly and successfully, the late 1978 and early 1979 downturn may be relatively mild.

Crowding-Out

"Crowding-out" is the term that refers to the impact of sales of new Treasury debt on the financial markets and the economy. Provided other determinants of interest rates do not change, a deficit funded by the sale of debt to the private sector will serve to raise interest rates and thereby reduce funds available for the financing of private expenditures. This diminished ability of the private sector of the economy to fund its expenditures in the financial markets implies that private expenditures will be reduced. This concept was discredited in the minds of some market practioners because crowding-out was used to justify a forecast of substantially higher interest rates for late 1975 and 1976. Some proponents of the crowding-out thesis argued that the huge budget deficit of that time would lead to rapidly rising money and bond yields. This did not happen. Instead, interest rates declined sharply as private credit demands fell rapidly and sufficient resources were available to cover the deficit. Although interest rates did not rise in late 1975 and 1976, this is not proof that crowding-out did not, in fact, occur. If the 1975 and 1976 Treasury borrowing had been less sizable, more funds would have been available to the private sector.

Circumstances are now ripe to produce a classic textbook case of crowding-out. Huge budget deficits at this mature stage of the cycle are unprecedented. Moreover, private credit demands are expanding. In fact, in the past three quarters, total loans at commercial banks have increased at annual rates of 9.2%, 12.6% and 14.3%. Our calculations indicate that if growth in M1 is held to a 6% to 7% range in 1978, the heavy Treasury borrowing scheduled for the next year will serve to add to upward pressures on short- and long-term interest rates. The effect of crowding-out will first reduce flows of funds to the thrift institutions and thereby produce a lower

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level of housing starts. Next, the process will result in reduced flow of credit to the consumer sector. Finally, there will be lessened credit availability to small business and the agricultural sector. The only caveat that we make in offering this projection is that monetary growth not substantially exceed 6 1/2% on average. If monetary growth continued at a 10% or 12% or higher rate, then interest rates could be held down. While crowding-out would not become visible under these circumstances, ultimately there would be a significant inflationary outburst.

Social Security Fiasco

For several years, students of social security have been arguing that serious imbalances were developing in the program. Now, there is growing recognition of this disturbing development in political circles. This year, the old age survivors and disability insurance funds will incur a huge $6 billion deficit that will double by 1981. Moreover, the expected deficits of the coming five years will entirely eliminate the assets accumulated by these funds. In other words, the social security system is on the verge of insolvency and a taxpayer bailout is needed.

A taxpayer bailout of the social security program can be accomplished by either of two approaches. On the one hand, we could raise the tax base on employee contributions and uncap or hike materially the base for employer contributions. This approach would have the highly undesirable side effect of reducing the real family income. With real income down, demand for consumer goods can surely be expected to be pared. Raising business taxes would strengthen inflationary forces. For those firms able to pass along the higher costs, the prices of their products would rise. For those firms unable to pass along the higher taxes to consumers, their demand for labor would decline and this also would tend to produce a lower standard of living for the working sector of the population. A variant of this approach would place all government employees under the program. While this ploy will solve the near-term problem, it would, at the same time, reduce the take-home pay of these workers, their standard of living would fall, they would buy less cars and other consumer items and the economy would be adversely affected. Unfortunately, we appear on the verge of continuing this first approach that has proved so obviously unsuccessful. This past week, the Senate Finance Committee voted higher base levels for the social security tax for employees and employers, along with higher tax rates.

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A simpler and far less complicated way of approaching the problem also exists. Instead, we could recognize that time and demographic shifts have undermined the social security program. The advances in medical technology and the greater general longevity could be acknowledged. One such solution would be to increase the full eligibility age from 65 to 66 or 66 1/2 and further extend this age as needed, with a likely target being age 70 by the end of the century. By extending the eligibility age, the trust funds would have the income from the older workers who remain in the workforce while not having to pay benefits to those workers currently turning 65. This approach would thereby solve the problem. While there are arguments against this solution, tis alternative needs to be aired. I personally believe that this latter approach is far more desirable than setting off an additional wave of inflation and ultimately paying social security benefits in such highly inflated dollars that retired persons are tricked when they find that their benefits are far less than planned.

Outlook Update

The third quarter results were about as expected. Growth in real GNP was 3.8%, compared with our forecast of 3%. Our estimate of inventory investment was considerably lower than the actual. Before acknowledging this forecast miss, we would prefer to wait until the third quarter revisions, when we expect the number to be restated downward. In view of the stronger than expected inventory investment in the third quarter, we have reduced our forecast for the fourth quarter to 4.2%.

Our current forecast for real growth for 1978 is 3.6%, compared with an estimated 4.8% this year. The quarterly trend from the first to the final quarter is 4.4%, 3.4%, 1.9% and -0.5%. We expect that the CPI will rise by 7% against 6.6% this year. The higher rate of inflation is mainly due to a further slowing in productivity along with a further rise in wage rates. Wages will be boosted by a hike in the minimum wage and non-age costs will be raised by higher social security and unemployment compensation taxes in business. The rise in wage rates coupled with the slowing in productivity and the more modest economic growth indicates to us that real after tax corporate profits will decline 5.7% in 1978, after rising 7.4% this year.

Among other key components of our forecast, we expect total automobile sales of 10.6 million, down from 11.2 million. We anticipate that housing starts will decline from a 2 million pace in the beginning of 1978 to about 1.8 mil-

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lion by year-end. We expect business fixed investment to rise 13.8% in 1978, down from 14.4% this year. Consumption expenditures are projected to go up about 7% in 1978, compared with a 10.3% increase this year. Total government spending should rise 14.4%, substantially better than this year's 9.9% gain. Due to the flow of Alaskan oil and an assumed strengthening of U.S. exports because of better foreign economic conditions, we anticipate a $1.3 billion deficit of net exports of goods and services in 1978, compared with this year's $10.1 billion deficit.

In the money and capital markets, we anticipate that the Federal funds rate will rise about 100 basis points between now and the third quarter, the time when we currently expect interest rates will peak. Depending upon political pressures, this would mean that the prime rate could move into an 8.5% to 9% range. A continuation of this year's political pressures would result in a narrowing of spread between the Federal funds rate and the prime rate. In the long-term market, yields should rise 60 basis points from current levels and perhaps somewhat more. Thus, our forecast would place the peak newly issued "Aa" utility bond at 9% in the third quarter, compared with a current level of 8.4%, and 7.90% at the beginning of 1977.

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JERRY L. JORDAN
SENIOR VICE PRESIDENT & ECONOMIST

Congressman Parren J. Mitchell, M.C.
U.S. House of Representatives
Subcommittee on Domestic Monetary Policy
of the Committee on Banking, Finance & Urban Affairs
Washington, DC 20515

Dear Congressman Mitchell:

I am pleased to have this opportunity to provide comments on the conduct of monetary policy in 1977. I do not believe that monetary policy was conducted effectively last year, and as a consequence some adjustment costs are going to be incurred to correct the excesses that have occurred. My interpretation of policy actions last year is that the Federal Reserve tried to employ two short-run operating targets simultaneously -- the money supply and market interest rates -- and wound up creating the worst of both worlds.

I do not believe that even more rapid growth of the money supply would have prevented the sharp increases of short-term market interest rates. Except in the very short run (two or three months) it is wrong to consider interest rates and money supply as alternative policy targets. I believe the reason that short-term interest rates have risen so sharply this year is <u>because</u> the money supply has grown excessively. Although this contradicts conventional wisdom, if the Federal Reserve had achieved growth of the money supply within the target ranges announced earlier this year, I doubt short-term interest rates would have risen as much as they did.

At each Open Market Committee meeting the Federal Reserve policymakers view the growth of the money supply and changes in short-term interest rates during the subsequent month or two as moving in opposite directions. However, market participants understand that over a somewhat longer period the actual results will be the exact opposite. If the money supply grows more rapidly than previously, or more rapidly than desired by the monetary authorities, market participants understand it will be necessary for the Federal Reserve subsequently to adopt more restrictive reserve supplying operations and allow short-term interest rates to rise in order to slow the growth of the money supply. If growth of the money supply falls short of the Federal Reserve's

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targets or the trend rate, then the markets understand that short-term interest rates will remain the same or decline somewhat as long as growth of money and bank reserves is below the targets or the trend rate.

The behavior of the Treasury bill futures market provides evidence regarding the attitudes of financial market participants towards the money supply and market interest rates. Whenever the money supply is announced to have increased sharply, Treasury bill futures market interest rates rise sharply. On the other hand, when the money supply is unchanged or declines, interest rates on the Treasury bill futures market also decline.

During the past year actions by the Federal Reserve were criticized as being too expansionary by those who emphasis the money supply, and too restrictive by those that emphasize movements in short-term interest rates. I agree that there is too much emphasis placed on the weekly money supply numbers, and I also believe that there is too much emphasis placed on daily and weekly movements in short-term interest rates. The monetary authorities should be concerned with the trend of growth of the money supply over a period of several months and longer, and with the general pattern of interest rates and inflation over a business cycle. Short-run preoccupation with movements of interest rates can cause the central bank to get substantially off of its long-run path, ultimately causing a costly correction in terms of inflation, output, and employment.

Since the central bank desires to operate on a weekly target, and participants in money and credit markets will always look for a weekly number to gauge central bank policy by, I would urge that the recommendations of the Federal Reserves own internal studies under the "Committee on the Directive" be implemented. On two separate occasions in the past decade the Federal Open Market Committee has authorized extensive studies of policies for formulation and implementation of monetary policy, and both reports recommended increasing the emphasis on a reserve aggregate measure, such as the monetary base, as the short-run operating target.

Many other central banks of the world, Germany and Switzerland in particular, have had considerable success with using their version of the monetary base as an operating target. A number of studies on the U.S. monetary system suggest that employing the monetary base as a weekly and monthly operating target would produce results that are preferable to either interest rates or the money supply.

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The behavior of the central bank in 1977 has been somewhat of a paradox in other respects. The Federal Reserve frequently emphasizes that the short-run money supply statistics are unreliable and they have limited ability to control the money supply in the short run. A number of studies, including one commissioned by the Federal Reserve System, have made specific recommendations for improving the quality and reliability of the money statistics and for making institutional changes which would enhance the ability of the central bank to achieve its own money supply growth targets. The Federal Reserve failure to make progress towards implementing any of these statistical or procedural reforms is discouraging at best. An appropriate role for Congressional oversight of monetary policy in 1978 would include insistance that the central bank make tangible progress towards improving the statistics and control techniques, or explain its reasons for maintaining the status quo.

In 1978, if growth of the money supply continues to exceed the Fed's long run targets, short-term interest rates will continue to rise sharply, disintermediation will occur, and the dollar will continue to decline on foreign exchange markets. In contrast to 1977, I would expect sharper increases in long-term interest rates the faster the growth of money this year. This would be caused by the observation and fears of accelerating inflation over the next few years.

The most constructive thing the Fed can do at this point is to make it clear that it is going to immediately return to its announced policy of gradually reducing the trend growth of the money supply. In such an event, I doubt long-term interest rates would rise significantly from present levels.

Sincerely,

Jerry L. Jordan

Jerry L. Jordan

(Mr. Jordan enclosed two studies, which follow.)

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"DEFENDING" THE DOLLAR

Jerry L. Jordan

The price of the U.S. dollar in foreign exchange markets relative to other major currencies -- notably the German Deutschmark and the Japanese Yen -- has declined sharply this year. Said somewhat differently, the number of D-marks or Yen that would be received in exchange for one U.S. dollar has gone down and, of course, the number of D-marks or Yen that a foreign consumer must give up in order to acquire one U.S. dollar also has fallen.

Foreign officials have not been very happy about this development, and newspapers have carried numerous quotes of foreign individuals pleading that the United States should "do something" to "aid", support", or "defend" the dollar. There are only a few options available to the Federal Reserve System as a means of influencing the price of the dollar on international exchange markets, and they all have "side effects" that must be considered. Foreign central banks can take actions to influence the exchange rate between their currency and the U.S. dollar without influencing the U.S. money supply, but Federal Reserve intervention on foreign exchange markets may have a direct influence on the money supply of foreign countries. Also, actions to influence exchange rates, like actions to influence short-term market interest rates, can have opposite effects in the long run than in the short run.

Central banks of other countries hold assets considered to be "foreign reserves" — a large part of which are usually U.S. government securities. When they want to "support" their own currency on foreign exchange markets, they can sell the U.S. Treasury securities and use the dollars received to buy their own currency in the market. When they want to "support" the dollar, they simply create more of their own currency to pay for dollars purchased in the foreign exchange market.[1] If they do not want the growth of their own money supply to be more rapid as a result of the intervention, they must take offsetting actions such as raising reserve requirements or selling domestic securities on the open market.

The only "foreign reserve" held by the Federal Reserve System in any significant quantity is gold. Presumably, the U.S. could sell some of its gold for foreign currency and use the foreign currency to "buy" dollars on foreign exchange markets.[2] Such actions would contract the U.S. monetary base and money supply, and the Federal Reserve would have to decide whether that was desirable from a domestic monetary policy standpoint.

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[1] They always convert dollar balances into U.S. Treasury securities or some other dollar denominated interest bearing asset.

[2] The U.S. has taken the position that gold has been "demonitized" and has no role as an international reserve or monetary asset, but continues to hoard its stockpile.

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The only other way the Federal Reserve could intervene to "support" the dollar on foreign exchange markets is to borrow some foreign currency from another central bank and use it to buy dollars. Such borrowings of foreign currency from a foreign central bank are referred to as "swaps".

Swaps

Central banks are the only organizations that can literally write-up both sides of their balance sheets with the stroke of a pen. The partners in a swap each simply increase an asset item and a liability item on their books. Initially, the Federal Reserve Bank records an increase in foreign owned balances (denominated in dollars) as a liability. The U.S. dollars "put" into the account of the foreign central bank are literally created -- nobody else has less dollars as a result. Likewise, the Fed's newly acquired asset -- a balance at the foreign central bank -- was created.

At this initial point nothing has happened to the money supplies of either country since central bank balances are not counted. However, since the purpose of the swap was to enable the Federal Reserve to intervene, the foreign country money supply will increase and the U.S. money supply will contract as the Fed acquires dollars through the sale of the foreign currency. But, foreign central banks don't hold large idle balances at the Fed since they don't earn interest, so U.S. Treasury securities are purchased by the Federal Reserve on behalf of foreign central banks. Foreign balances at the Federal Reserve decline as the Treasury securities are paid for, and that increases the U.S. money supply. This increase in the U.S. money supply offsets the decrease caused by Fed intervention on foreign exchange markets. The net effect of Federal Reserve "support of the dollar" using foreign currencies acquired through swaps is no change in the U.S. money supply, and an increase in the foreign money supply. The foreign central bank must either take offsetting action or accept the implications of an acceleration in the growth of its own money supply.[3]

At least a temporary effect of the central bank intervention to "support the dollar" is on interest rates on short-term U.S. Treasury securities, similar to the effects of open market purchases by the Fed. But a major difference compared with purely domestic operations is that the U.S. monetary base (and money supply) is not expanded by the Fed purchases of securities for foreign accounts. Unless there is some offsetting actions by the foreign central bank, the effect is as though the Federal Reserve acquired the authority to conduct open market operations using another country's money supply.

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[3] In most respects the results are exactly the same as when the foreign central bank buys dollars for its' own account. One difference which may contribute to the desire to see the Fed do the intervening is that the exchange risk associated with intervention facilitated by swap agreements is usually shared on a 50-50 basis between the participating countries.

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Exchange Rate Pressures

A wide variety of factors are often cited as "causes" of a change in the exchange rate between the currencies of two countries. Changes in the relative rates of real economic growth, inflation, economic policy actions of government, or political uncertainty can all contribute towards making the goods or securities of another country look more or less attractive.

In 1977 the growth of total demand for goods and services in the United States was much stronger than our major trading partners. Real output growth and inflation both accelerated sharply compared to late 1976 and compared to other countries. Part of this stronger growth in demand was reflected in a sharp increase in imports of foreign goods. Since our trading partners did not increase their demand for our exports as much, nor did they desire to acquire a sufficient quantity of securities denominated in dollars, the exchange rate between dollars and other major currencies has declined substantially.

The price of the dollar on foreign exchange markets will stop declining only when foreign demand for our goods and securities matches our demand for their goods and securities. Attempts might be made to bring this about in a number of ways, including changes in quotas, tariffs, capital controls, reference prices or other government mandated changes in the terms of trade. But all such actions would impose some costs on the consumers of at least one of the countries involved. And as long as total demand and inflation in the U.S. continued at a more rapid rate than other industrialized countries, the exchange rate would be under downward pressure.

To achieve and maintain stable exchange rates over an extended period of time, countries cannot experience widely divergent rates of inflation. This suggests that there are only two basic approaches to "defending" the international price of the dollar. One would be to halt the erosion of the domestic price of dollars in terms of goods and services -- that is, end inflation. The other would be to get other industrialized countries to inflate along with us. The later alternative seems to be the most likely approach.

Throughout 1977, U.S. government officials have been "encouraging" foreign countries — again, notably Germany and Japan — to adopt more stimulative monetary and fiscal policies. Since U.S. economic policies have become increasingly stimulative in 1977, and inflation will accelerate further in 1978, a dramatic increase in total spending in Germany and Japan would be necessary to close the gap.

However, recently the central bank of Germany announced that the target growth rate for their central bank money (similar to the U.S. monetary base) for 1978 is 8 percent, the same as for 1977. Also, they emphasized that this would imply a growth of only 5 to 6 percent from the end of this year to the end of next year, in view of the accelerated growth that has occurred in recent months. If participants in foreign exchange markets expect that the German monetary authorities will limit their actual monetary growth to the announced targets, but expect that the Federal Reserve will continue to exceed its' announced targets for 1978, the U.S. dollar will continue to be under downward pressure, relative to the D-mark, on foreign exchange markets.

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NEAR-TERM BENEFITS, LONGER-TERM COSTS

Jerry L. Jordan
Senior Vice President & Economist

Except for faster inflation, 1978 will be a pretty good year. In the first half oil prices will remain unchanged, real output growth is likely to be stronger than in the second half of 1977, and the unemployment rate can be expected to decline to somewhere between 6 and 6½ percent.

The Lags of Policy Actions

Monetary and fiscal policy actions in 1977 were more stimulative than at any time in several years. A substantial body of economic research supports the view that the initial impact of an acceleration in the growth of the money supply and government spending is on the growth of real output and employment. The 8.3 percent average growth of the narrow definition of the money supply (M1) during the last three quarters of 1977, especially when accompanied by a sharp acceleration in the growth of government spending, should foster a rate of growth of total spending in the economy (GNP) in the 11 to 12 percent range during the first half of 1978. The increased growth of nominal spending is likely to be composed of growth of real output of more than 5 percent and inflation of 6 to 7 percent.

Looking further ahead, if monetary and fiscal stimulus in 1978 are similar to the last three quarters of 1977, normal lag relationships suggest that in 1979 the rate of inflation would increase further, probably to the range of 7 to 9 percent. Growth of real output and employment still would be positive, although slower, so long as the strong stimulus is maintained.

Re-Assessment of Economic Policies

It seems probable that a change in priorities for economic policies is likely around mid-1978. Inflation, will have risen from less than a 4 percent rate in the fall of 1977 to over a 6 percent rate in the spring of 1978, and will continue to accelerate. The unemployment rate will have declined from 7 percent in the fall of 1977 to less than 6½ percent by mid-1978. In such an environment it may turn out that a Congress facing an election in the fall will decide that tax cut stimulus is not the appropriate economic policy action for the second half of 1978.

One response might be to reduce the growth of government spending in the fiscal 1979 budget and to plan a marked reduction in the deficit by foregoing the tax cut. This could be combined with a reduction of money growth. Such actions — slower growth of goverment spending and money supply — in the second half of 1978 would slow the growth of total spending in the economy in 1979. The same relationships between policy actions and economic activity that indicate strong growth of total spending in the economy which will occur in the first half of 1978, would also indicate a marked reduction in output growth in 1979.

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The dilemma is simply that once monetary growth and government spending have accelerated to new higher rates, as in 1977, there are only two options available to policymakers. The high rates of growth can be maintained indefinitely and the average rate of inflation will rise to new correspondingly high rates, or growth of money and government spending can be reduced to or below the previous trend rate. However, the initial impact of the deceleration of money growth and reduced growth of government spending is on real output and employment. The rate of inflation can be expected to begin to slow only after a lag of some two or three years.

These relationships have proven to be reliable regardless of the proximity of the economy to full employment and full capacity utilization. There are good reasons to believe that underutilized economic capacity at present is not near so large as the physical capacity utilization data might suggest. Nevertheless, policymakers' perceptions of the economy's proximity to full utilization of its resources are bound to be a factor later this year since the unemployment rate still will be around 6 percent and the capacity utilization numbers will not indicate severe supply constraints. There will be some doubt as to whether a significant move toward monetary and fiscal restraint is appropriate.

Some observers will argue that the accelerating inflation is not attributable to "demand pull", but that the inflation is caused by "cost push" forces. Such reasoning would be used to support arguments in favor of direct restraints on prices and wages, rather than monetary and fiscal restraint, as an appropriate policy for dealing with inflation.

A combination of direct restraints on wages and prices coupled with continued strong monetary and fiscal stimulus could potentially postpone the occurrence of a recession in 1979, but at a cost of substantially increasing the probability of a much more severe contraction in 1980 or later. At the present time it is likely that the adoption of monetary and fiscal restraint in the second half of 1978 would produce a recession in 1979 that would be relatively mild -- on the order of magnitude of the mini-recession in 1967 or the shallow recession in 1970. However, if strong monetary stimulus continued for another year or two, possibly accompanied by some form of incomes policy, then the next recession would be more severe than 1970 -- possibly approaching the 1974-75 contraction.

Interest Rate Patterns

Short-term market interest rates rose about two percentage points in the last nine months of 1977, but are still well below the levels of longer-term yields. Such a sharply upward sloping yield curve is an unusual condition for the last months of the third year of economic expansion. During 1978 the yield curve should flatten further, and the expectation of somewhat faster inflation suggests that both short- and long-term yields will rise.

For those who choose to assume that restrictive monetary and fiscal actions will be adopted later this year, and a recession will occur in 1979, a downward sloping yield curve should be expected prior to the economic contraction. That would suggest a rise in short-term market interest rates of at least two percentage points from present levels, with relatively little upward movement in longer-term yields. This pattern would be consistent with little change in expectations about the long-run average rate of inflation, while increased short-term credit demands are not "accommodated" by the Federal Reserve.

For those who choose to assume that monetary growth will remain rapid this year and into 1979, a more substantial rise in longer-term interest rates should be expected. This does not imply that the rise in short-term yields will be less, but only that the yield curve will shift to higher levels and still be somewhat upward sloping a year from now.

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50 Memorial Drive
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Franco Modigliani
Institute Professor

December 30, 1977

Subcommittee on Domestic Monetary Policy
Room 3154 House Annex #2
2nd and D Streets, S.W.
Washington, D. C. 20515

I received a letter from Parren Mitchell asking me to send to you my views on the monetary policies which took place during 1977. Enclosed is a copy of my statement.

Sincerely yours,

Franco Modigliani

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CRITICISM OF MONETARY POLICY IN 1977

by Franco Modigliani

Monetary policy in 1977 has been rather unsatisfactory. Its failures are a matter of both form and content.

From the point of view of form, I would continue to recommend that the Federal Reserve should state its primary target in terms of a target growth of money income broken down into real income growth and price changes. At the beginning of the calendar year, this target should presumably coincide with that set forth by the Administration with the consent of Congress through the budget process. This target should be revised if and when new evidence suggests that it is no longer appropriate. Together with the income growth target, the Federal Reserve should indicate the growth of the main monetary aggregates and the broad path of short term interest rates, which, in its view, is appropriate to the achievement of that target. The Federal Reserve should then be free to revise these intermediate targets with appropriate explanation as to why a different growth of the aggregates was appropriate to achieve an unchanged income target -- e.g., evidence that current and prospective aggregate output was growing faster or slower than target. It should also feel free to depart from the stated targets for awhile, but again, with an explanation of the reason for such departure. For instance, departure may be justified by short run fluctuations in the demand for money, while income remains on its desired broad path. Finally, the success or failure of the Fed should be judged primarily by its success or failure in achieving the income target and not by success or failure in achieving the monetary growth and interest rate targets.

With respect to content, monetary policy in 1977 has been excessively tight. This is largely because the target growth for M1 was set too low at

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the beginning of the year -- at least on the assumption that the Fed was trying to achieve the Administration's target. The chosen growth target for M1 presupposed a continuation in the rapid rise in velocity of circulation of M1, interest rate constant, which was very unlikely to be realized, and in fact, was not realized. (It is, of course, possible that the Fed never accepted the Administration's growth target, and was covertly aiming for a lower one, but if so, this should be regarded as an unbearable situation whose repetition must be avoided through the approach stated in the first paragraph.)

The Federal Reserve appears to have responded to the inadequacy of its M1 target, in part by allowing M1 to grow well above target through much of the year. This, per se, was a step in the right direction, but since the Fed never changed its target or explained why it was appropriate to exceed it, the impression was created that the Fed was losing control of M1, and that a severe tightening was in the offing, which had very damaging effects on financial markets and most likely on the stock market in particular.

What is particularly puzzling in this whole episode is that the growth of M2 was never significantly above target, yet the Fed appears to have made little effort to call attention to this fact or to the fact that in the present circumstances M2 is likely to be a more reliable indicator than M1.

But even though M1 was allowed to exceed target, still its growth was inadequate. The evidence for this proposition is first that with almost certainty, real growth this year will fall short of the Administration's target, and second, short term interest rates rose not far from 200 basis points in the last six months or so. This rise seems hardly appropriate for an economy whose growth rate is still sluggish compared with the existing slack. Indeed, the

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prevailing view is that growth in the coming year will be definitely unsatisfactory unless we proceed with a substantial tax cut.

This leads me to my final criticism of both the style and content of monetary policy. In my view, the Federal Reserve by adhering too closely to the monetarists' prescription of constant and very limited growth in monetary targets, has made it impossible to use monetary policy for the one function for which it has always been recognized -- namely, that of restraining or stimulating investment. At the present time, everybody agrees that we should have more investment and less government deficit. The way to achieve that target, as is well known, is to pursue an easy monetary policy and a tight fiscal policy. But, because the Fed can not be brought to pursue an easier monetary policy, we are forced to do with a low level of investment whose unfavorable effect on income must then be offset by more and more deficit through tax cuts and expenditure programs.

I would very much hope that the Administration, and Congress in its supervisory capacity, can promptly bring pressure to bear to end this paradoxical situation.

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GEORGE W. MCKINNEY, JR.
SENIOR VICE PRESIDENT

December 30, 1977

Subcommittee on Domestic Monetary Policy
Room 3154, House Annex #2
2nd & D Streets, N. W.
Washington, D. C. 20515

This is in response to Congressman Mitchell's request for views on 1977 monetary policy.

Nothing is easier than to criticize what someone else has done, with benefit of hindsight and without having had the actual responsibility. In view of that fact, I want to emphasize my feeling that the Federal Reserve did an outstanding job in the conduct of monetary policy in 1977. Certainly the basic thrust of that policy--to limit the availability of money in order to slow inflation--has been in the nation's best interests. Further, the most widely voiced criticism of monetary policy (that perhaps policy was too restrictive in late summer and early fall) has been proved substantially invalid as revisions of data show that the economy was considerably stronger than was thought at the time. Thus the Federal Reserve shows up even better in the light of information that was not available to its critics at the time.

The only significant weakness in my mind stems from the requirement that the Federal Reserve make quarterly reports to the Congress on its plans for monetary policy over the coming year. This requirement skirts excessive involvement of the Congress in the detail of how the Federal Reserve conducts its policies (as distinguished from whether it achieves its objectives). This report to the Congress tends to be focused on an intermediary objective--the money supply--rather than the ultimate objective of maintaining monetary conditions conducive to maximum sustainable employment, production, and purchasing power. The Congress should not be judging the Federal Reserve on its money supply targets; they are a means to an end. Instead, the Federal Reserve should be held accountable, under current circumstances, for the degree of progress the nation makes in limiting inflation while avoiding recurrence of recession.

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Of course, the Federal Reserve cannot be held accountable for those fiscal policies which make it more difficult to attain these objectives. Nevertheless, if the Federal Reserve is judged by this standard, it has done better than could reasonably have been expected, even with benefit of hindsight.

An unfortunate side effect of the Congressional focus on the details of monetary policy has been that the Federal Reserve has adopted an untenable approach to monetary policy execution, in that it keeps one foot in the interest rate camp and the other in the money supply camp (by setting targets for the Federal funds rate at levels felt to be consistent with the desired rate of money growth). This approach does not allow adequately for market reaction to changes in the money supply. If, for example, the money supply grows at rates above the announced targets, the market assumes that the Federal Reserve will have to take positive action to get money growth back within bounds. Since this will involve higher Federal funds target rates, both sellers and buyers of money market instruments adjust their sights accordingly. As a result, decisions relating to liquid asset holdings (or issuance of liabilities) that were associated with the lower level of interest rates tend to be associated with a new, higher expected level of rates. The relationship between money growth and interest rates which previously existed is no longer valid, and the level of the Federal funds rate which is consistent with a given rate of money supply growth is higher than formerly. Thus the Federal Reserve, when it starts on a "money supply chase" intended to bring money supply growth within target ranges, thereby stimulates faster money growth and creates part of the problem it is trying to solve. Ultimately the Federal Reserve catches up with the moving target, and money supply growth slows. This happened in 1975, in 1976, and again this year.

If the Federal Reserve were not required to state its money growth targets publicly, and if it did not simultaneously attempt to peg both price and quantity, this problem of market reaction would be markedly reduced and it would be easier for the Federal Reserve to concentrate on its ultimate objectives.

If you decide to convene a panel to discuss monetary policies, I would of course be glad to participate in it if you wish. Thank you for the opportunity to comment.

Yours very truly,

George McKinney

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Beryl W. Sprinkel
Executive Vice President and Economist

January 4, 1977

Enclosed is my response to the interesting and relevant questions raised by Congressman Mitchell concerning 1977 domestic monetary policy. As you can tell from my comments, I wasn't too happy with the way things turned out, and I tried to rationalize the results.

Congressman Mitchell indicated that he might want to call on me for further assistance in early 1978. I would be very pleased to provide whatever aid I can.

Best wishes for a happy and prosperous New Year.

Sincerely,

Beryl W. Sprinkel

Subcommittee on Domestic
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Monetary Policy in Perspective

In my opinion, monetary policy was excessively expansive in 1977 and we will suffer the cost of higher inflation in the years to come. I agree with the stated objective of the Federal Reserve to gradually reduce monetary aggregate growth until growth in the money supply is commensurate with real output growth. Although there is some cyclical variation in velocity of circulation of money, total spending has risen at about the same rate as M-2 growth since 1960. (See attached chart) In other words, M-2 per unit of real GNP has risen at the same pace as inflation. If we are to ever have stable prices, M-2 growth must eventually be reduced to 3 to 4% per year, the projected secular growth in real GNP. However, an attempt to achieve lower money supply growth quickly would almost certainly induce a painful recession. Hence, I prefer gradualism to a monetary crunch.

The latest data indicate that M-2 grew 9.0% during the past year while M-1 grew 7.3%. Not only did monetary growth accelerate in 1977 but during much of the year both M-2 and M-1 exceeded the targets established by the Federal Reserve. To compound the difficulty, economist critics from President Carter's Administration have argued that the Federal Reserve did not create enough new money!

Why did money growth accelerate this year. Some say higher growth was in response to Administration pressure. Others allege that Dr. Burns was running for reappointment as Chairman of the Federal Reserve Board. I believe both of these explanations are wrong.

In fact, there has long been a tendency for money creation to be pro-cyclical, not counter-cyclical. Two examples will suffice. Beginning in the fall of 1974 and continuing until February 1975, money supply growth declined sharply despite the fact that the economy was in serious recession and the Federal Reserve targeted increased monetary growth. This past year the real economy rose at a rate well in excess of long-term trend, yet monetary growth accelerated well above target. The explanation for this pro-cyclical pattern of monetary growth lies in the techniques used by the Federal Open Market Committee in executing policy. The Committee attempts to simultaneously achieve money supply and fed funds

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targets--a difficult if not impossible task. The Board can readily achieve either target only by abandoning or changing the other.

During a period of declining economic activity, the demand for credit usually subsides, therefore placing downward pressure on short-term interest rates. The money market desk can retard a decline in the fed funds target by selling Government securities and contracting bank reserves and the monetary base. However, this action results in monetary growth below the stated aggregate target, as occurred from fall 1974 until February 1975. Conversely, during periods of rising business activity such as this past year, rising credit demands typically exert upward pressure on short-term interest rates. The Federal Reserve can retard the fed funds rate from rising above target by buying Government securities. This augments bank reserves and the monetary base, and hence monetary growth accelerates above target. Typically the fed funds target is adjusted upward slowly--1/8 of 1%. When the higher rate which permits proper aggregate growth is eventually attained, it is achieved only after a substantial money supply over-shoot.

In my opinion, achieving proper growth in monetary aggregates is critical if economic stability and growth are to be promoted. Utilization of an interim interest rate target makes attainment of monetary aggregate targets extremely difficult for reasons explained above. Therefore, I would recommend abandoning the short-run federal funds target, while concentrating on regulating growth in the monetary base and hence the money supply.

At least three advantages would ensue:

1. The Federal Reserve would certainly come closer to achieving its monetary aggregate targets. The Fed has absolute control over the base. Although there is not a perfect correlation between the base and M-1 and M-2, the relation is much closer than the correlation between the fed funds rate and M-1 and M-2.

2. Short-term interest rate volatility would be reduced, in my opinion. Under present operating procedure, the cyclical rise in short-term rates is sometimes delayed by promoting higher growth in the money supply. But more money growth assures greater credit demands as spending rises more rapidly and more money leads to higher inflation. Both the income and inflation effects assure even higher interest rates in later periods. The converse is true in periods such as 1974-75 when low money growth assured an even more severe recession and weaker credit demands. Low interest rates can become a lasting way of life only if the money supply eventually grows in line with real output growth, thereby assuring low rates of inflation. An attempt

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to promote lower interest rates via high monetary growth as in 1977, virtually assures higher inflation and higher interest rates. To put it differently, Keynesian populists can attain their laudable objective of low interest rates only by following the monetarist prescription of gradually reducing the rate of monetary growth until it is eventually commensurate with real output increases and hence lower inflation.

3. After a brief learning period, I'm convinced the money markets would react less to the regular Thursday release of the weekly money supply numbers. Under present ground rules it is virtually certain that a weekly over-shoot in money will lead to higher short-term rates since it is believed the Fed must allow the fed funds rate to rise. Under the proposed change, the market would pay more attention to changes in basic Federal Reserve strategy concerning the projected rate of rise in the base which is under the control of the Federal Open Market Committee.

In summary, I believe monetary policy was too expansive in 1977 due to adherence to fed funds rate targets. Policy execution could be improved by focusing Federal Reserve actions on achieving growth in the monetary base that is believed to be consistent with money supply targets. Current Federal Reserve strategy of gradually reducing monetary growth is correct. What is needed is an operating tactic that will assure better performance in achieving the stated objective.

Beryl W. Sprinkel, Executive Vice President and Economist
The Harris Trust & Savings Bank
Chicago, Illinois

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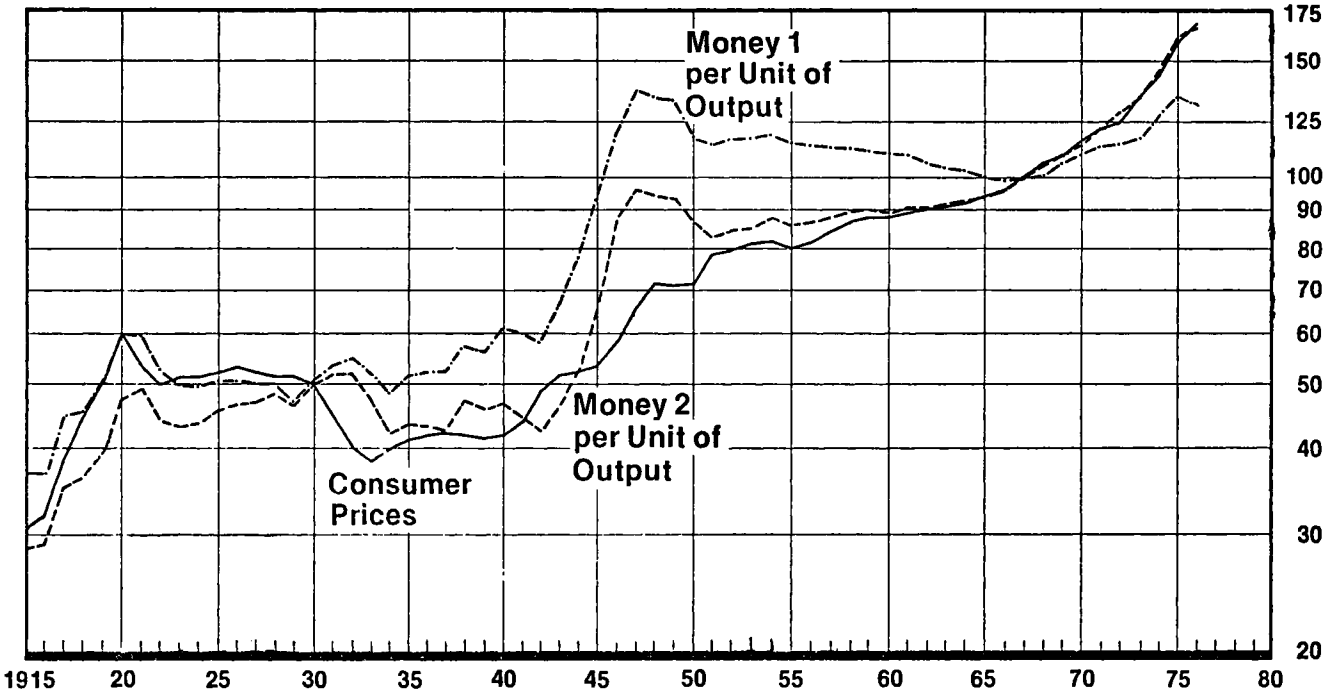

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Yale University *New Haven, Connecticut 06520*

DEPARTMENT OF ECONOMICS
Cowles Foundation for Research in Economics
Box 2125, Yale Station

December 20, 1977

Subcommittee on Domestic Monetary Policy
U. S. House of Representatives
Room 3154, House Annex No. 2
2nd & D Sts. S.W.
Washington, D. C. 20515

In response to Congreeman Mitchell's request of December 12, I do not have time to write anything new on the subject. I enclose two recent published articles bearing in part on the subject, and you are welcome to use excerpts.

Sincerely,

James Tobin

Enclosures

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THE NEW YORK TIMES, SUNDAY, NOVEMBER 20, 1977

Can Carter Afford Arthur Burns?

By JAMES TOBIN

In January President Carter will have a chance, the only chance during his term, to influence the monetary and credit policies of the government over which he presides. Those policies will be pervasive, powerful—even decisive—determinants of the course of the economy: production, unemployment, profits, inflation, interest rates, stock prices. They will affect the fortunes of most workers, businessmen and investors more significantly, if less visibly, than almost all the legislation and administration that commands the attention of Congress, the executive branch and the public.

As Mr. Carter is well aware, the electorate holds him responsible for the performance of the economy. He is bound, therefore, to take most seriously his designation of a chairman of the board of governors of the Federal Reserve System to serve from Jan. 31, 1978, not at the President's pleasure but for a full four years.

The Fed makes monetary policy. Specifically, its decision-making body is the Federal Open Market Committee, which meets monthly in Washington and sometimes more frequently by telephone. The members of the committee are the seven governors (of whom one is the designated chairman) and five of the 12 presidents of district Federal Reserve banks. The governors are appointed by the President and confirmed by the Senate for 14-year terms. One vacancy occurs every two years; the next one, not that of the current chairman, also occurs at the end of January.

The district bank presidents are only in the remotest sense Federal officers. They are appointed by the boards of directors of the banks, subject to approval by the board of governors in Washington. They are not subject to Presidential approval or Senate confirmation; they serve indefinite terms; they are paid more like private bank executives than Government officials. All 12 participate in meetings of the Open Market Committee; of their five votes, the New York president always has one and the four others are rotated.

No representative of the President of the United States—not the Secretary of Treasury, not the chairman of the Council of Economic Advisers—is allowed to attend the committee's meetings even to observe and listen, much less to express views or to vote. This bizarre apparatus dates from the Banking Act of 1935, amending the Federal Reserve Act of 1913. Neither law anticipated that the agenda of central banks would become so central to the economic policies of democratic governments.

The chairman of the Fed has only one vote in the Open Market Committee, but in practice the committee most invariably follows his lead. There

The New York Times

are several reasons: fear that open dissent will imperil the independence of the Fed, the chairman's role as public spokesman and his command over the administrative and research staffs, the chairman's influence in appointments of new governors and district bank presidents and the chairman's personal and intellectual force.

President Carter has inherited a chairman and a board appointed by his Republican predecessors; 10 of the 12 bank presidents also assumed office since 1969. A new chairman will not find it easy to change policy, especially if the outgoing chairman stays on the board.

These are the reasons why the designation of a chairman is the only real opportunity Mr. Carter will have to influence an agency whose actions are crucial to his economic goals and to the record by which he will be judged. If he replaces Arthur F. Burns, he will not be threatening the Constitution or even the independence of the Federal Reserve System. The statute deliberately sets the chairman's term at four years to give the President this limited power, with no presumption that incumbents will be retained. Designating a new chairman would not politicize a technical professional position; the office is political, in the sense that high policy is at stake. Mr. Burns's professional distinction and long career of dedicated public service are not in question; they do not entitle him to life tenure.

In a similar situation in 1962, it is true, President Kennedy reappointed William McChesney Martin. Like Mr. Burns today, Mr. Martin enjoyed great support in financial and business circles suspicious of a new Democratic Administration, and his retention helped to reassure them. But there is a significant difference. After some early polemics, Mr. Martin had reached a modus vivendi with the new Administration. Under his leadership the Fed broadly supported the Kennedy-Johnson economic strategy throughout the 1961-65 recovery. In his Oct. 26 speech at Spokane, Mr. Burns called for a similar fiscal strategy today, but he gave no indication that he wold satisfy the monetary needs of an expanding economy as Mr. Martin did in the early 1960's.

How has the Fed exercised its responsibility during Mr. Burns's tenure as chairman? In the future history of monetary policy, two principal themes will stand out: First, during this period the Fed changed significantly its way of defining, formulating and executing monetary policy. Second, beginning in 1974 the Fed undertook a crusade against inflation and gave it priority over other economic goals.

The first change reflected the influence of Milton Friedman and other monetarists although they have not been entirely satisfied. Previously the Fed had geared its policy to general economic and financial conditions; explicit formulas were not used, much less announced.

During Mr. Burns's tenure, the Open Market Committee began to formulate and announce its policy in terms of target ranges for growth of several monetary aggregates, notably M-1, the narrow money stock—currency and demand deposits held by the nonbank public. Each quarter year-ahead targets are announced; the range for M-1 is currently 4 to 6½ percent.

The Fed's marksmanship is imperfect because it does not directly control M-1 or other aggregates. The Fed buys and sells Treasury bills, usually under repurchase agreement. There are many loose joints in the linkage between

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these operations and M-1. Fed operations can, however, directly control the interest rate on Federal funds, overnight loans between banks. The M-1 outcome then depends on how banks and depositors all over the country respond to that rate and to a myriad of other events. Each month the Open Market Committee reconsiders its operating target for the Federal-funds rate, raising it if M-1 is too high, lowering if M-1 is too low. Predicting these moves from weekly monetary statistics, volatile and erratic as they are, has become an obsessive Wall Street pastime, generating ridiculous weekly gyrations in stock prices.

Yet investors have been quite right this year to fear that M-1 could be held to target only by sharply higher interest rates, damaging both the discounted value and the prospect of future corporate earnings. The Fed has raised the funds rate 200 basis points in 1977. Though higher short-term interest rates induce the public to make-do with less cash, money growth still exceeds the target.

It never seemed likely that M-1 growth of 4 to 6½ percent was consistent with 11 to 12 percent growth of dollar gross national product (5 to 6 percent higher production plus 6 percent higher prices). It would have taken an extraordinary increase in the efficiency with which the public uses the money stock to produce such a big increase in velocity (G.N.P. divided by M-1). Velocity did rise significantly in 1975 and 1976, reconciling the Fed's moderate money stock targets with growth in G.N.P. without an upward trend of interest rates. But interest boosts in 1977 have already damaged the prospects for G.N.P. growth next year; and the further increases needed to return M-1 promptly to target range would bring about a recession as surely as the Fed's double-digit interest rates did in the spring of 1974. The Administration is certainly right to ask the Open Market Committee to place the economy's health above the Fed's self-imposed money stock targets.

The problems just discussed, arising from short-run volatility of money stock statistics and from variability of velocity, could be avoided if the Fed's year-ahead targets were ranges for growth of dollar G.N.P. (money stock times velocity) rather than for M-1 (or other monetary aggregates) alone. After all, G.N.P. growth is the bottom line; money stock control is means, not

end. G.N.P. growth targets would also facilitate consistency with the economic projections and objectives adopted in the budget decisions of the Administration and Congress. It is unfortunate that, under Mr. Burns's leadership, the Fed has elevated money stock growth rates to much greater symbolic significance in the public mind than they deserve.

The deeper purpose of current Fed policy is to conquer inflation, and its premise is that the battle can be won by—and only by—reducing monetary growth rates. The Fed has no direct handle on prices and wages. Even if it successfully controls the growth of money supplies and total spending, the Fed cannot determine the way spending splits between production and prices or between employment and wages. Six percent price inflation and 8 percent wage inflation are, for historical reasons, solidly entrenched in United States industry today. Experience since 1974 confirms that these hard-core trends melt very slowly even when unemployment and excess capacity are high. If, for example the Fed contrives for 1978 a 9 percent growth in dollar spending instead of 11 percent growth, the result will not be 4 percent inflation instead of 6 percent; it will be much closer to 3 percent production growth instead of 5 percent. Maybe Mr. Burns's slow monetary cure for inflation is the right choice even though it implies protracted stagnation with unemployment 7 percent or higher. But President Carter's goals—full employment, budget balance many others—would be doomed. Whether he reappoints Mr. Burns or not the President will surely wish to take this unique opportunity to come to some understanding about the future course of monetary policy and its place in the general economic strategy of the Government.

James Tobin is Sterling Professor of Economics at Yale University.

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ECONOMIC OUTLOOK, U.S.A.
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The Economic Impasse: Is There A Way Out?

James Tobin*
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The Faltering Recovery

After two and a half years of slow and incomplete recovery from the 1974-75 recession, the world economy is faltering. The advanced industrial countries as a group, the OECD area, are slipping into a growth recession, perhaps worse. The United States so far appears to be an exception. But here too the pace of recovery is slowing and confidence in its future is low and falling.

The OECD group, and the United States in particular, have been aiming for full recovery in 1980-81, six or seven years after the onset of recession. This was surely not an ambitious timetable, but now we are significantly behind schedule. If current weakness is allowed to develop into another recession, in 1984 the noncommunist world may well be looking back on a full decade of stagnation. The potential consequences are frightening: among them are generations of youth denied work experience, rampant protectionism between and within nations, reduced long-run growth prospects after years of subnormal capital investment, desperation in poor third world countries deprived of export markets, social and political instability spreading even beyond those Western European democracies already vulnerable.

Inaction and Impasse

Facing those dangers, the major governments on whose policies the course of the world economy depends are doing little or nothing. Their inaction reflects in varying proportions complacency and paralysis. Two of the three "locomotives" of the world economic train, Germany and Japan, are not unhappy with their large export surpluses, strong currencies, and relatively low or declining inflation rates; they enjoy the international political and economic power they derive from this state of affairs. Anyway, the unemployment resulting from declining internal growth is mostly outside their borders. The policy impasse in the United States, the third and major locomotive, is the subject of this article.

The impasse is that our government cannot, by the conventional monetary and fiscal tools of demand management, engineer simultaneously significant reductions in both inflation and unemployment. At any rate, it cannot do so within any reasonable time, for example before the next Presidential election. Yet the public, encouraged by politicians and pundits of all persuasions, expects timely achievements on both fronts. The Administration has promised to take us from 6% inflation, 7% unemployment in 1977 to 4% and 4¾% in 1981.

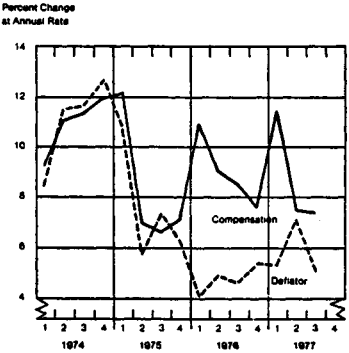
Why do these modest goals seem so improbable? There are several reasons. The principal one is simply that the hard core inflation rate, about 6%, is terribly stubborn. It is reinforced by, and reinforces, the inflation of labor costs, around 7% in wages but 9% in total hourly compensation. Since 1975 these rates have scarcely abated, in spite of substantial unemployed labor and capacity (see Chart 1). It is true that the double-digit inflation of 1973 and 1974 receded fairly quickly. Most of that decline simply reflected the cessation, in some cases the reversal, of the extraordinary increases in commodity prices of those years. Continued improvement has been hard to come by, and would become even harder if unemployment and excess capacity were further reduced. The present pattern is solidly entrenched — in existing labor contracts, in expectations, in widespread indexation, in patterns of emulation, comparison, and never-ending catch-ups.

The Fed vs. Inflation

Like other central banks, the Federal Reserve regards the conquest of inflation as its sacred duty. The Fed's determination to force disinflation by starving the economy for cash balances has only been strengthened by the failure of the policy to date. The Fed's 1977 monetary targets — 4 to 6½% for M1, 7 to 9½% for M2 — seemed when announced inadequate for the projected 12% growth in dollar GNP, 6% real growth combined with 6% inflation. Only a miraculous spurt of monetary velocity, it seemed, could avoid collision between the recovery and the Fed's targets. The miracle didn't happen. The Fed has raised the Federal Funds rate nearly 200 basis points since January but has not succeeded in holding monetary aggregates down to target. The Fed's increases in interest rates, triggering expectations of more to come, deserve much of the blame for the 1977 bear market in stocks and for slowing the recovery (see Chart 2).

While long term bond and mortgage rates have so far been quite stable, continued rise of short rates, including the prime rate, will soon affect those markets too. Residential construction has been a bright spot in the economic scene, but we are not far from interest rate levels that will retard the flow of funds into mortgage-lending institutions.

Chart 1. QUARTERLY CHANGES IN AVERAGE HOURLY COMPENSATION* AND GNP IMPLICIT PRICE DEFLATOR



*Average hourly compensation, all employees, nonfarm business sector
Sources: U.S. Departments of Commerce and Labor

*Dr. Tobin was a member of the President's Council of Economic Advisors in 1961-62.

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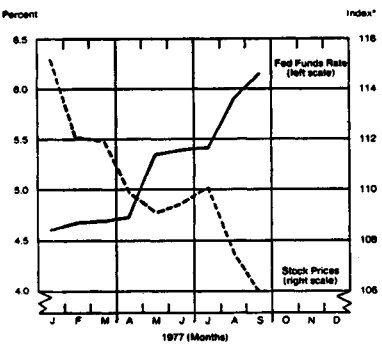
Chart 2. RECENT MOVEMENTS OF THE FEDERAL FUNDS RATE AND COMMON STOCK PRICES



*Standard & Poor's price index of 400 industrial stocks (1941-43=100)

Sources: Federal Reserve System; Standard & Poor's Corporation

Yet in today's Looking-glass world of economic discussion, the Fed is on the defensive not for untimely increases in short term interest rates but for permitting monetary growth to exceed the Fed's own targets. The critics include not only Milton Friedman and the monetarist Shadow Open Market Committee but the liberal chairmen of the House and Senate monetary committees.[1]

The Monetarist Argument

Monetarists and their converts in central banks, here and abroad, argue that the monetary authorities must not accommodate the ongoing inflation. But the most the authorities can do is to restrict the growth of spending. They do not control the split of nominal income increases between output growth and price inflation. Given the stubborn momentum of the price trend, the impact of monetary restriction is on real output.

Some monetarists blindly ignore this fact. Some admit that output and employment will suffer "temporarily" but contend that markets will eventually accommodate wages and prices to noninflationary monetary growth. The ultimate gain, they assure us, is worth the initial pain: anyway we cannot escape punishment for past sins. Some advocates of this policy believe that a firm stance of "no accommodation," credible to business and labor alike, will greatly accelerate the desired disinflation. Many monetarists are quite content to retard output growth because they believe the economy is already, with 7% unemployment and 17% excess capacity, at full employment and full capacity.[2] For some this is an empirical proposition. For many others it is simply an implication of their faith in markets — they work promptly to eliminate excess supplies or demands, so smoothly that the economy is never far from its equilibrium. It follows that full employment is whatever employment rate we have.

The Failures of Current Policy

Widespread acceptance of monetarist orthodoxy in business and financial circles contributes to the current paralysis of policy. As securities market investors, the wealthy may be scared of the Fed's restrictive monetary stance. As influential citizens, they so strongly support Chairman Burns that the President hesitates to use his prerogative to appoint a new Fed Chairman next January. Stymied on monetary policy, the Administration and the Congress turn to fiscal measures. Stymied again! Thanks in no small part to Burns' ridicule and moral condemnation of the universal "rebate" last spring, its support evaporated and the President withdrew the proposal. Further proving his fiscal conservatism and anti-inflationary dedication, the President promises a balanced budget in 1980-81 and resolutely resists the temptation to stimulate a lagging economy. But these and other efforts to please his predecessor's constituencies are not enough to gain their approval, their confidence,[3] their investments — and, we may be sure, their votes. They never are. As previous Democratic administrations have sooner or later found, the only way to make American business prosper is to ignore the doctrinaire macroeconomic advice of its spokesmen.

Following their counsels of caution is proving counterproductive in several ways. One argument for go-slow recovery was to avoid inflationary bottlenecks and shortages, giving business time to build new capacity. But without current and prospective demand and profitability, there is little incentive to undertake such investment. In real volume, non-residential fixed investment still falls 5% short of its 1974 first quarter rate. Intentions surveys show improvement — perhaps 6-8% in real fixed investment — but not enough to sustain vigorous recovery or to make up for past shortfalls. With industrial common stocks selling at 1965 prices, while capital goods are now twice as expensive, the climate is not favorable for an investment boom.

Instead of capacity shortage in steel, for example, we face a world-wide glut. The American steel industry and union are mounting a powerful political campaign for protection against imports, unbecoming though it may seem to those who remember the costly labor contract and the price increases of last winter.

In a soft economy, the Administration is generally vulnerable to pleas for protection of American jobs and profits; its tactical response in textiles and television has been to yield in substance while loyally adhering to free trade in principle. Likewise, failure to restore prosperity and reduce unemployment has increased the obligations the government feels to satisfy sectoral interests in inefficient and inflationary ways: minimum wage increases, farm price supports and acreage limitations, cargo preferences. Other Administration measures and proposals, e.g. energy taxes and prices and social security taxes, have intrinsic merit. But their effects on inflation statistics, temporary to be sure but untimely, will do macroeconomic damage unless monetary targets are raised to accommodate them.

[1]Friedman, "Why Inflation Persists," *Newsweek*, October 3, 1977. *SOMC Policy Statement* of September 19, 1977, issued by Allan Meltzer, Carnegie-Mellon University. The press has reported criticisms of the Federal Reserve for excessive monetary growth by Henry Reuss, Chairman of the House Banking Committee, Parren Mitchell, Chairman of the House Domestic Monetary Policy Subcommittee, and William Proxmire, Chairman of the Senate Committee on Banking, Finance, and Urban Affairs.

[2]Herbert Stein, "Full Employment at Last," *Wall Street Journal*, September 14, 1977, suggests the strong possibility that today's 7% unemployment is full employment.

[3]The Conference Board's Measure of Business Confidence, 75% in March 1976 and 71% in May 1977, fell to 59% in August 1977.

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Some Alternatives

Let me recapitulate. Carter, Burns, and Congress cannot disinflate by conservative monetary and fiscal policies without many more years of high unemployment and excess capacity, carrying staggering economic costs and serious risks to the body politic. Quite possibly they cannot disinflate even with those costs and risks. One alternative, clearly, would be to accept the 6% inflation and to gear monetary and fiscal policy to speedy completion of the recovery, relying on present and future indexation to mitigate the costs of inflation, while avoiding demand-pull accelerations of inflation in the future. As preferable as this course would be to prolonged stagnation, it is very unlikely to be acceptable to a government so committed and a public so persuaded to whip inflation now, or anyway some day. The only other possibility is to engineer *directly* a mutual de-escalation of wage and price inflation. A 4% wage, 2% price inflation would have essentially the same real results for all concerned as an 8% wage, 6% price pattern, and would be much more pleasant. But how do we get there from here?

It is now clearer than ever that President Carter made a fateful mistake when he backed off his campaign rhetoric and foreswore incomes policies of all kinds. He did so to reassure nervous business and labor leaders, both of whom were certain they got the worst of Nixon's episodic wage and price controls. Now everything is taboo, from full-fledged controls to advisory guideposts — including even proposals for prenotification and hearings on major wage contracts and price increases, once espoused by Chairman Burns, whose free enterprise credentials are impeccable. The Council for Wage and Price Stability is obliged to keep a low profile. The semi-official Labor-Management Committee moderated by Professor John Dunlop, former Secretary of Labor, is an important avenue of communication between the private sector and the federal government. The one subject they do *not* discuss is the setting of wages and prices.

The taboo, it is worth noting, does not reflect general public opinion. Although, as anti-inflation hawks frequently remind us, survey respondents regard inflation as a very serious, often the most serious, economic problem, the remedy they instinctively support is not tight money but direct control.[4]

[4]Gallup Poll of December 1976 reported 46% in favor of "having the government bring back wage and price controls," 39% opposed, 15% no opinion. Both in August 1971 and in August 1974 the same question yielded 50% in favor, 39% opposed, 11% no opinion. The percentage naming inflation or high cost of living as "the most important problem" was 81% in September 1974 and in July 1977 reached its lowest point since then, 32%.

Actual and Projected Economic Indicators

seasonally adjusted

ECONOMIC INDICATOR	Quarterly Data												Annual Data		
	ACTUAL								PROJECTED						
	1975	1976				1977				1978			Actual		Proj.
	4th	1st	2nd	3rd	4th	1st	2nd	3rd p	4th	1st	2nd	3rd	1975	1976	1977
1. GROSS NATIONAL PRODUCT (annual rate, billion $)	1601	1651	1692	1727	1755	1811	1870	1911	1966	2023	2071	2121	1529	1706	1890
2. GNP IMPLICIT PRICE DEFLATOR (1972=100)	130.2	131.4	133.1	134.6	136.4	138.1	140.5	142.3	144.4	146.5	148.6	150.8	127.2	133.9	141.3
3. GNP IN CONSTANT DOLLARS (annual rate, billion 1972 $)	1230	1256	1272	1284	1287	1311	1331	1343	1360	1375	1391	1405	1202	1275	1336
4. INDUSTRIAL PRODUCTION (1967=100)	123	127	129	131	132	134	137	139	141	143	145	147	118	130	138
5. UNEMPLOYMENT RATE (percent)	8.5	7.6	7.5	7.8	7.9	7.4	7.0	7.0	6.9	6.8	6.7	6.6	8.5	7.7	7.1
6. CORPORATE PROFITS AFTER TAXES (annual rate, billion $)	83.1	90.4	93.1	94.0	90.9	97.2	104.3	103.0	106.4	108.3	109.6	112.0	73.4	92.1	102.7
7. EXPENDITURES FOR NEW PLANT and EQUIPMENT (annual rate, billion $)	111.8	114.7	118.1	122.6	125.2	130.2	134.2	138.4	143.0	148.0	152.6	156.6	112.8	120.2	136.4
8. NEW PRIVATE HOUSING UNITS STARTED (annual rate, millions)	1.37	1.40	1.44	1.57	1.77	1.76	1.90	2.05	2.06	2.06	2.05	2.03	1.16	1.54	1.94
9. CHANGE IN BUSINESS INVENTORIES (annual rate, billion $)	-3.6	14.5	18.3	21.5	-0.9	13.8	21.7	19.8	16.3	16.0	17.4	16.0	-11.5	13.3	17.9
10. CONSUMER DURABLE EXPENDITURES (annual rate, billion $)	144.3	153.3	156.7	159.3	166.3	177.0	178.6	177.7	181.4	185.2	188.9	193.0	132.9	158.9	178.7
11. NATIONAL DEFENSE PURCHASES (annual rate, billion $)	86.7	86.3	86.0	86.4	88.4	89.7	93.4	97.3	100.0	102.0	104.2	106.8	83.9	86.8	95.1

p-Preliminary data: line six is the estimate of the ASA-NBER panel of forecasters.

Sources: Projections: American Statistical Association-National Bureau of Economic Research panel of forecasters, adjusted by Editor for differences between actual and projected 1977:3 values. (Note: forecasts were released in August 1977.)

Actual Data: Departments of Commerce and Labor, Board of Governors of the Federal Reserve System.

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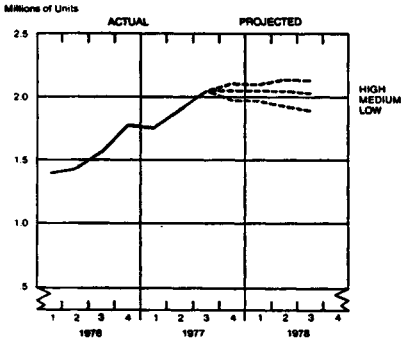
Guideposts with Rewards and Penalties

Toothless guideposts may be too ineffectual and full controls too rigid. The most promising approach is to combine guideposts with rewards for compliance and possibly penalties for noncompliance. These inducements could be built into the tax system, along lines originally proposed by Henry Wallich and Sidney Weintraub.[3] For example, give every firm and its employees rebates of one point of their payroll taxes for every point by which their average wage increase for the year falls short of the wage guidepost. In addition, tax every firm an extra point on its profits for every point its wage increase exceeds the guidepost. Similar incentives for avoiding markup inflation might be necessary but are more difficult to devise. In any case, the government might insure compliant workers against real income loss by offering tax rebates in case cost of living inflation fails to follow wages down. Certainly there would be inefficiencies, distortions, inequities. These should not be considered in a vacuum, but weighed against the colossal costs of the orthodox route to disinflation. In present circumstances we can afford to take some innovative risk; we can't afford not to. The big question is this: Is there enough leadership and statesmanship in Washington to guide us out of the impasse?

October 1977

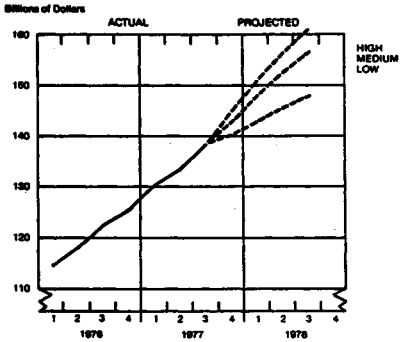
[3] "A Tax-Based Incomes Policy," *Journal of Economic Issues*, June 1971.

NEW PRIVATE HOUSING UNITS STARTED



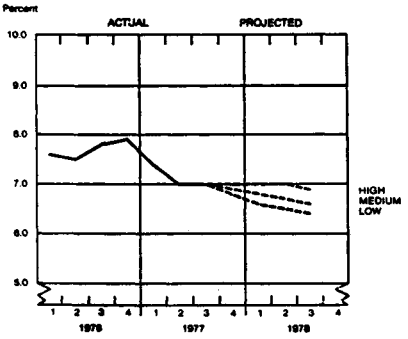
Sources: Actual data, U.S. Department of Commerce; projected data, ASA-NBER Panel of Forecasters, adjusted by Editor for difference between actual and projected 1977:3 values.

BUSINESS CAPITAL OUTLAYS



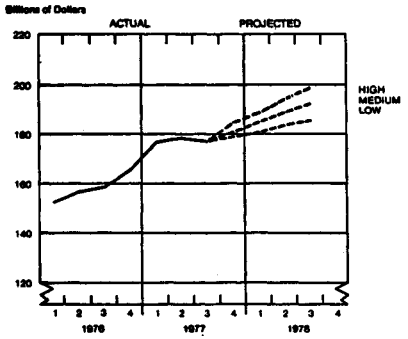
Sources: Actual data, U.S. Department of Commerce; projected data, ASA-NBER Panel of Forecasters, adjusted by Editor for difference between actual and projected 1977:3 values.

UNEMPLOYMENT RATE



Sources: Actual data, U.S. Department of Commerce; projected data, ASA-NBER Panel of Forecasters, adjusted by Editor for difference between actual and projected 1977:3 values.

CONSUMER DURABLE OUTLAYS



Sources: Actual data, U.S. Department of Commerce; projected data, ASA-NBER Panel of Forecasters, adjusted by Editor for difference between actual and projected 1977:3 values.

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The Ohio State University

Journal of Money, Credit, and Banking
Editorial Office
Hagerty Hall
1775 College Road
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Phone 614 422-7834

February 14, 1978

Congressman Parren J. Mitchell
Chairman
Subcommittee on Domestic Monetary Policy
of the Committee on Banking, Finance
and Urban Affairs
U.S. House of Representatives
Washington, DC 20515

Dear Congressman Mitchell:

Enclosed for your information is a brief response to your inquiry concerning my views of monetary policy in 1977.

Thank you very much for asking.

Sincerely,

William G. Dewald

William G. Dewald
Professor of Economics
and Editor of JMCB

Enclosure

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Statement

Evidence in recent years is persuasive that both monetary growth and government spending have significant effects on aggregate demand over a period of a year to a year and a half--a short period by conventional monetarist wisdom. But it isn't much consolation for advocates of discretionary monetary and fiscal policies because the evidence is also persuasive that changes in monetary growth and government spending have been the major contributing factors to economic instability.

Though one cannot very sensibly attribute the shock of oil price increases in 1974-75 to the monetary and fiscal authorities, it seems that even in this instance they succeeded in making a bad situation worse by first clamping on the monetary brakes in 1974 and subsequently stepping on the monetary accelerator. After inflationary expectations had been cooled by the 1974-75 recession, the authorities managed to confound not only U.S. citizens but interested parties around the world by reigniting inflationary expectations. The authorities were responsible for successively higher annual rates of monetary growth in 1975, 1976, and 1977; and this was not damped much by restrictive fiscal policies.

In 1977, there was something of a repeat of the 1974-75 experience. Higher import prices and a hard winter in the first quarter of the year generated some price increases that damped real growth. Late in 1976 and early 1977 monetary and fiscal policy were also comparatively nonexpansionary. But later in the year, even as real growth slowed, both policies as measured by accelerating monetary growth and government spending became increasingly expansionary, raising expectations in the minds of consumers

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and businesses about the prospect of stepped up inflation followed by restrictive policy actions and recession.

Though I do not care to make a fetish out of it, there appears some merit in directing the authorities in the future to aim at stabilizing spending growth or aggregate demand growth rather than at moderating inflation or variation in the unemployment rate. Aggregate supply variations because of bad crops, oil embargoes, strikes, blizzards, and the like can certainly cause real problems. But year in and year out inflationary and recessionary disturbances generally have come from the aggregate demand side. Since there are in fact quite powerful policies to influence aggregate demand quickly, the authorities could contribute to economic stabilization, compared with their historical performance, if they simply aimed at stabilizing growth in aggregate demand or, in this age of accountability, if they would at least take responsibility for its variation.

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Chase Econometric Associates, Inc.

a Subsidiary of The Chase Manhattan Bank, N.A.
900 17th Street N.W., Washington, D. C. 20006 (202) 785-3520
555 City Line Avenue, Bala Cynwyd, Pennsylvania 19004 (215) 667-7350 Telex: 831609

January 19, 1978

The Honorable Parren J. Mitchell
U.S. House of Representatives
Subcommittee on Domestic Monetary Policy
of the
Committee on Banking, Finance and Urban
Affairs
Washington, D.C. 20515

Dear Mr. Mitchell:

Thank you for providing me with the opportunity to present my views on the conduct of monetary policy.

The events of the past few weeks demonstrate the importance of maintaining a vigilant check upon the persons responsible for the conduct of monetary policy. During 1977, monetary policy was carried out in a reasonably effective manner. However, during 1978, there appears to have been a significant, sudden tightening of monetary policy, a potentially counter-productive move which may have been related to the President's decision not to re-appoint Dr. Burns. I believe that before the President reached his decision there was considerable pressure upon Dr. Burns to maintain a policy consistent with both the President's and Congress' economic goals. With the decision made, the Federal Reserve was then able to concentrate more heavily upon the short run aspects of credit demand and financial transaction which appear to have dominated Federal Reserve policy in the past.

The conclusions of my study, An Investigation of the Impact of Alternative Monetary Policies on Recent Business Cycle Fluctuations, which was prepared for your Subcommittee during 1976, include the following:

1) Proper management of the money supply can aid substantially in the nation's quest for economic stability and growth.

2) Large oscillations in monetary conditions can have significant effects upon income distribution and the composition of economic activity.

3) In the operation of monetary policy there appears to be a serious conflict between short run and long run economic goals.

4) Actual monetary policies followed by the Federal Reserve have been pro-cyclical during the past ten years.

In total, this study indicates that historically there appears to have been a tendency on the part of the Federal Reserve to overact to short run concerns

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at the expense of achieving the country's economic goals. The experience of 1977 indicates that strong steady pressure by the government can help to counteract these pressures and insure that the Fed will be more responsive to the political process. Of course, the question as to whether or not additional pressure will lead to greater stability in monetary policy remains open. However, the limited evidence for 1977 suggests that a slight reduction in the independence of the Federal Reserve would not be harmful.

Sincerely yours,

Leon W Taub

Leon W Taub
Vice President

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An Investigation of the Impact of Alternative Monetary Policies on Recent Business Cycle Fluctuations

A STUDY PREPARED
FOR

The Subcommittee on Domestic Monetary Policy
Committee on Banking, Currency, and Housing
U.S. House of Representatives

Leon W Taub
Chase Econometric Assoc., Inc.
900 17th Street, N.W.
Washington, D.C. 20006
August, 1976

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PREFACE

This study was performed for the Subcommittee on Domestic Monetary Policy, Committee on Banking, Currency and Housing of the U.S. House of Representatives by Chase Econometric Associates, Inc.

The report was prepared by Leon W. Taub, Vice President of CEAI using the CEAI United States Macroeconomic Model. Dr. Taub was assisted by other CEAI staff members including Lea Mutschler and Michael Durst, Research Assistants, and Gay Lane.

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EXECUTIVE SUMMARY

The purpose of this study is to examine the consequences of alternative monetary policies for the United States economy during the period 1965-1975 and to compare the simulated outcomes to the course which the economy actually followed during that period. The alternative policies were designated in terms of fixed "rule-of-thumb" monetary and "non-borrowed reserves" growth targets.

The most important conclusions which emerge from this study are as follows:

1) The actual monetary policies followed by the Federal Reserve System during the last 10 years have been procyclical. By contrast, a rule-of-thumb monetary growth target type of policy would have led to less severe recessions and, to some extent, less exuberant booms. A wide variety of rule-of-thumb monetary growth targets would have been more successful than the policies actually followed in meeting the economy's need for stability, particularly during recession periods.

2) The events of 1973-74 -- the quadrupling of free-market oil prices by OPEC, the price increases in bauxite, phosphates and other raw materials, the ending of wage/price controls, and the massive devaluation of the dollar, among others -- were so serious that they could not have been fully offset by monetary policy alone. However, had a more stable monetary policy been pursued, the 1974-75 recession would have been significantly less severe.

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3) The choice of a level and/or starting point for a rule-of-thumb growth target is at least as important as a decision to move to a rule-of-thumb type policy. If a rule-of-thumb monetary growth target had been chosen poorly or without regard to contemporaneous economic developments, the result would have been a substantially worse economic performance than was actually experienced during the 10 year period.

4) Rule-of-thumb monetary growth targets can promote stable economic growth if the target is based on a six-month average growth rate, and if the target is subject to the constraint that quarterly changes in reserves not be negative.

5) An attempt to attain an inflexible monetary growth rate target on a quarterly basis can be destabilizing or can lead to oscillating changes in reserves and interest rates. Similarly, attempts to achieve a monetary growth target without a constraint on reserves can lead to destabilizing and/or oscillating changes in other monetary indicators.

6) Single-quarter changes in short-term interest rates, which can result from attempts to achieve a rigid monetary growth target, have relatively little effect on long-term rates in the affected quarters. Nevertheless, large changes in short-term rates do cause some economic instability, and can worsen the prevailing inflation/unemployment tradeoff. Also, large oscillations in interest rates and reserve aggregates can have significant effects on income distribution and on the composition of economic activity among the various sectors of the economy. In particular, investment seems to be depressed more than consumption by oscillating monetary policies and interest rates.

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7) A rule-of-thumb reserves growth target yields results which are closely akin to the simulated results of a monetary growth target, while causing less instability in the short-term money markets and slightly improving the economy's unemployment/inflation tradeoff.

8) An examination of several monetary aggregates taken together can often provide a better indication of monetary conditions and the direction of monetary policy than an analysis of just M1 (currency plus demand deposits) alone.

9) There appears to be a serious conflict between short-run and long-run economic goals in the United States. In the short-run, an expansionary monetary policy increases real growth much more powerfully than it increase inflation. However, in the longer-run (beginning in three to four years), a more expansionary monetary policy leads to a significant increase in the rate of inflation and a shift in the potential unemployment/inflation trade-off to a more unfavorable position. In addition, by approximately the tenth year after the institution of the expansionary monetary policy, the increase in inflation becomes so great that the economy actually begins to grow more slowly under a "more expansionary" policy. (While this slowdown in real growth could presumably be postponed by further increases in monetary growth rates, traditional economic wisdom holds that a policy of "escalating the speed of the treadmill" will have an extremely unfavorable end result.)

10) Proper managment of the monetary aggregates requires that the designated authorities take into account forecasted, as well as historical, economic conditons. Changes in monetary policy should me made with great care, since monetary policy has substantial long-run as well as short-run economic consequences.

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In interpreting the results of this study, it is important to note that the prices of some critical primary goods -- food, fuel, and imported goods -- are assumed to be exogenous. This is the assumption usually made when simulating the Chase Econometrics Macroeconomic Model, since prices of these critical primary goods are often dominated by outside events such as changes in the weather, actions of cartels, political crises, and foreign regulations and currency market interventions. For short-run simulations, the lack of response of these exogenous prices is unlikely to be a serious shortcoming. In the longer-run simulations, however, these exogenous prices could have led to a significant understatement of the inflationary impact of monetary policy and to an overstatement of the real growth impact. This possible source of error could have been avoided by linking satellite models to the Chase Econometrics Macroeconomic Model. However, such a task would have exceeded the time and cost constraints of this project and hence has been reserved for future study.

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SECTION I

INTRODUCTION

1.1

PROJECT DESCRIPTION

It has often been argued that monetary policy has accentuated rather than dampened the business cycle in the United States. In 1957, Milton Friedman, after analyzing the course of monetary policy, concluded, "The record is one of repeated mistakes in the use of existing monetary policy tools, mistakes that were themselves a major source of economic instability."[1] These arguments are usually based upon the apparently excessive rates of growth in money supply which seem to precede almost every boom, as well as the much smaller rates of growth (and even contractions) which seem to precede every trough.

The most outrageous example of this was in 1929-1931. Although the peak of the 1929 boom (as estimated by the National Bureau of Economic Research) was in June, 1929, the New York Federal Reserve Bank raised the discount rate (from 5 percent to 6 percent) as late as August, 1929. From June, 1929, to Septemeber, 1932, the money supply fell 11 percent and total Reserve credit fell approximately 33 percent!

Fortunately, the experience of 1929-32 has never been repeated. However, the improvement seems to have been one of degree rather than direction. As shown in Figure 1.1, the "money supply growth test" indicates that the same type of pro-cyclical monetary policy has accompanied each of the post-war business cycles. (Recession periods as designated by the National Bureau of Economic Research are shown as shaded.) For example, the money supply grew approximately 8.4 percent in 1972 and 6.2 percent in 1973. In 1974, despite (or because of) the huge exogenous price increases caused by OPEC, the ending of wage-price controls, the devaluation of the dollar, and the

[1] Consumer Installment Credit, Part II, Volume 2, National Bureau of Economic Research and the Board of Governors of the Federal Reserve System, 1957, p. 101.

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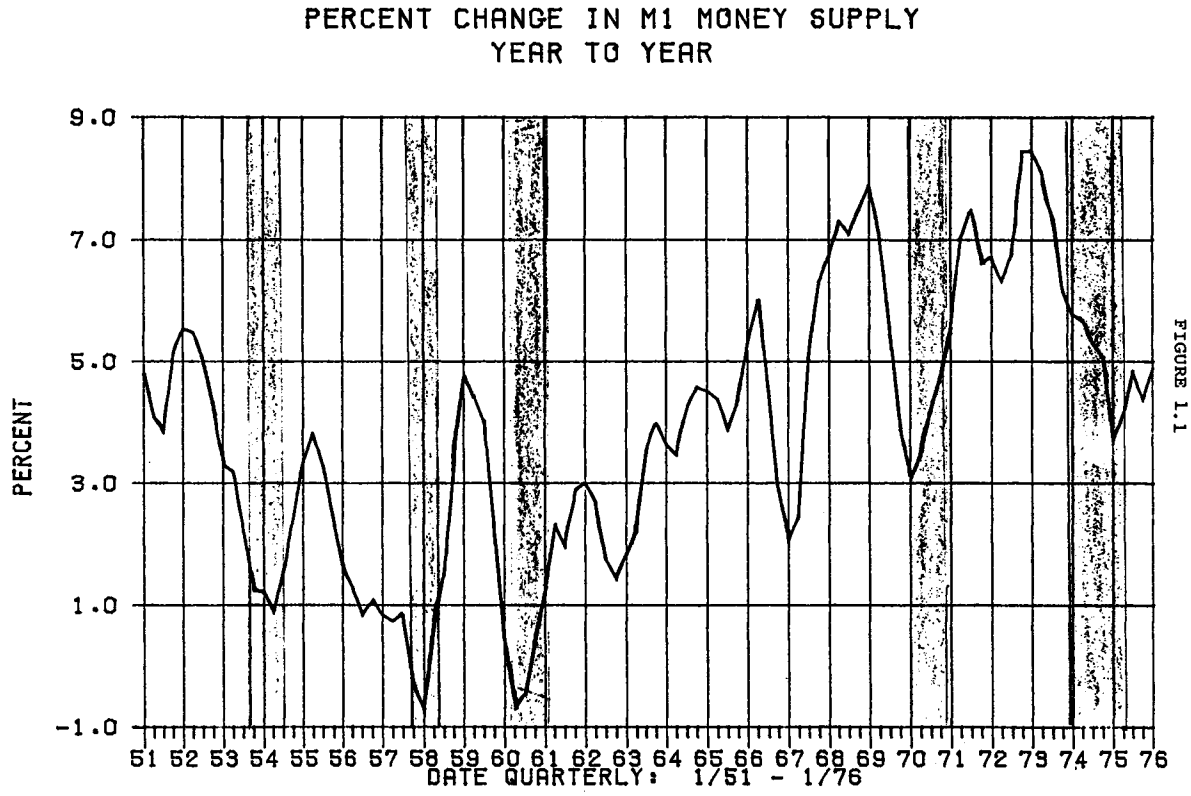

FIGURE 1.1

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jump in worldwide commodity prices, the money supply grew only 5.1 percent. During the first quarter of 1975, the money supply grew at an annual rate of less than 1 percent. Similar graphs showing alternative measures of monetary conditions tell the same story. For example, one measure of monetary policy often used by Chase Econometric Associates, Inc. (CEAI) is the non-borrowed monetary base minus the currency. This measure closely approximates non-borrowed reserves, adjusted for changes in reserve requirements. The non-borrowed monetary base minus the currency component grew rapidly through the end of 1972. However, its growth then became extremely erratic. The non-borrowed monetary base minus currency grew less than 3/4 of one precent during the first half of 1973, but then grew almost 6 percent during the next three quarters. These rates of growth might not have been too harmful, but beginning in the second half of 1974 a powerful squeeze was put on the money markets and the non-borrowed monetary base minus currency fell almost 1.5 percent! The change in monetary conditions from the perspective of the non-borrowed monetary base minus currency (NMBXC) is shown in Figure 1.2.

The behavior of interest rates also seems to indicate that Fed policy accentuated rather than moderated the business cycle. As late as the third quarter of 1972, when the boom was clearly established, the 90 day Treasury bill rate averaged less than 4.25 percent! Just as short-term rates were slow to rise during the recovery, they were also slow to fall as the economy weakened. During the fourth quarter of 1974, the 90 day Treasury bill rate was still well above seven percent. In fact, after dropping to 5.4 percent in the second quarter of 1975, the 90 day Treasury bill rate again rose to 6.33 percent during the third quarter. The post-war relationship between the Treasury bill rate and the business cycle is shown in Figure 1.3.

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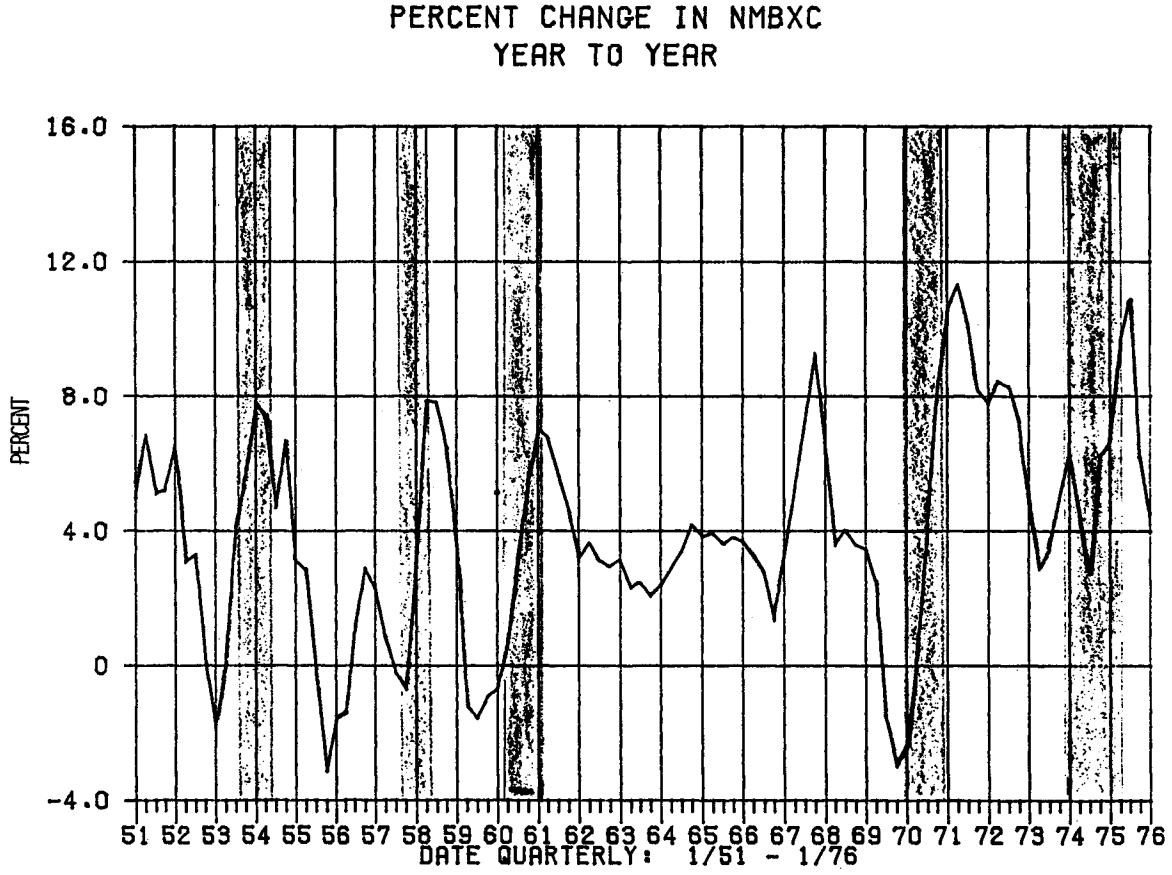

FIGURE 1.2

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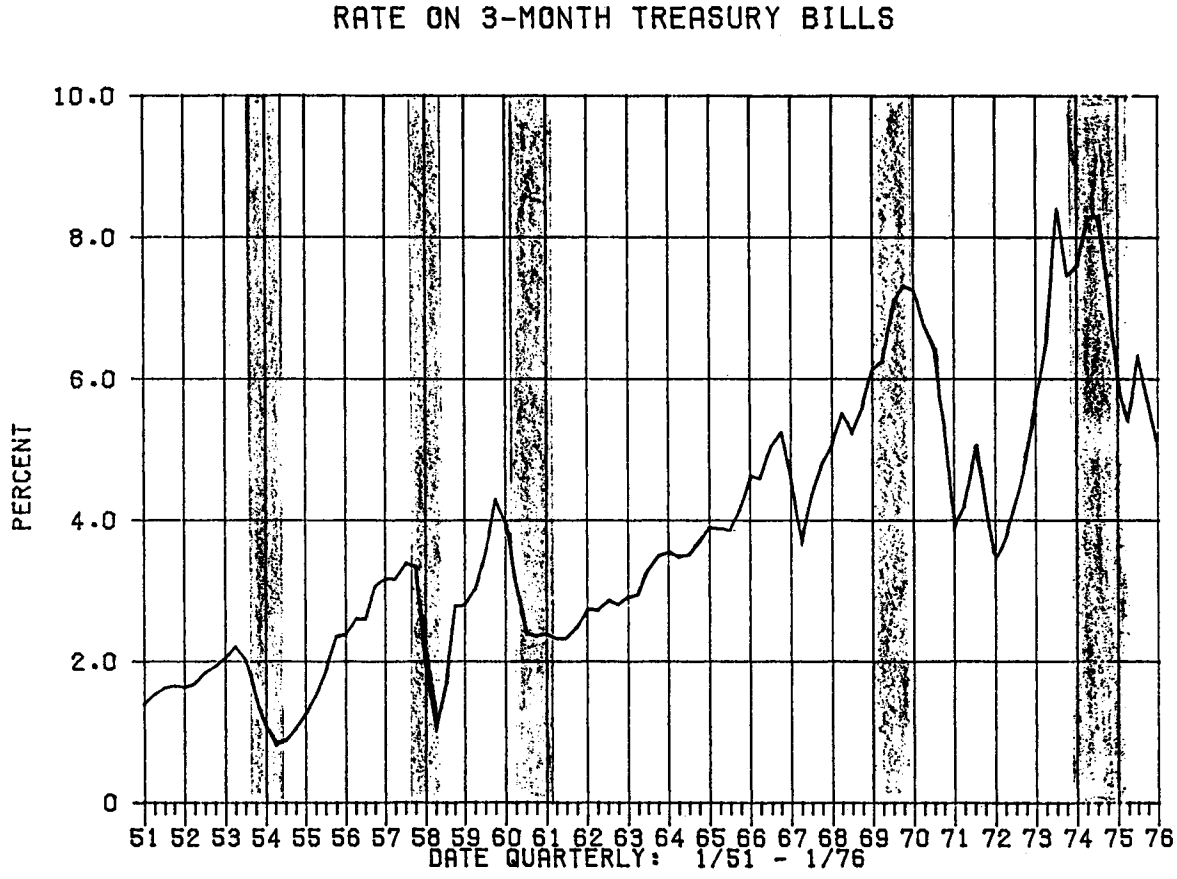

FIGURE 1.3

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The tendency to ease monetary conditions significantly during a recovery and then suddenly tighten them before a peak has resulted in monetary policies which at least initially seem inappropriate and overly erratic.

Judgmental analysis, based on graphs such as the ones shown here, can be extremely useful in highlighting the problems and presenting the implications of recent Fed policies. However, judgmental analysis provides an incomplete understanding of many crucial aspects of the Fed's policies. Econometric models add to judgmental analysis by providing estimates of the consequences of alternative types of monetary policies which might have been followed, and by providing quantative answers to questions such as:

. After considering the nature of the lags in our economic system, did monetary policy add significantly to post-war economic instability?

. Would "rule of thumb" monetary policies have been more counter-cyclical than the policies actually followed?

. How much less (more) unemployment would have resulted had various "rule of thumb" monetary policies been followed?

. How much less (more) inflation would have resulted had various "rule of thumb" monetary policies been followed?

. When would changes in policy have to be made in order to ameliorate the impact of the business cycle?

To throw light on questions such as these, the Subcommittee on Domestic Monetary Policy of the House Committee on Banking, Currency, and Housing commissioned Chase Econometric Associates, Inc. to use its macroeconomic model of the economy to investigate the impacts of possible alternative monetary policies on recent business cycle fluctuations. In particular, Chase Econometrics was asked to calculate what the impact would have been of various types of monetary policies designed to be less erratic than the ones actually pursued.

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1.7

Although it was undoubtedly hoped that at least some of the policies, some chosen with the art of hindsight and others consistent with long prescribed Monetarists' rules, would prove to be extremely good policies and would serve as a model for future policies, the major objective of the study was to test a variety of less erratic policies to determine if the extra stability alone would have been beneficial. Toward that end, the staff of the Subcommittee specified that the wide variety of simulations listed below be performed.

Simulation Number	Starting Date	Subsequent Quarter M1 Annual Growth Rate Targets
1	1975, First Quarter	10 percent in each quarter.
2	1973, First Quarter	Continue at 9 percent.
3	1973, First Quarter	8.75%, 8.5%, 8.25%, 8%, 7.75%, 7.5%, 7.25%, 7%, 6.75%, 6.5%, 6.25%, 6%, 5.75%.
4	1971, Third Quarter	5.75%, 5.5%, 5.25%, 5%, 4.75%, 4.5%, 4.25%, 4%, Continue at 4 percent.
5	1965, First Quarter	4.25%, 4.5%, 4.75%, 5%, 5.25%, 5.5%, 5.75%, 6%, 6.25%, 6.5%, 6.75%, 7%, 7.25%, 7.5%, 7.75%, 8%, Continue at 8 percent.
6	1965, First Quarter	Continue at 4 percent.
7	1965, First Quarter	3.75%, 3.5%, 3.25%, 3%, 2.75%, 2.5%, 2.25%, 2%, 1.75%, 1.5%, Continue at 1.5%.

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In addition, CEAI performed the following simulations.

Starting Date	Annual Monetary Targets
1973, First Quarter	9 percent M1 growth but with a restraint upon contractions in the non-borrowed monetary base minus currency.
1973, First Quarter	8 percent growth in the non-borrowed monetary base minus currency.
1971, Third Quarter	2.2 percent growth in the non-borrowed monetary base minus currency.
1965, First Quarter	Steady growth in the non-borrowed monetary base less currency at its average rate for the 1965.1-1976.1 period.

These simulations were devised by the staff of CEAI as interesting variants of the simulations suggested by the staff of the Subcommittee.

In order to gauge the usefulness of these simulations, it is important to have a general understanding of the CEAI Macroeconomic Model and its simulation capabilities. A brief description of the model and a discussion of its simulation capabilities are presented in the remaining three portions of this Section. Sections II and III respectively contain a discussion of each simulation and a listing of the major results of each run.

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1.9

A DESCRIPTION OF THE CEAI MACROECONOMIC MODEL

GENERAL

When econometric models were first developed, it was fashionable to call them "Keynesian" or "monetarist", according to the philosophical bent of the author and the lines along which the model was constructed. Before long, it became clear that all of these models had serious deficiencies. As Haberler has pointed out, may theories of the business cycle seem to have considerable validity and it is foolish to claim that a single relationship is the exclusive cause of business cycles.[2] If a single business cycle hypothesis is absurd, no model with a single set of causal relationships can possibly claim to describe reality.

Recognizing this truism, most model builders have expanded their models to include a wide variety of empirically valid relationships. A major strength of multivariate econometric techniques is that they are able to handle these diverse relationships. In fact, to use econometric techniques properly, an economist must attempt to include all economically valid links in each equation. A model which is built to describe only one type of linkage is almost certain to be econometrically unsound and yield poor forecasts and simulations.

The CEAI Macroeconomic model is most properly termed an "eclectic" model, since it incorporates many empirically verifiable components of a

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[2] Haberler, Gottsfreid, Prosperity and Depression, George Allen and Univin, London, 1964, P. 361.

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wide variety of economic theories. An economist looking at the income multipliers in the consumer durable functions would probably call the Model "Keynesian", yet the same economist looking at the well developed, simultaneous and lagged links between the real and monetary sectors would be justified in calling the model "monetarist". The specification of the consumer non-durable and service functions provides strong empirical support for Friedman's permanent income hypothesis; the wage and price sectors embody, in part, a "Cambridge" factor-cost theory of price determination, and the treatment of the financial aspects of investment and savings would be acceptable to most "neo-classical" economists. Even a "Marxist" would find consolation in the relative income terms which enter into each of the consumption functions. While it is not possible to incorporate all valid economic relationships in a finite model, the CEAI Model does incorporate many of the diverse economic relationships which exist. The great strength of the CEAI model is the skill with which these relationships have been tested, combined, and quantified.

OVERVIEW

The Chase Econometrics Macroeconomic Model is a regression-based model of the United States economy. It can be used to analyze the consequences of economic and political events on approximately 470 volatile economic indicators. Forecasts are generally prepared ten quarters into the future on a quarterly basis and ten years into the

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future on an annual basis. However, even on a quarterly basis, the model satisfies the requirements of long run homogeneity, and can therefore be used for long-run as well as short-run simulations and forecasting. The major sectors of the model and a brief description of the economic theory behind them are presented below. A copy of the full equation book of the CEAI U.S. Macroeconomic Model has been made available to the staff of the Subcommittee.

Consumption of Durable Goods - Purchases of durable goods are treated as a substitute for saving. When faced with a change in income, consumers have the choice of either saving their income in liquid form or adding to their stock of durables. As such, the lags on the income term are generally short. The maximum lag is four quarters and the average lag is one quarter. Credit availability is also important, since purchases of durable goods fall during periods of monetary crunches. Other important variables in this sector include relative prices, changes in the distribution of income (primarily among profit type income, wages, and transfer payments), the unemployment rate (as an expectational variable), housing starts, and demographic variables.

Consumption of Nondurables and Services - The model uses a modified permanent income hypothesis to forecast consumption of nondurables and services. Changes in this sector occur relatively slowly in response to changes in income. Of course, the impact is different for each variable in the sector. The lags for consumption of clothing are almost as short as

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in the durable goods equations. At the other extreme they extend to fifteen quarters for consumption of housing services. Relative prices and changes in income distribution are also important in these functions.

Investment in Plant and Equipment - Investment in plant and equipment is predicted through an Evans "double-peaked" investment function. In the short run,output is quite important in determining investment as a modifications variable. However, the major determinants of investment occur with long lags. They include output, as well as the financial desirability of additional investment. The last term, the financial desirability of additional investment, is calculated following D.W. Jorgenson's work on the rental cost of capital. The lags on this term are such that the primary influence occurs with a one-to-two-year lag, depending upon the type of investment being considered.

Investment in Residential Structures - Housing starts are determined by both demand variables (income, population, the unemployment rate, and the stock of unsold homes), and supply variables (credit availability in various nonlinear and asymmetrical forms). Of these factors, the most important in the short run is credit availability. As will be noted in the discussion of the monetary sector, the Chase Model is unique in including non-price credit rationing as a key variable in the monetary sector. The variable is important in predicting housing starts as well as consumption of durables.

Government - The government revenue equations are quite straightforward. In general, each type of revenue is predicted as a function of an endogenous tax base (e.g. wages, coporate profits) and an exogenous tax rate. All equations are in level form except for social security contributions which are in first difference form. Most government

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expenditure variables are exogenous, the major exception being unemployment benefits. In the short run, government expenditures have a greater impact on the economy than changes in taxes or changes in transfer payments. However, these types of expenditures also tend to be more inflationary than changes in the tax structure or transfer payments. Higher prices retard consumption and slow down the economy. Therefore, in the long run, tax changes actually have a greater multiplier than government purchases. The major exception to this "rule" is that government expenditures which increase labor productivity lower prices and have the highest multiplier of all. After four quarters the multiplier for defense expenditures is approximately 2.3; non-defense expenditures,1.1; personal income tax payments, 1.4.

The Monetary Sector - The principal exogenous variable in the monetary sector is the non-borrowed monetary base minus currency. This is roughly equivalent to non-borrowed reserves adjusted for changes in the reserve requirements, although"non-borrowed reserves"of non-member banks are also included. In the remainder of this report, when the phrase "non-borrowed reserves" appears in quotation marks, it should be understood to refer to this variable. Under current conditions, a one percent change in non-borrowed reserves changes constant dollar GNP by approximately 0.1 percent. Changes in "non-borrowed reserves" flow through the federal funds rate to affect other short-term interest rates. Other variables affecting short-term interest rates include the inflation rate, the government deficit, the private sector demand for funds, and the rate of economic activity. Long term interest rates are determined by the inflation rate with very long lags (up to eighteen quarters), the volume of new corporate issues, and corporate industrial production, cash flow, and investment plans. Short-term interest rates are also

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significant in determining long-term rates. However, the "elasticity" is asymmetrical and nonlinear, and ranges from 0.2 to 0.4.

The money supply equations are reduced-form equations including terms such as income, total savings, the inflation rate, and the non-borrowed monetary base minus currency. Changes in interest rates are also used to capture the shifts between the various monetary aggregates. The equation for loans is quite important since it enters many of the monetary equations,including the equation which predicts credit rationing. Loans are a function of interest rates, investment, production, cash flow, and (with a negative sign) the value of corporate bond issues.

The term for non-price credit rationing is unique to the Chase Model. Credit rationing has three components: M1, the ratio of loans to deposits, and deposits of funds in thrift institutions. This term is very useful since it measures monetary tightness not reflected in interest rates, either because of institutional rigidities, non-price market discrimination, or wage/price restraints.

Prices and Wage Rates - The price sector is extremely important to the Chase Model. Increases in the inflation rate reduce consumer expectations, depress real income, raise interest rates, and cause tighter monetary conditions (assuming cet. par. monetary policy). The tightened monetary situation,in turn,reduces both consumption and investment. The key exogenous variables in the price sector are prices received by farmers,the wholesale price index for petroleum,and the price of imported raw materials. These prices flow through the other wholesale price indices to the total wholesale price index. They then flow through the consumer price indices to the total consumer price index. Both the wholesale price index and the consumer price index are determined through identities. The GNP deflators are then calculated through the aforementioned

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price indices. Wage rates are determined by the previous level of inflation, the unemployment rate, the rate of capacity utilization, and the change in production. Wage rates are then used to calculate normal unit labor costs,which in turn are a significant input in the price equations. It is important to note that in the Chase Model, a tightening in money supply results in higher interest rates, the short-run impact of which is a higher rate of inflation than would ordinarily occur. This relationship explains a portion of the behavior of the economy in mid-1974. Of course, the long-run (1 year +) impact of tighter monetary policy is a reduction in inflation.

Output and Income - Once the level of final sales inventories, prices, and wage rates have been forecasted, the calculation of income is quite straightforward. Output and man-hours worked are direct functions of final sales plus inventories. Employment is computed by average hours worked per week. Total wages are simply equal to the wage rate times man-hours. Once supplements are added to total wages(supplements are endogenous but are primarily a function of other labor income,which is exogenous), the total wage bill to the employer can be calculated. One key equation in the income sector is profits. Profits are a function of output, capacity utilization, prices, unit labor costs, and the ratio of investment to GNP. Interest rates also directly affect corporate profits. Peak capacity is calculated through a Cobb-Douglas production function of the form Output = $A (K)^{\alpha} (L)^{1-\alpha} e^{\gamma t}$ where α = 1/3. By calculating this production function, we can define capacity utilization in such a way that changes in investment and employment affect the calculation of peak capacity. This methodology provides a better estimate of capacity utilization than is used in most models, and is very important in correctly predicting prices and investment.

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1.16

SIMULATION CAPABILITIES OF THE CEAI MACROECONOMIC MODEL

No model could ever simulate actual economic conditions perfectly. Even an ideal model would fail to capture movements in the published data which reflect random disturbances and normal errors in data collection. Therefore, before the main part of the work on this project could commence, it was necessary to create a series of baseline scenarios. Each experimental simulation could then be compared to its own baseline with full confidence that all differences were caused by the changes made, rather than by any possible spurious simulation characteristics of the model.

To prepare the baseline simulations, the CEAI model was used to "forecast the past." A simulation was prepared beginning in each of the starting-point quarters, and running through the first quarter of 1976. The version of the model used, May 1976 (Version 29), was the most recent version available at the time the project was begun. The actual values of each of the exogenous inputs were fed into the model. No adustments of any type were made to the constant terms of the equations in the model. The results of these simulations are shown on Tables 1.1 - 1.4.

This procedure for creating the baselines provided an extremely powerful test of the model's simulation capability. In the most extreme case, the model was called upon to "forecast" for well over 10 years with no "model management" of any type.

As shown in Table 1.1, the model proved itself to be an extremely good representation of the economic relationships which determined the course of the economy since 1965. Even during 1975, the last year of the simulation period and perhaps the most difficult post-war year to simulate, the cumulative

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error in real Gross National Product was less than 2 percent. The cumulative inflation discrepancy, as measured by the Consumer Price Index, was less than 4 percent. Since these two small errors offset each other, current-dollar Gross National Product was predicted within .1 percent! For most variables, the average absolute error was approximately 1 percent, which is very close to being within the error tolerance of the data. The model was able to capture both the timing and the severity of all peaks and troughs and showed no tendency to explode or to tail off into a depresssion.

The other baseline simulations yielded similar results; the comparisons are shown in Tables 1.2 - 1.4. In each simulation, the model proved to be extremely capable of determining the economic consequences of a wide range of exogenous shocks and major policy changes.

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SIMULATION CAPABILITIES OF THE CEAI MACRO-ECONOMIC MODEL

Table 1.1

1965 First Quarter Simulation
(Actual Exogenous Inputs)

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
Gross National Product (Current Dollars)											
Actual History	688.1	753.0	796.3	868.4	935.5	982.4	1063.4	1171.1	1306.3	1406.9	1498.9
Baseline	690.9	741.6	808.6	887.4	934.0	986.8	1072.8	1189.9	1320.2	1416.0	1497.4
Difference	-2.8	11.4	-12.3	-19.0	1.5	-4.4	-9.4	-18.8	-13.9	-9.1	1.5
% Difference	-.4	1.5	-1.5	-2.2	.2	-.4	-.9	-1.6	-1.1	-.6	.1
Gross National Product (Constant Dollars)											
Actual History	925.9	981.0	1007.7	1051.8	1078.8	1075.3	1107.5	1171.1	1233.4	1210.7	1186.1
Baseline	918.7	945.1	991.6	1043.3	1050.8	1060.7	1106.7	1189.0	1251.2	1233.4	1208.1
Difference	7.2	35.9	16.1	8.4	28.0	14.6	.8	-17.9	-17.8	-22.7	-22.0
% Difference	.8	1.9	.5	.8	2.6	1.3	.1	-1.5	-1.4	-1.9	-1.8
Unemployment Rate											
Actual History	4.5	3.8	3.8	3.6	3.5	5.0	5.9	5.6	4.8	5.6	8.5
Baseline	4.2	4.2	4.1	3.8	4.6	5.8	6.1	5.4	4.4	5.3	7.9
Difference	.3	-.4	-.3	-.2	-1.1	-.8	-.2	.2	.4	.3	.4
Consumer Price Index											
Actual History	94.4	97.3	100.0	104.2	109.8	116.3	121.3	125.3	133.1	147.7	161.2
Baseline	94.4	97.8	101.7	106.2	111.7	117.0	120.8	123.0	129.3	142.2	154.9
Difference		-.5	-1.7	-2.0	-1.9	-.7	.5	2.3	3.8	5.5	6.3
% Difference		-.5	-1.7	-1.9	-1.7	-.6	.4	1.8	2.9	3.7	3.9
Money Supply (M1)											
Actual History	167.1	174.9	181.8	194.8	206.5	214.5	228.8	245.0	263.3	277.7	289.5
Baseline	168.4	174.6	182.1	191.5	197.5	203.5	216.7	231.5	248.5	265.0	278.5
Difference	-1.3	.3	-.3	3.3	9.0	11.0	12.1	13.5	14.8	14.7	11.0
% Difference	-0.8	.2	-.2	1.7	4.4	5.1	5.3	5.5	5.6	5.3	3.8
Treasury Bill Rate											
Actual History	3.95	4.88	4.33	5.35	6.69	6.44	4.34	4.07	7.02	7.87	5.82
Baseline	4.29	5.08	4.98	5.55	5.54	4.35	3.13	3.29	6.44	8.26	6.21
Difference	-.34	-.20	-.65	-.20	1.15	2.09	1.21	.78	.58	-.39	-.39

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SIMULATION CAPABILITIES OF THE CEAI MACRO-ECONOMIC MODEL

Table 1.2

1971 Third Quarter Simulation
(Actual Exogenous Inputs)

	1971	1972	1973	1974	1975
Gross National Product (Current Dollars)					
Actual History	1063.4	1171.1	1306.3	1406.9	1498.9
Baseline	1064.9	1171.6	1303.7	1403.3	1491.1
Difference	-1.5	-.5	2.6	3.6	7.8
%Difference	-.1	-.04	.2	.3	.5
Gross National Product (1972 Dollars)					
Actual History	1107.5	1171.1	1233.4	1210.7	1186.1
Baseline	1109.8	1177.7	1238.1	1219.5	1192.3
Difference	-2.3	-6.6	-4.7	-8.8	-6.2
% Difference	-.2	-.6	-.4	-.7	-.5
Unemployment Rate					
Actual History	5.9	5.6	4.8	5.6	8.5
Baseline	6.0	5.5	4.5	5.4	8.1
Difference	-.1	.1	.3	.2	.4
Consumer Price Index					
Actual History	121.3	125.3	133.1	147.7	161.2
Baseline	121.6	125.6	133.1	147.0	160.7
Difference	-.3	-.3	0	.7	.5
% Difference	-.2	-.2	0	.5	.3
Money Supply (M1)					
Actual History	228.8	245.0	263.3	277.7	289.5
Baseline	229.1	244.1	261.8	276.9	292.9
Difference	-.3	.9	1.5	.8	-3.4
%Difference	-.1	.4	.6	.3	-1.2
Treasury Bill Rate					
Actual History	4.34	4.07	7.02	7.87	5.82
Baseline	4.20	3.80	6.80	8.63	6.53
Difference	.14	.27	.22	-.76	-.71

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Table 1.3

SIMULATION CAPABILITY OF THE CEAI MACROECONOMIC MODEL

1973 First Quarter Simulation (Actual Exogenous Inputs)

	1973	1974	1975
Gross National Product (Current Dollars)			
Actual History	1306.3	1406.9	1498.9
Baseline	1295.6	1397.1	1488.1
Difference	10.7	9.8	10.8
% Difference	.8	.7	.7
Gross National Product (1972 Dollars)			
Actual History	1233.4	1210.7	1186.1
Baseline	1224.2	1208.1	1183.5
Difference	9.2	2.6	2.6
% Difference	.7	.2	.1
Unemployment Rate			
Actual History	4.8	5.6	8.5
Baseline	4.9	5.8	8.4
Difference	-.1	-.2	.1
Consumer Price Index			
Actual History	133.1	147.7	161.2
Baseline	133.8	148.0	161.8
Difference	-.7	-.3	-.6
% Difference	-.5	-.2	-.4
Money Supply (M1)			
Actual History	263.3	277.7	289.5
Baseline	264.8	280.2	296.4
Difference	-1.5	-2.5	-6.9
% Difference	-.6	-.9	-2.3
Treasury Bill Rate			
Actual History	7.02	7.87	5.82
Baseline	6.95	8.46	6.40
Difference	.07	.59	.58

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Table 1.4

SIMULATION CAPABILITY OF THE CEAI MACROECONOMIC MODEL

1975 First Quarter Simulation
(Actual Exogenous Inputs)

	1975.1	1975.2	1975.3	1975.4	1976.1
Gross National Product (Current Dollars)					
Actual History	1433.6	1460.6	1528.5	1572.9	1619.2
Baseline	1446.2	1463.1	1519.9	1570.8	1600.2
Difference	-12.6	-2.5	8.6	2.1	19.0
% Difference	-.9	-.2	.6	.1	1.2
Gross National Product (Constant Dollars)					
Actual History	1158.6	1168.1	1201.5	1216.2	1241.2
Baseline	1170.6	1167.4	1188.7	1207.2	1217.3
Difference	-12.0	.7	12.8	9.0	23.9
% Difference	-1.0	.1	1.1	.7	1.9
Unemployment Rate					
Actual History	8.1	8.7	8.6	8.5	7.6
Baseline	7.8	8.7	8.6	9.0	9.1
Difference	.3	0	0	-.5	-1.5
Consumer Price Index					
Actual History	157.0	159.5	162.9	165.5	167.1
Baseline	157.7	160.2	163.8	166.8	168.6
Difference	-.7	-.7	-.9	-1.3	-1.5
% Difference	-.4	-.4	-.6	-.8	-.9
Money Supply (M1)					
Actual History	282.6	287.8	292.9	294.7	296.9
Baseline	285.3	291.6	296.0	299.9	303.5
Difference	-2.7	-3.8	-3.1	-5.2	-6.6
% Difference	-.1	-1.3	-1.1	-1.8	-2.2
Treasury Bill Rate					
Actual History	5.87	5.40	6.33	5.68	4.95
Baseline	6.64	6.71	6.54	6.21	5.41
Difference	-.77	-1.31	-.21	-.53	-.46

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1.22

LIMITATIONS OF THE CEAI MACROECONOMIC MODEL

If one is desirous of testing the economic consequences of past and proposed policy actions, one must use models. Economics is different from sciences such as physics, biology, or chemistry, since in economics it is not possible to perform experiments on test samples and observe the results. Econometric models are the only way to test economic policies under conditions in which all other factors are held constant.

All models of the economy are, of course, limited. The world is infinitely complex and models are finite. Even worse, there are many relationships in the economy which are only partially understood by economists. Also, the data which economists must use to construct their models are limited, imprecise, and often subject to revision. At CEAI, we are acutely conscious of the limitations as well as the strengths of our models.

There are four major limitations of the CEAI U.S. Macroeconomic model of which the reader should be aware, before reading Section II of this report. First it must be realized that some prices--primarily oil, farm goods, and imported raw materials--are taken to be exogenous. (Many components of these products are forecasted using other CEAI models. However, only the macroeconomic model was used for this project.) It is certainly possible that large changes in the U.S. money supply could have some effect upon these prices which the CEAI macroeconomic model cannot capture. Nevertheless, this problem is unlikely to be significant except perhaps in the long-run simulations.

Second, it is very difficult to capture the economic changes which result from changes in asset holdings. Wherever possible (such as in the

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automobile and housing start equations), CEAI has tired to capture asset effects. However, we do not attempt to predict or simulate the stock market, nor do we attempt to make judgments such as, "A six-month decline in the stock market will not cause stock holders to re-evaluate their real wealth but an eight-month decline will." Since data on consumer asset holdings in the United States are so poor and forecasts of these holdings would require one to forecast the stock market, many linkages in this area must be omitted.

The United States has not experienced a hyper-inflation in the post-war period. From other countries' experiences, we know that in hyper-inflationary conditions some economic relationships are completely reversed. (Consumers normally consume less as prices increase. However, in a hyper-inflation there is a flight from cash.) Thus, the model is unlikely to be able to simulate those conditions which will lead to or involve a hyper-inflation.

Finally, in the real world, lag structures are likely to be continuous, while in a model they must be discrete. Thus, a model's simulations may indicate certain oscillations which would be far more dampened in actual experience. Therefore, to interpret the simulations, one should look at emerging and continuing trends rather than a single isolated quarter.

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SECTION II

DISCUSSION OF THE SIMULATIONS

2.1

1975, First Quarter

1974 was a year of great uncertainty. Despite a significant slowdown in real income, final sales, and production, many observers did not recognize until the very end of the year that a true recession was upon us. The first simulation presumed that the Fed followed its actual policies through 1974, but that beginning in the first quarter of 1975 it took an extremely strong anti-recessionary stance. The assumed implementation of this stance was in the form of a target annual growth rate of 10 percent in M1.

The simulation indicates that this policy would have been only partially successful. By the end of 1975, (when the economy was growing rapidly even under the baseline (actual history) assumptions, real GNP would have been only .5 percent higher and the unemployment rate only .2 percentage points lower than under the baseline. Short term interest rates would have moved somewhat erratically, with a peak at the end of 1975. While the short-run effect on inflation would have been negligible, the money supply was more than 3.5 percent higher than in the baseline, implying that this simulation probably would have shown growing inflation through 1976 had the simulation been continued.

An attempt to continue the 10 percent growth-rate policy in the first quarter of 1976 would have had extremely serious consequences. The model indicated that no reasonable open market policy operations would have been sufficient to cause M1 to grow 10 percent in that quarter. (Money market observers are well aware of the difficulties the Fed encountered in reaching for its more modest growth-rate target.) In the actual simulation we expanded the monetary base by $4 billion in 1976.1. This resulted in M1 growing 5.5 percent, while M2 and M4 grew 13.3 and 15.6 percent respectively.

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It could certainly be argued that these growth rates were consistent with the type of policy desired.

During 1976.1, real GNP was .9 percent higher under this scenario. However, a wage-price spiral was clearly beginning to develop. Despite the substantially lower interest rates caused by the large increase in the monetary base, both the Consumer Price Index and the implicit GNP deflator were .2 points, or approximately .1 percent, higher than in the baseline. The wage rate in manufacturing was .4 percent above its baseline value. The results of this simulation are shown in Table 2.1 and Figures 2.1 and 2.2.

CONCLUSIONS

1) If Fed policy is designed to react to recent economic conditions rather than to forecasted conditions, it can only be of limited use in ameliorating the severity of recessions, even disregarding the obvious problem that before the peak, the policy will be aimed in the wrong direction. After the peak has been observed to have passed, even a quick reaction by the Fed will be late. The simulation indicates that the lags in monetary policy are so long that the recession is likely to be over before much of the policy's impact is felt.

2) The lag between a change in monetary policy and its impact on inflation is substantially longer than the lag between the change in policy and its impact on real growth in a recessionary environment.

3) Attempts to achieve a high monetary growth target in a single quarter may prove futile. The expansion of reserves necessary to achieve a 10 percent growth rate of M1 in 1976.1 would have been so great that it would have flooded the economy with liquidity.

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MAJOR ECONOMIC INDICATORS

1975 10 Percent M1 Growth vs. Baseline

	1975.1	1975.2	1975.3	1975.4	1976.1
Gross National Product (Current Dollars)					
10% M1 Growth	1447.1	1467.9	1526.4	1580.3	1616.9
Baseline	1446.2	1463.1	1519.9	1570.8	1600.2
Difference	.9	4.8	6.5	9.4	16.7
% Difference	.1	.3	.4	.6	1.0
Gross National Product (Constant Dollars)					
10% M1 Growth	1171.5	1171.9	1193.6	1213.3	1228.5
Baseline	1170.6	1167.4	1188.7	1207.2	1217.3
Difference	.9	4.5	4.9	6.1	11.1
% Difference	.1	.4	.4	.5	.9
Wage Rate in Manufacturing					
10% M1 Growth	4.69	4.77	4.89	5.02	5.17
Baseline	4.68	4.77	4.88	5.01	5.15
Difference	.01	.01	.01	.02	.02
% Difference	.21	.14	.21	.32	.40
Consumer Price Index					
10% M1 Growth	157.7	160.0	163.5	166.8	168.8
Baseline	157.7	160.2	163.8	166.8	168.6
Difference	.0	-.2	-.3	.0	.2
% Difference	.0	-.1	-.2	.0	.1
Treasury Bill Rate					
10% M1 Growth	5.41	4.33	6.81	6.86	3.10
Baseline	6.64	6.71	6.54	6.21	5.14
Difference	-1.23	-2.39	.26	.65	-2.31

TABLE 2.1

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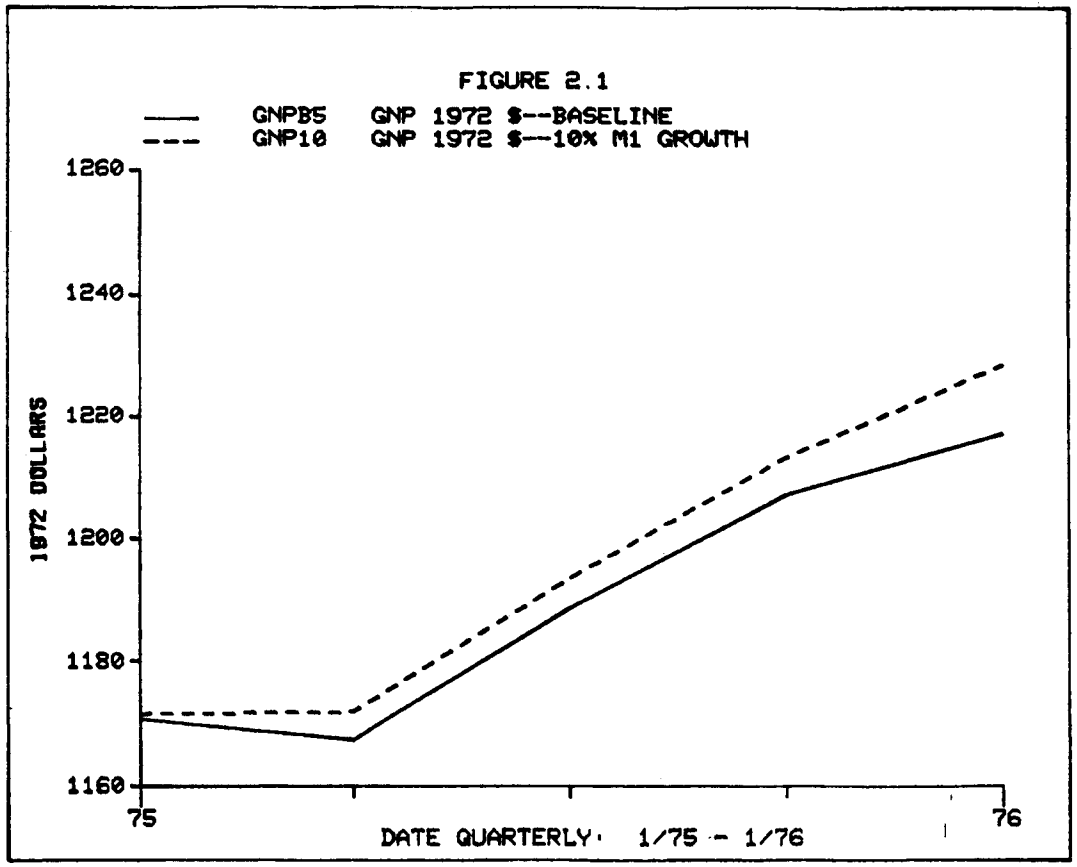

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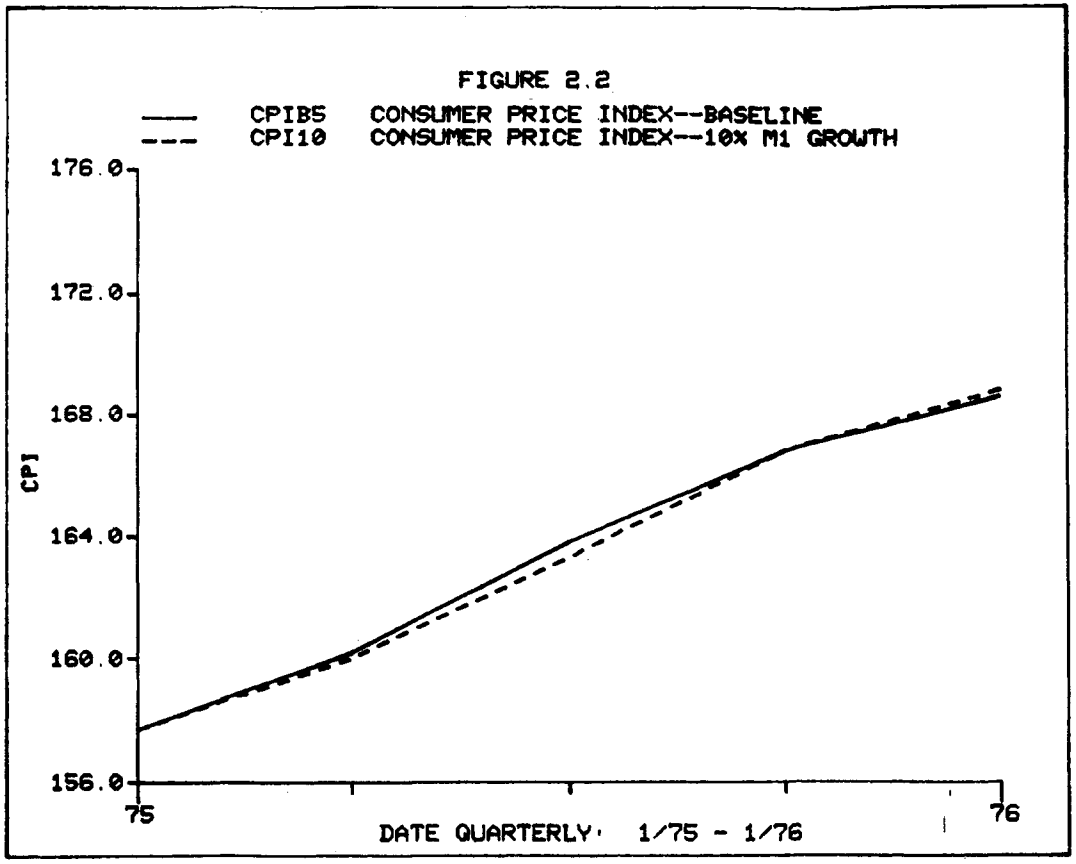

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4) Since the relationship between changes in reserves and changes in money supply contains a significant lag, attempts to achieve a high monetary growth target in a single quarter may result in so great an addition to reserves that excessive tightening may be required in subsequent quarters. (The required increases in reserves in 1975.1 and 1975.2 were so great that to achieve a steady 10 percent M1 growth rate, it was necessary to decrease "non-borrowed reserves" during 1975.3.) Thus, attempts to slavishly achieve a given M1 target in every quarter may result in severe oscillations in monetary policy.

5) Several monetary aggregates should be used in conjunction with M1 to determine monetary conditions and the impact of a given monetary policy since institutional changes, particularly in the short run, can easily distort the growth rate of a single monetary aggregate. For example, in the "10 percent growth rate" simulation M1 grew only 5.5 percent during 1976.1. However M2 and M4 grew 13.3 and 15.6 percent respectively during the same period. Clearly, any analysis of monetary conditions which ignored the growth rates of M2 and M4 would give an incorrect analysis of the simulated conditions.

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2.7

1973, First Quarter

Four alternative simulations were generated beginning in 1973.1. The purpose of these simulations was to determine whether the Fed could have prevented the 1974/75 recession by following a less erratic monetary policy (as discussed in Section I) than the one actually pursued. The results of the simulations indicate that the exogenous shocks faced by the economy--the quadrupling of oil prices, the "food shortage", the successive devaluations of the dollar, and the sharp escalations in the prices of many other raw materials (phosphate, bauxite, etc.)--were so great that the Fed could not have offset the impact of the massive decline in real disposable income through monetary policy. However, by following a less erratic course, the Fed could have moderated the recession substantially and reduced the collapse in income and employment actually experienced. Moreover, the simulations indicate that a more moderate policy would have resulted in a relatively small inflation penalty.

The following alternative simulations were used to test the hypothesis that Fed policy was needlessly destabilizing during the period 1973.1 - 1976.1.

(a) 9 Percent M1 Growth--changes to "non-borrowed reserves" such that money supply (M1) continued to grow at the approximate 9 percent annual growth rate of 1972.4.

(b) 9 Percent M1 Growth with Judgment--The same changes as in (a), except that deviations from the target were permitted if the 9 percent growth rate could only be achieved by a severe reduction in "non-borrowed reserves."

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(c) Declining M1 Growth--Changes to "non-borrowed reserves" such that the money supply growth rate declined from the 9 percent average annual rate of 1972.4 by .25 percent in each quarter, to 5.75 percent by 1976.1.

(d) 8 Percent NMBXC Growth--Changes to "non-borrowed reserves" such that "non-borrowed reserves" grew at an 8 percent average annual growth rate during each quarter.

Simulations (a) and (c) were chosen by the staff of the Subcommittee on Domestic Monetary Policy to represent two diverse types of non-erratic monetary policy. Simulations (b) and (d) were suggested by Chase Econometrics during the course of this study as interesting variants of simulations (a) and (c).

These alternative simulations indicate that a wide variety of non-erratic monetary policies would have resulted in substantially less economic disruption than was actually experienced during the 1974-1975 period. A summary of the economic impacts for simulations (a) and (c) is given in Table 2.2. The CEAI Macroeconomic Model indicates that the unemployment rate would have been .8 percent lower than the baseline under scenario (a) and .5 percent lower than the baseline under scenario (c), had the policies represented in the scenarios been followed. These results are shown in Figures 2.3 and 2.4. Thus, the erratic monetary policy actually followed cost the economy an average of 460,000 jobs during 1975, even relative to a policy which called for the growth in the money supply to decline steadily (but slowly) before and through the recession! The cumulative inflation penalty paid for this more expansionary, but more stable policy was only .8 percent during 1975, the third year of this simulation. The model indicates that the tight Fed policy in 1973-74 did nothing to slow the growth of the 1973-74 inflation bubble but caused

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Table 2.2
MAJOR ECONOMIC INDICATORS
1973 Alternative Simulations (a) & (c)

	1973	1974	1975
Gross National Product (Current Dollars)			
a) 9% M1 Growth	1298.0	1415.3	1517.9
Difference from Baseline	2.4	18.2	29.8
c) Declining M1 Growth	1297.3	1409.7	1504.3
Difference from Baseline	1.7	12.6	16.2
Gross National Product (Constant Dollars)			
a) 9% M1 Growth	1226.3	1222.1	1200.5
Difference from Baseline	2.1	14.0	17.0
c) Declining M1 Growth	1225.8	1217.8	1191.7
Difference from Baseline	1.6	9.7	8.2
Unemployment Rate			
a) 9% M1 Growth	4.9	5.4	7.6
Difference from Baseline	0	-.4	-.8
c) Declining M1 Growth	4.9	5.5	7.9
Difference from Baseline	0	-.3	-.5
Consumer Price Index			
a) 9% M1 Growth	133.8	147.9	162.6
Difference from Baseline	0	.1	.8
c) Declining M1 Growth	133.8	147.9	162.6
Difference from Baseline	0	.1	.8
Money Supply (M1)			
a) 9% M1 Growth	267.0	291.0	317.2
Difference from Baseline	2.2	10.8	20.8
c) Declining M1 Growth	266.1	286.9	306.2
Difference	1.3	6.7	9.8
Treasury Bill Rate			
a) 9% M1 Growth	6.43	7.68	6.9
Difference from Baseline	-.52	-.78	-.5
c) Declining M1 Growth	6.59	8.10	7.6
Difference from Baseline	-.36	-.36	1.2

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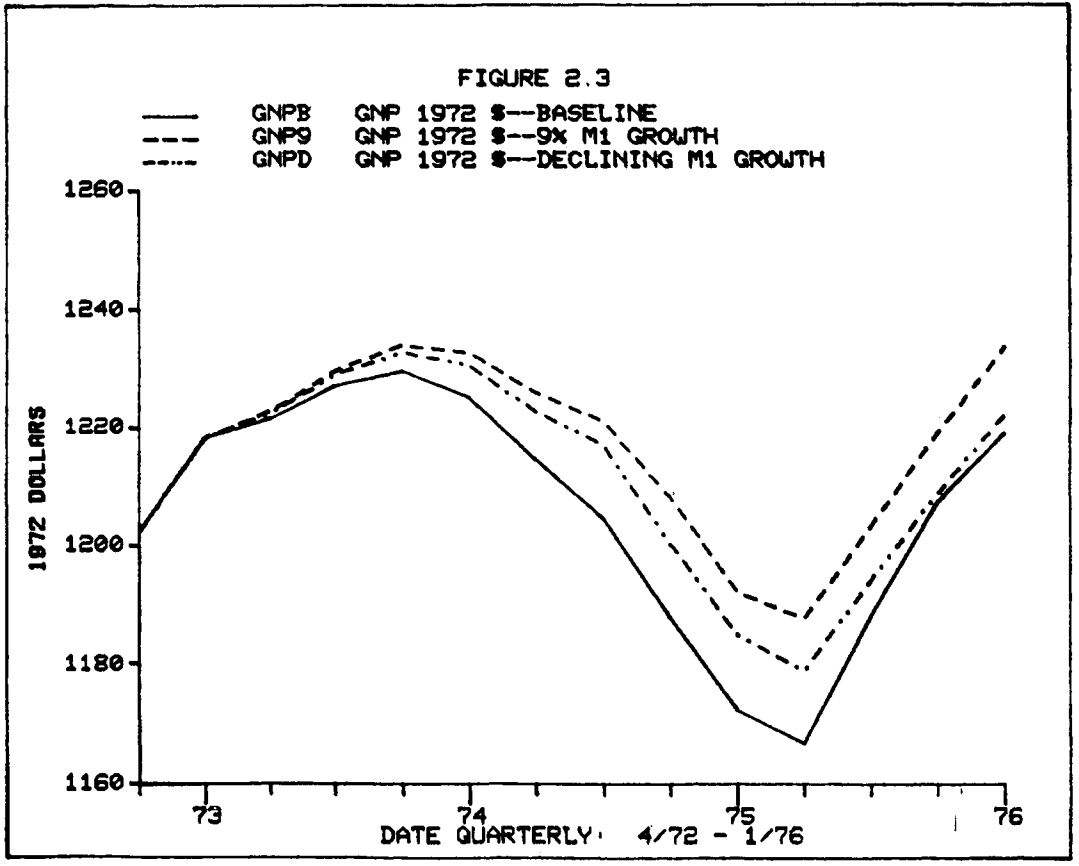

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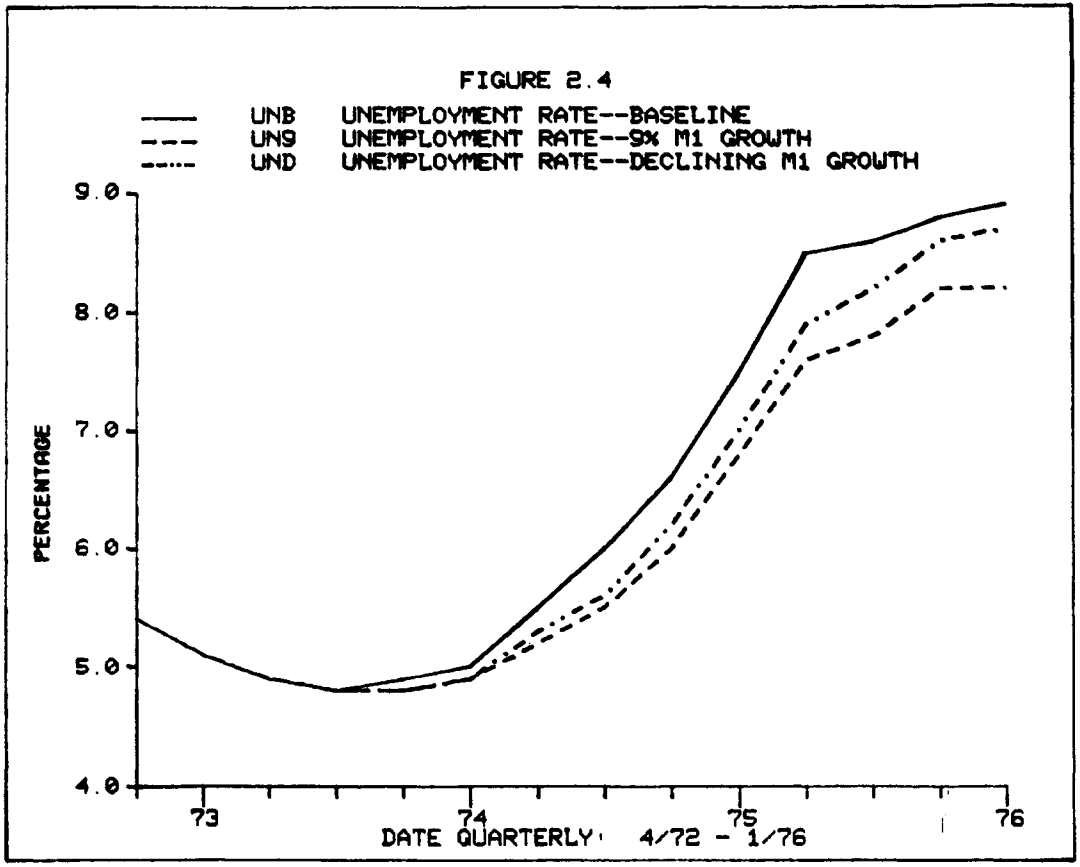

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serious reductions in real income and employment during 1974-75. The major beneficial result of the policy actually pursued was a slightly reduced inflation rate in 1975. The different inflation consequences of these policies are shown in Figure 2.5.

This is not to imply that either of the two alternative policies which we have simulated would have been optimal. In fact, both policies would have had serious deficiencies that one would hope could have been remedied had the M1 Growth "rule-of-thumb" been revised periodically. The problems can be seen in the quarterly detail provided in Table 2.3. In the 9 Percent M1 Growth case, a serious wage-price spiral seems to be developing by the end of 1975. The Consumer Price Index rose .4, .8, and .5 index points faster than the baseline in 1975.3, 1975.4, and 1976.1 respectively. Presumably the differential would have grown even larger, had the model simulation been continued. A wage-price spiral also appeared to be developing in the Declining M1 growth simulation, although the spiral was not as severe. (The Consumer Price Index grew .4 index points faster than the Baseline in 1976.1). The apparent paradox can be resolved by noting that under the Declining M1 Growth simulation, the money supply grew far faster than the baseline through 1976.1.

The simulations indicate that if a higher M1 growth policy were followed through 1975.1 or 1975.2, it would then have been appropriate to shift gradually to a more restrictive policy despite the depths of the recession. The only alternative, would have been spiraling inflation. This should not be surprising. The 1975.1 simulation indicates that a shift in monetary

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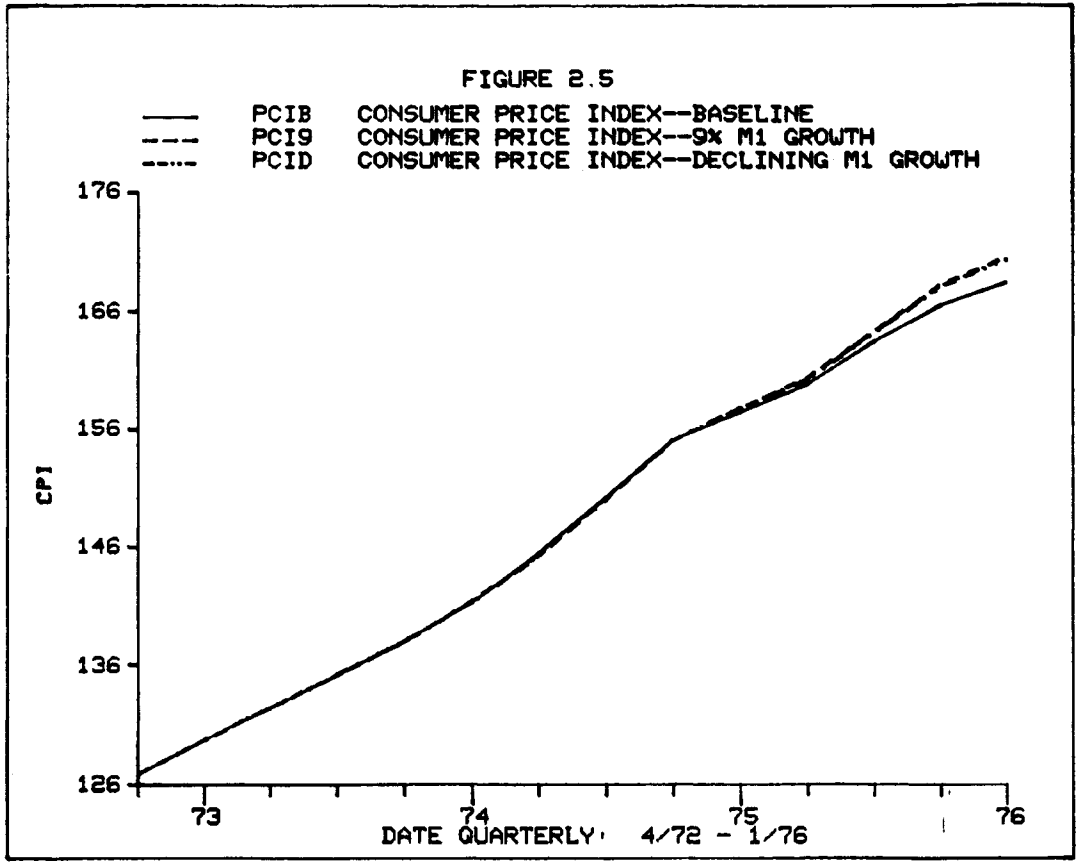

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TABLE 2.3

1973 ALTERNATIVE SIMULATIONS (a) & (c)
Quarterly Detail-Changes from Baseline

	1975.1	1975.2	1975.3	1975.4	1976.1
Gross National Product (Current Dollars)					
9% M1 Growth	29.9	32.7	28.7	28.0	33.4
Declining M1 Growth	19.6	19.5	14.6	11.4	14.0
Gross National Product (Constant Dollars)					
9% M1 Growth	19.9	21.0	15.2	11.7	14.6
Declining M1 Growth	12.7	12.3	6.1	1.5	3.2
Unemployment Rate					
9% M1 Growth	-.7	-.8	-.8	-.7	-.6
Declining M1 Growth	-.5	-.5	-.5	-.3	-.2
Consumer Price Index					
9% M1 Growth	.4	.4	.8	1.6	2.1
Declining M1 Growth	.4	.4	.7	1.5	1.9
Money Supply (M1)					
9% M1 Growth	19.2	18.9	61.2	62.8	74.3
Declining M1 Growth	11.4	9.1	23.7	19.0	32.4
Treasury Bill Rate					
9% M1 Growth	-.95	-1.89	2.39	2.49	-2.95
Declining M1 Growth	-.50	-1.06	3.25	2.93	-3.44

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policy should indeed occur, if possible, before the peak. In a mild, "easy money" recession it would seem that the shift should occur at or shortly after the trough. In a serious recession, particularly one characterized by tight monetary policy, some delay would be in order since the rate of inflation is typically lowest during the first stage of a recovery. A little more inflation during a period of relatively stable prices might well be desirable given the large economic and social costs of very high unemployment during a trough and during the first phase of a recovery. However, it should be kept in mind that any extra stimulation will lead, eventually, to additional inflation.

One other disturbing aspect of the Declining M1 Growth simulation is that by the end of the simulation period, real GNP is only slightly higher than in the baseline scenario, while the level of prices is approximately 1 percent higher than in the baseline. This result stems from the comparison of an income flow (GNP) with the level of inflation. Real wealth and well-being would be much greater under the Declining M1 Growth scenario than under the baseline even if the final periods' GNP levels had been identical. The extra income, investment, and consumption gained by the more moderate policy during 1974-75 improves the well-being of the United States and would only be "lost" if real GNP fell below that of the baseline scenario. These considerations raise the issue of the long-run benefits of alternative monetary policies, a question which will be addressed in the discussion of the longer-run simulations presented in the later sections of this report.

One negative aspect of these simulations is the wide fluctuation in short-term interest rates. The fluctuations are not as harmful as

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they first appear, since few effects of these fluctuations carry into the long-term money markets, as shown in Table 2.4. Nevertheless, as we will show below, it would be desirable to avoid the fluctuations if possible. The easiest way to do this would seem to be to fix a "non-borrowed reserves" target rather than an M1 target. As indicated in Table 2.4, (Note 1975.1, 1975.3, and 1976.1 in particular), most of the wide fluctuations in interest rates are eliminated by the use of this type of target. In fact, a fixed "non-borrowed reserves" target seems to lead to at least as stable a time pattern of interest rates as the policy which the Fed actually followed during the period. These results are illustrated in Figures 2.6 and 2.7.

The 8% NMBXC Growth scenario shows several other favorable characteristics. Although the final (1976.1) money supply and real growth statistics were almost identical to the Declining M1 Growth scenario, the Consumer Price Index was 1.3 index points lower! Even more significantly, in both of the final two simulation periods, the rate of inflation was no higher than in the baseline scenario despite the fact that the final level of M1 was significantly higher!

There was some real growth trade-off relative to the Declining M1 Growth scenario, since for a portion of the simulation the unemployment rate rose as much as .2 percentage points higher than in the Declining M1 Growth simulation. Nevertheless, most of the real growth improvement in the Declining M1 Growth simulation was captured while the negative inflation aspects of that scenario were almost entirely avoided. Considerable further study would be required to determine all of the causes and policy implications of this result. However, it seems clear that the extra financial

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TABLE 2.4

INTEREST RATE & MONEY MARKET BEHAVIOR
1973 Alternative Simulations

	1974.1	1974.2	1974.3	1974.4	1975.1	1975.2	1975.3	1975.4	1976.1
Teasury Bill Rate									
Baseline	7.26	8.38	9.66	8.53	6.34	6.54	6.51	6.21	5.63
a) 9% M1 Growth	6.14	6.67	8.85	9.05	5.39	4.65	8.90	8.71	2.68
b) 9% with Judgment*							7.40	7.45	6.39
c) Declining M1 Growth	6.43	7.18	9.38	9.42	5.84	5.48	9.76	9.15	2.19
d) 8% NMBXC Growth	7.38	7.94	8.72	8.68	7.40	6.72	6.50	6.12	5.38
AA Utility Bond Rate									
Baseline	8.62	9.49	10.51	9.95	9.29	9.87	9.78	9.52	9.18
a) 9% M1 Growth	8.07	8.60	9.97	10.06	8.74	8.71	10.78	10.98	8.03
b) 9% with Judgment*							10.13	10.19	9.76
c) Declining M1 Growth	8.22	8.86	10.27	10.29	9.02	9.19	11.28	11.24	7.85
d) 8% NMBXC Growth	8.68	9.27	10.01	9.92	9.81	9.96	9.81	9.55	9.23
Money Supply (M1)									
Baseline	274.9	278.2	282.0	285.6	287.9	294.8	299.4	303.3	307.1
a) 9% M1 Growth	281.7	287.8	294.1	300.6	307.1	313.7	320.5	327.5	331.2
b) 9% with Judgment*							324.3	327.2	331.1
c) Declining M1 Growth	279.2	284.4	289.4	294.5	299.3	303.9	308.5	313.0	317.4
d) 8% NMBXC Growth	278.2	282.6	287.7	291.6	295.2	300.2	305.3	309.8	315.0

* Same as (a) until 1975.3

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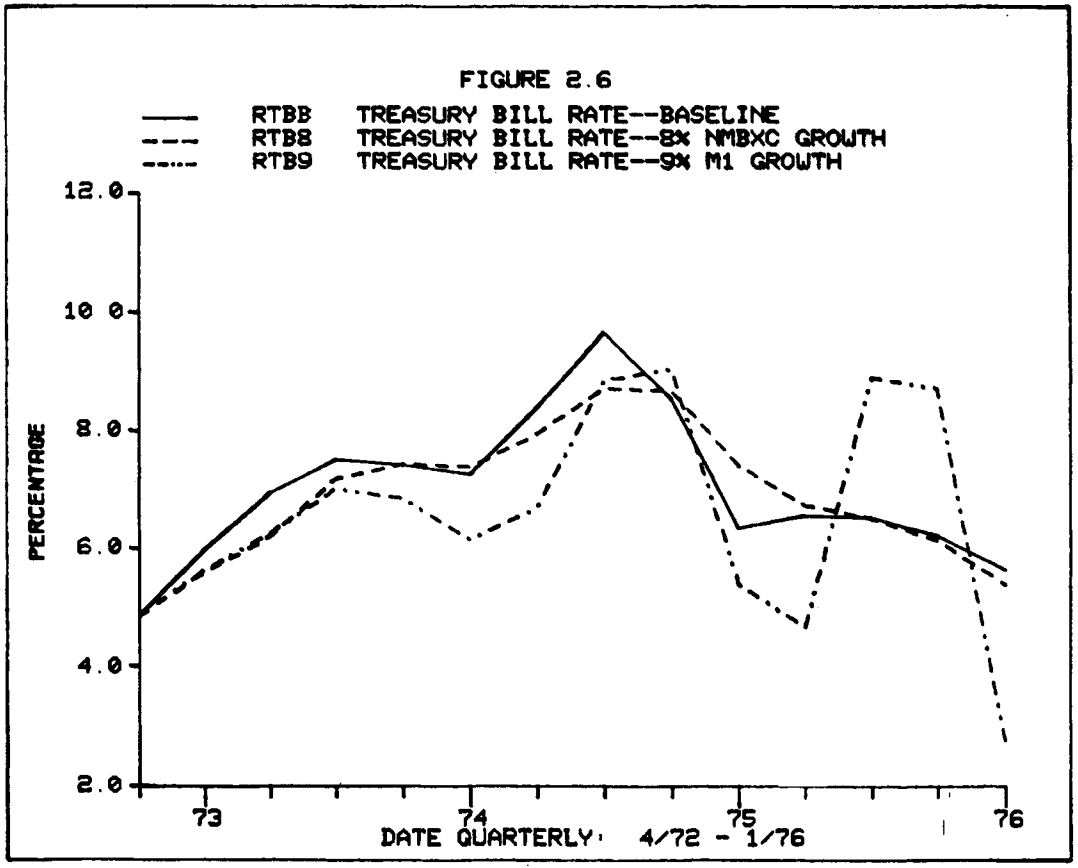

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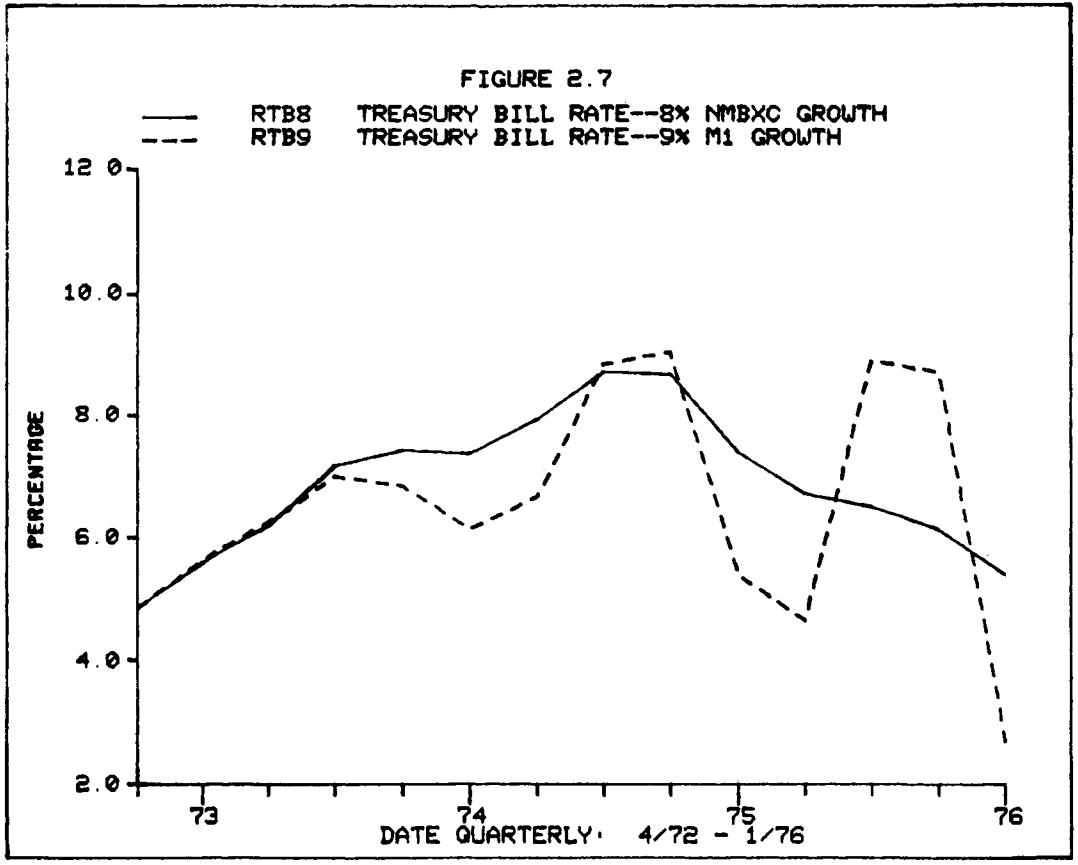

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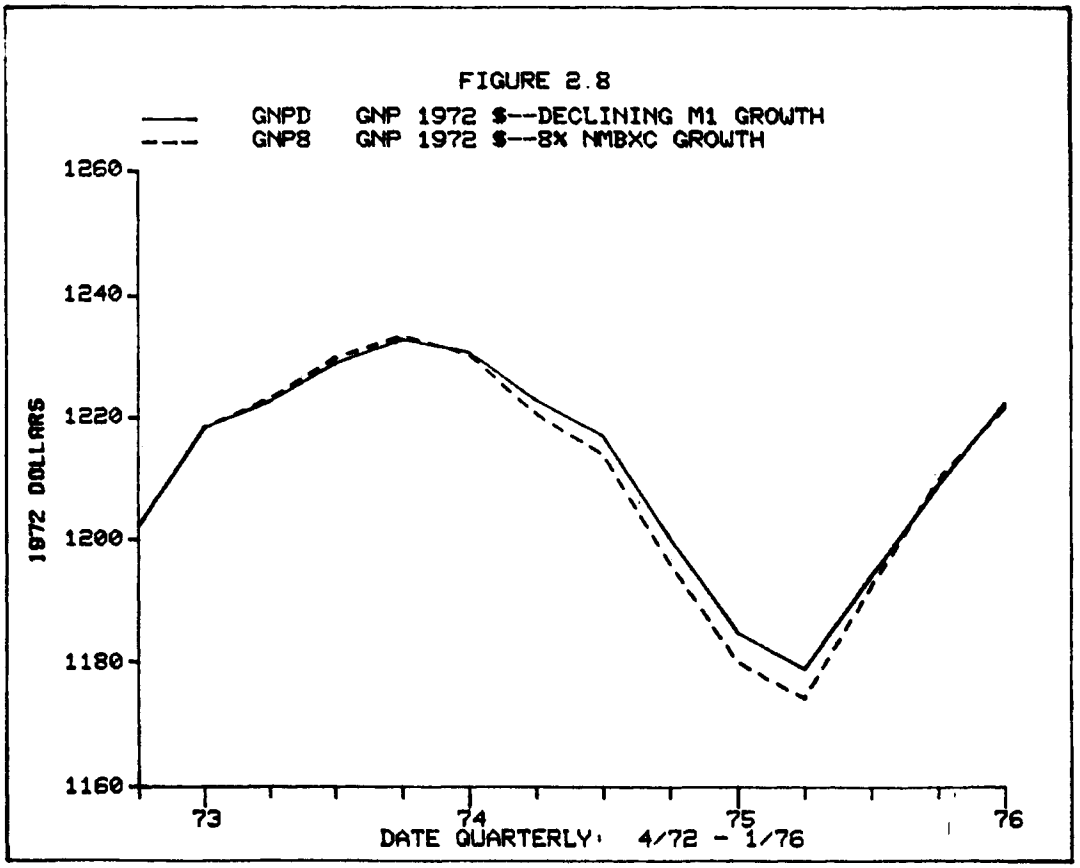

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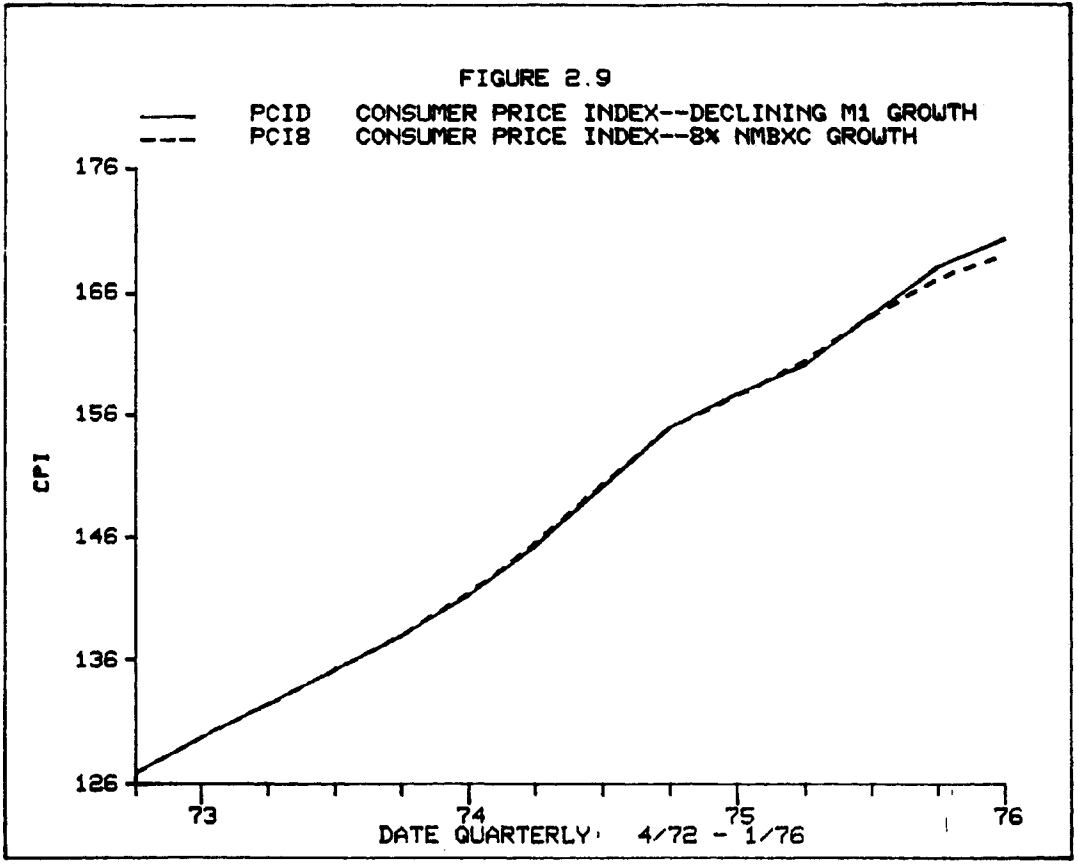

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stability resulting from the "non-borrowed reserves" target has long-run as well as short-run benefits. Comparisons of real growth and inflation in the Declining M1 Growth and 8% NMBXC Growth runs are shown in Figures 2.8 and 2.9.

Simulation(b)-- 9% M1 Growth with Judgment -- was an experiment with a constrained M1 Growth target. The "judgmental" rule was simply that if the 9 percent growth rate target would require a susbstantial drop in "non-borrowed reserves" in any quarter, no change in reserves would be made. In the following quarters, reserves would be adjusted so that the money supply would be brought back to its target growth path. As shown in Table 2.3, this procedure did dampen the most serious fluctuations in interest rates. More importantly, the use of this rule, even in its limited form, did reduce inflation without reducing real growth. In the Judgment run, the Consumer Price Index was .5 index points lower and real GNP was $1 billion higher than in the straight 9 Percent M1 Growth scenario.

The distributional consequences of the "judgmental" policy are also extremely interesting. The extra financial stability and lower inflation lead to a significant shift from consumption to investment. In 1976.1, consumption is $3.8 billion lower and investment is $4.9 billion higher under the Judgment scenario. While the bulk of this extra investment is in residential structures, all the components of investment showed significant gains. On the income side, the results are also interesting. Profits after taxes rose $1.7 billion, or 2 percent, in the Judgment scenario, while employee compensation rose only $1.2 billion, or 1 percent.

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CONCLUSIONS

1) The 1974-75 recession was significantly more serious than it would have been had a less erratic monetary policy been followed beginning in 1973. This conclusion holds for a wide variety of "non-erratic" policies. Of course, one would like to determine monetary policy with the aid of either superb forecasts or "20-20 hindsight" However even without these aids, the performance of the economy could have been improved if the Fed had chosen any one of a number of reasonable monetary condition targets and applied them consistently.

2) A less erratic monetary policy would have had no significant effect upon the 1973-74 inflation rate. However, if a relatively high (9 percent) M1 growth target had been chosen and maintained through 1976.1, the rate of inflation during the 1975-76 recovery would have been significantly higher, and a wage-price spiral would be developing.

3) Since monetary policy decisions affect the economy with long lags, the course of monetary policy should be based upon the economic conditions expected during the next 12 months, at least as much as the economic conditions prevailing at the time (or immediately before) the decisions are made. Even at a trough, a "backward looking" monetary policy may have adverse consequences during the next stage of the business cycle.

4) Short-run stability of monetary policy is necessary to achieve maximum real growth with a minimum of inflation. A fixed non-borrowed reserves target appears to be more likely to achieve this goal than a policy based upon a money supply growth target. If there is a desire to use a money supply growth target, the target should be subject to a constraint that non-borrowed reserves should not fall.

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2.24

1971, Third Quarter

The simulations considered thus far have been primarily concerned with the effects of monetary policy during or after a peak. Since the simulations were run through 1976.1 only, they were able to provide relatively little information on the consequences of alternative monetary policies during periods well before a cycle peak. While it is natural for a study which has been proposed in 1976 to concentrate first upon recessions, it is necessary also to examine monetary policy during the recovery phase. If alternative monetary policies during a recovery would have resulted in less inflation, it may be that any ensuing peak could have been postponed and any ensuing recession could have been less severe. This analysis is particularly timely since the U.S. economy is presently in the growth phase of a recovery.

To test the effects of monetary policy over a full business cycle, several simulations with earlier starting dates were specified by the staff of the Subcommittee. In one simulation, "non-borrowed reserves" were adjusted so that the money supply (M1) grew 5.75 percent in the third quarter of 1971. "Non-borrowed reserves" were then adjusted so that the money supply growth rate declined by .25 percent in each subsequent quarter to a level of 4 percent in the second quarter of 1973. Further changes were made to "non-borrowed reserves" in order to maintain a 4 percent growth rate in M1. An attempt was made to continue this "rule-of-thumb" through 1975 and the first quarter of 1976. However, this attempt proved unsuccessful since, given previous changes, the continuance of a 4 percent growth rate rule would have required unacceptably

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large reductions in total reserves in some periods and absurdly large expansions in total reserves in others. After discussions with the staff of the Subcommittee,it was decided to tolerate deviations from the established "rule-of-thumb" in any given quarter if the deficiency or surplus in growth was made up in the subsequent quarter.

The set of instructions embodied in this simulation did not cause a significant deviation from the policy actually followed until the second quarter of 1972. However, by 1972.2 a significant tightening of monetary policy was required. During the second and third quarters of that year interest rates rose .7 and 2.8 percentage points above the baseline respectively. While this differential narrowed considerably in subsequent quarters as the baseline monetary policy tightened, interest rates were generally higher and monetary growth generally lower than the baseline during the second half of 1972 and all of 1973.

By the end of 1973, the effects of the tighter policy on real growth were quite significant. Real GNP was 1 percent lower than in the baseline simulation with a difference of 2 percent in consumption of durable goods and investment in equipment. The unemployment rate was .4 percentage points higher than the baseline. However, the improvement in inflation during 1973 was barely significant. By the fourth quarter,the Wholesale Price Index and GNP deflator were only .2 percent and the Consumer Price Index only .1 percent lower than the baseline. These small declines represent an extremely unfavorable inflation/unemployment tradeoff.

This simulation indicates that a shift to a tighter monetary policy during the growth phase of a recovery may significantly slow the recovery while having little short-run impact on prices. This is particularly true

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in this case, since the 1970 recession was a fairly severe one, preceded and, as we will note later, intensified by a tightening in monetary policy. (Note the contrast between this simulation and the 1973 simulation. The latter simulation exhibits a greater inflationary impact during the recovery, presumably the result of the easier monetary policy coming on top of the extra liquidity provided during and before the recession in the 1973 simulation.) In the 1965.1 set of simulations we will see some evidence that over the long run, an easier monetary policy would have caused substantial additional inflation. Nevertheless, the results of this simulation indicate that the rapid expansion of the money supply during 1972 seems to have had a net beneficial effect upon the economy during 1972-1973.

It has been argued that this extra expansion of the money supply was harmful to the economy in 1974-75 since it allowed the economy to grow at an unsustainable rate. However, the simulation indicates that a slower steady growth in the money supply would not have prolonged the recovery. The real growth differential between the baseline and the 4 percent M1 Growth simulation remained in the range of 1 percent through the first quarter of 1975. This real growth differential then began to grow rapidly, peaking the third quarter of 1975 at 1.7 percent. With respect to the unemployment rate, the differential peaked in the fourth quarter of 1975 when unemployment was almost 1 percentage point higher in the tighter monetary policy simulation than in the (actual monetary policy) baseline.

The differences in the movement of the inflation rate occured primarily during the period 1973.4 through 1975.2 when monetary policy seems to have almost no impact on real growth. During this period with

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4 percent M1 Growth the implicit GNP deflator grew .5 percent less than the baseline. This is a particularly significant movement since the money supply grew only 2.5 percent less than the baseline during this period. Beyond 1975.2, the inflation rate differential was maintained, but did not grow despite the continually tighter monetary policy embodied in the simulation. (The cumulative movements in the Consumer Price Index were similar, although single-period observations varied due to the large fluctuations in interest rates in both the baseline and the specified simulation). The results of this simulation are shown in Table 2.5 and Figures 2.10-2.11.

Several caveats are necessary in interpreting the results of the 4% Growth simulation. First, the implicit monetary policy specified was sometimes tighter and sometimes looser than the policy actually followed, particularly on a quarterly basis. Second, the specified rule-of-thumb resulted in a monetary policy which was even more erratic than the baseline, if interest rate and reserve aggregate standards are used. Third, the economy was buffeted by a series of exogenous shocks in 1973, just at the time when the specified policy was beginning to have a significant impact. Nevertheless, the simulation indicates that a tighter monetary policy during the 1971-74 recovery would have slowed the growth of the recovery without having had a major impact upon inflation until 1974.

Furthermore, the 4 percent M1 Growth simulation indicates the danager of an inflexible rule-of-thumb policy. During 1974, when the economy needed extra money to cope with the events of 1973-74, the inflexible 4 percent rule-of-thumb resulted in a de facto tightening of monetary policy. A severe, unfavorable impact upon the economy in 1975 resulted. It appears that the impact was particularly severe since, under this scenario, there was little extra liquidity in the economy at that time.

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Table 2.5
MAJOR ECONOMIC INDICATORS
1971 4 Percent M1 Growth vs. Baseline

	1971	1972	1973	1974	1975
Gross National Product (Current Dollars)					
4% M1 Growth	1064.8	1169.5	1292.0	1383.8	1463.7
Baseline	1064.9	1171.6	1303.7	1403.3	1491.1
Difference	-.1	-2.1	-11.7	-19.5	-27.4
% Difference	0	-.2	-.9	-1.4	-1.9
Gross National Product (Constant Dollars)					
4% M1 Growth	1109.6	1175.4	1228.6	1206.5	1176.6
Baseline	1109.8	1177.7	1238.1	1219.5	1192.3
Difference	-.2	-2.3	-9.5	-13.0	-15.7
% Difference	0	-.2	-.8	-1.1	-1.3
Unemployment Rate					
4% M1 Growth	6.0	5.6	4.8	6.0	8.8
Baseline	6.0	5.5	4.5	5.4	8.1
Difference	0	.1	.3	.6	.7
Consumer Price Index					
4% M1 Growth	121.6	125.7	133.1	146.8	160.2
Baseline	121.6	125.6	133.1	147.0	160.7
Difference	0	.1	0	-.2	-.5
% Difference	0	0	0	-.1	-.3
Money Supply (M1)					
4% M1 Growth	229.0	241.7	252.2	262.1	272.0
Baseline	229.1	244.1	261.8	276.9	292.9
Difference	-.1	-2.4	-9.6	-14.8	-20.9
% Difference	0	-1.0	-3.8	-5.6	-7.7
Treasury Bill Rate					
4% M1 Growth	4.26	4.44	7.44	8.91	6.68
Baseline	4.20	3.80	6.80	8.63	6.53
Difference	.06	.64	.64	.28	.15

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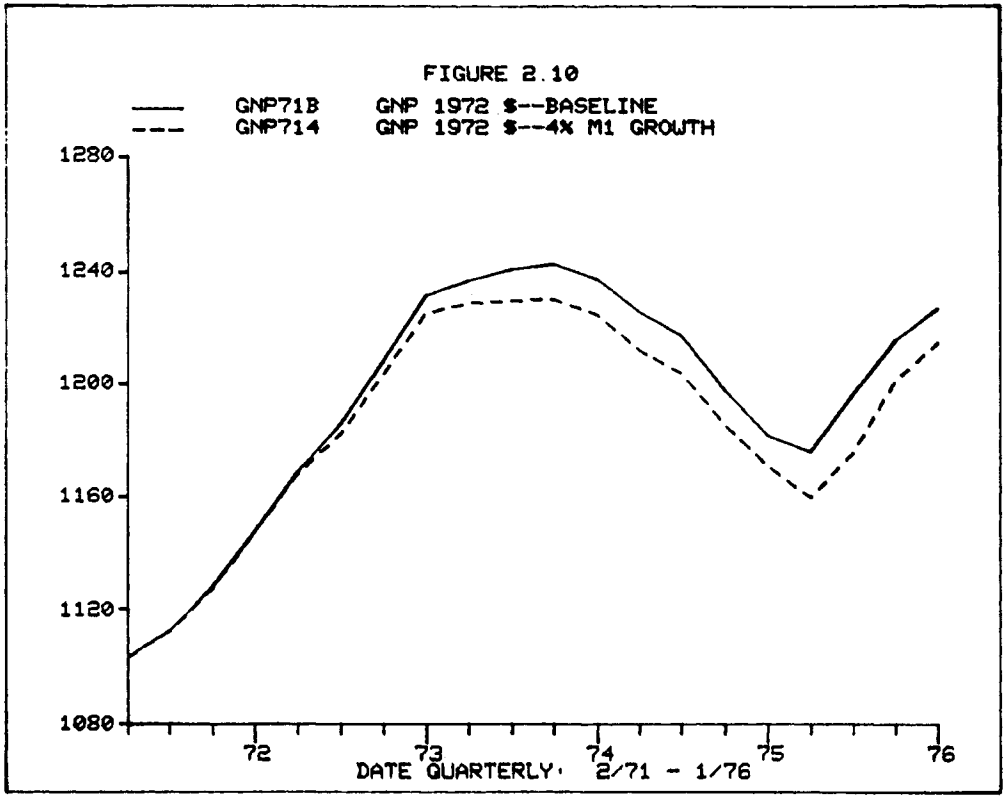

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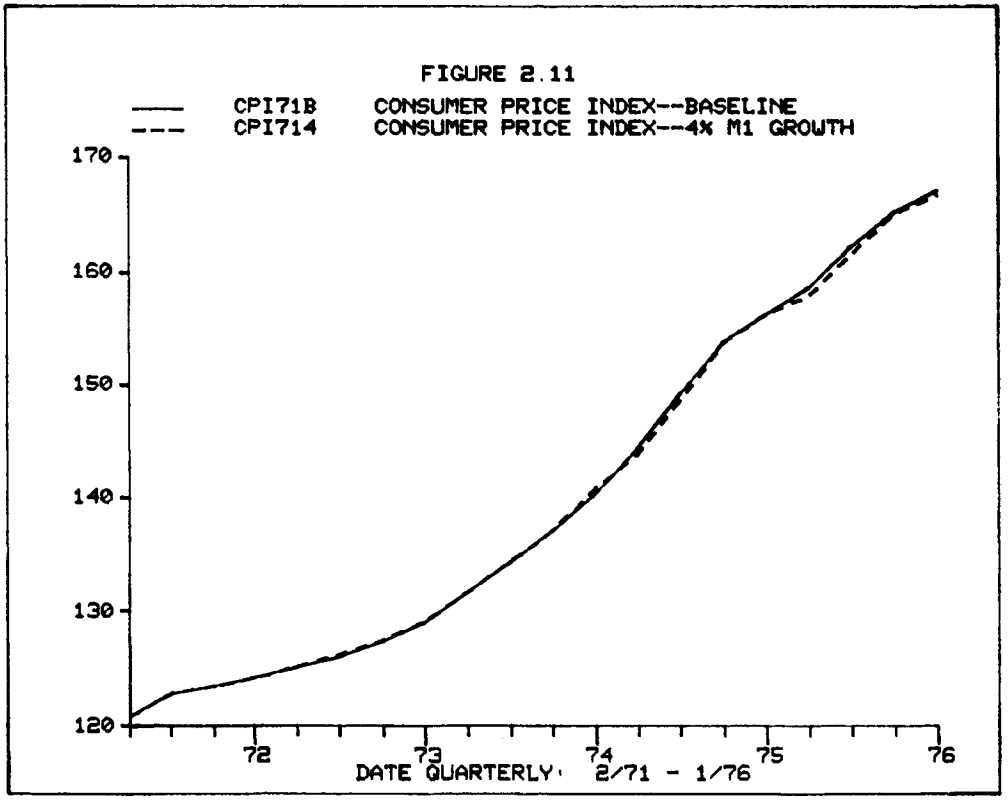

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2.31

Since the 1973.1 simulations using a "non-borrowed reserves" target proved so favorable in terms of improving the unemployment/inflation tradeoff,an additional simulation was performed starting in 1971.3 in which "non-borrowed reserves" were required to grow at a 2.2 percent annual rate. This resulted in a final level of "non-borrowed reserves" exactly equal to the level in the 4 percent M1 Growth simulation. This "steady" monetary policy resulted in the money supply (M1) being $10 billion higher than in the previous simulation in 1976.1 (although M1 was still $16 billion below the baseline). This simulation also differed from the previous one in that it called for a uniform policy through the simulation period rather than a policy in which monetary policy gradually tightened through 1973.2 and then held steady.

The results, shown on Table 2.6, are quite interesting. As in the 4% M1 Growth simulation, real GNP grows more slowly than in the baseline during 1972, and for much of 1975. Also as in the 4 percent M1 Growth simulation, in 1974 and early 1975, the rates of growth in real GNP and inflation were essentially unchanged, although the levels were lower. Finally, in both simulations, the inflation rate did not decline significantly until the very end of the simulation. However, in the non-borrowed reserve target simulation, the sharp slowdown in real growth in 1973 is avoided.

The magnitudes of the differences from the baseline in real growth and inflation were also significantly different between the 4% M1 Growth and Non-borrowed Reserve Target simulations. By the end of 1973,real growth in the Non-borrowed Reserves Target simulation was only .4 percent lower than in the baseline. By the end of the simulation period, this real growth differential had grown to only .8 percent, approximately the peak differential.

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Table 2.6
MAJOR ECONOMIC INDICATORS
Cumulative Percent Difference from 1971 Baseline

	1972.1 1974.1	1972.2 1974.2	1972.3 1974.3	1972.4 1974.4	1973.1 1975.1	1973.2 1975.2	1973.3 1975.3	1974.4 1975.4
Gross National Product (Constant Dollars)								
4% M1 Growth	0 -1.0	-.1 -1.1	-.3 -1.1	-.4 -1.0	-.5 -.9	-.7 -1.4	-.9 -1.7	-1.0 -1.2
"Reserves" Target	-.1 -.3	-.1 -.3	-.2 -.5	-.3 .3	-.3 -.3	-.3 -.3	-.2 -.6	-.2 -.6
Consumer Price Index								
4% M1 Growth	0 .3	0 -.4	.2 -.4	0 -.1	.1 0	0 -.5	0 -.5	-.1 -.3
"Reserves" Target	0 -.2	0 -.2	.1 -.3	-.2 -.4	-.1 -.4	-.1 -.3	-.1 -.3	-.2 -.4

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This contrasts with a much larger peak differential of 1.7 percent and a final differential of .9 percent in the same (negative) direction between the 4 percent M1 Growth simulation and the baseline. In terms of inflation, the final period differentail in the Non-borrowed Reserves Target simulation was .7 percent. The final (and peak) period inflation differential was only .3 percent in the 4 percent M1 Growth Rate simulation. Thus, the Non-borrowed Reserves Target simulation yielded higher growth and lower inflation than the 4 percent M1 Growth Rate simulation despite the fact that both simulations ended with the same level of non-borrowed reserves. This comparison indicates clearly the advantages of a relatively stable monetary policy. These results are demonstrated graphically in Figures 2.12 and 2.13.

CONCLUSIONS

1) A stable monetary policy, in terms of the growth in reserves and the level of interest rates, appears highly desirable in improving the economy's real growth/inflation tradeoff.

2) Unchanging, rule-of-thumb monetary policies are not likely to be able to meet the varying needs of the economy.

3) Following a more restrictive monetary policy during 1971-72 would have reduced real growth significantly, while the rate of inflation would have been virtually unaffected until early 1974. However, a tighter monetary policy beginning in 1971.3 would have reduced inflation slightly during the 1974-75 period.

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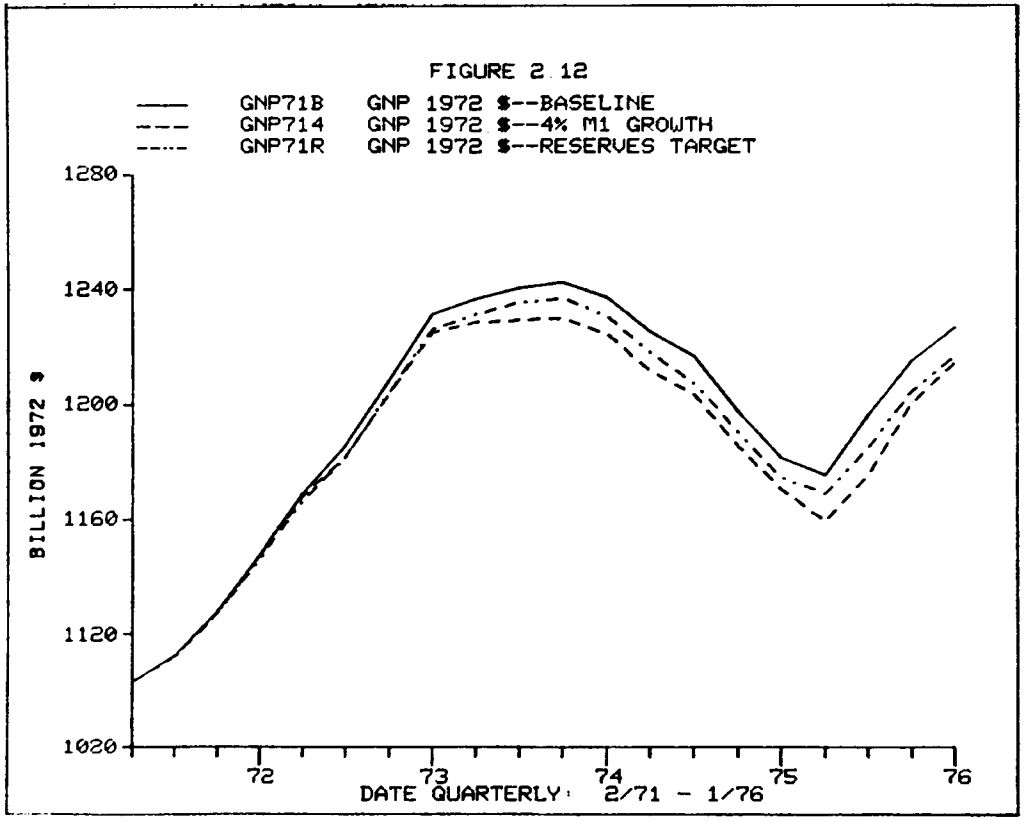

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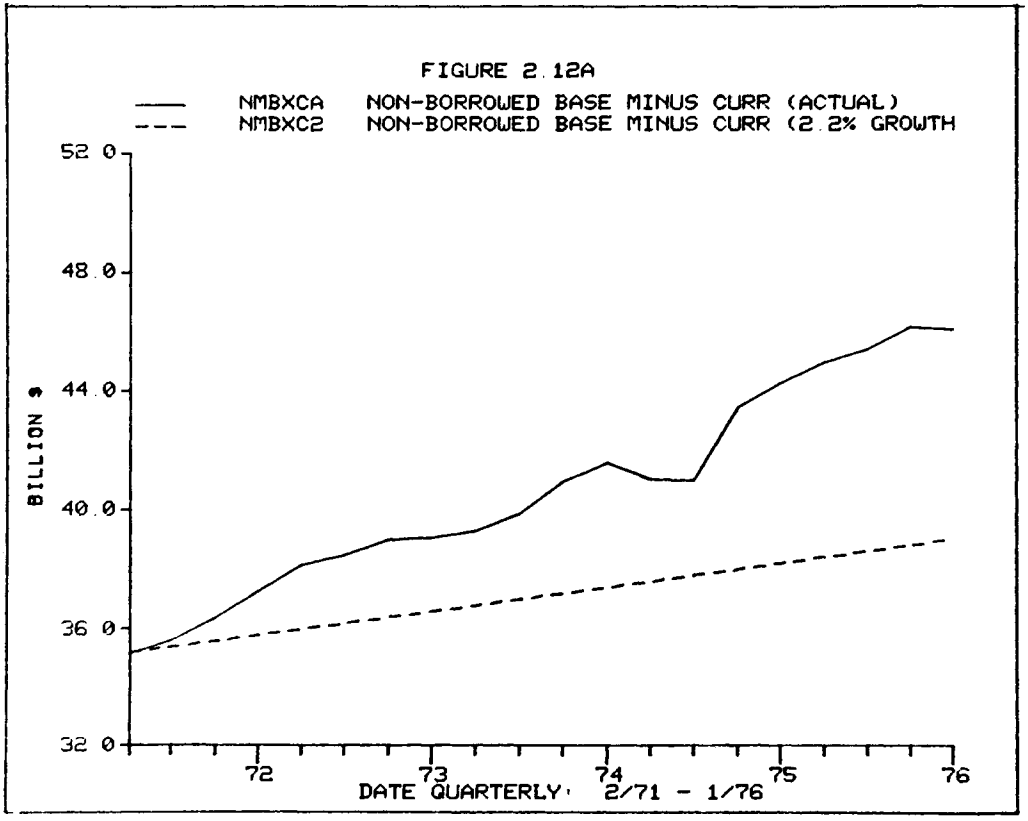

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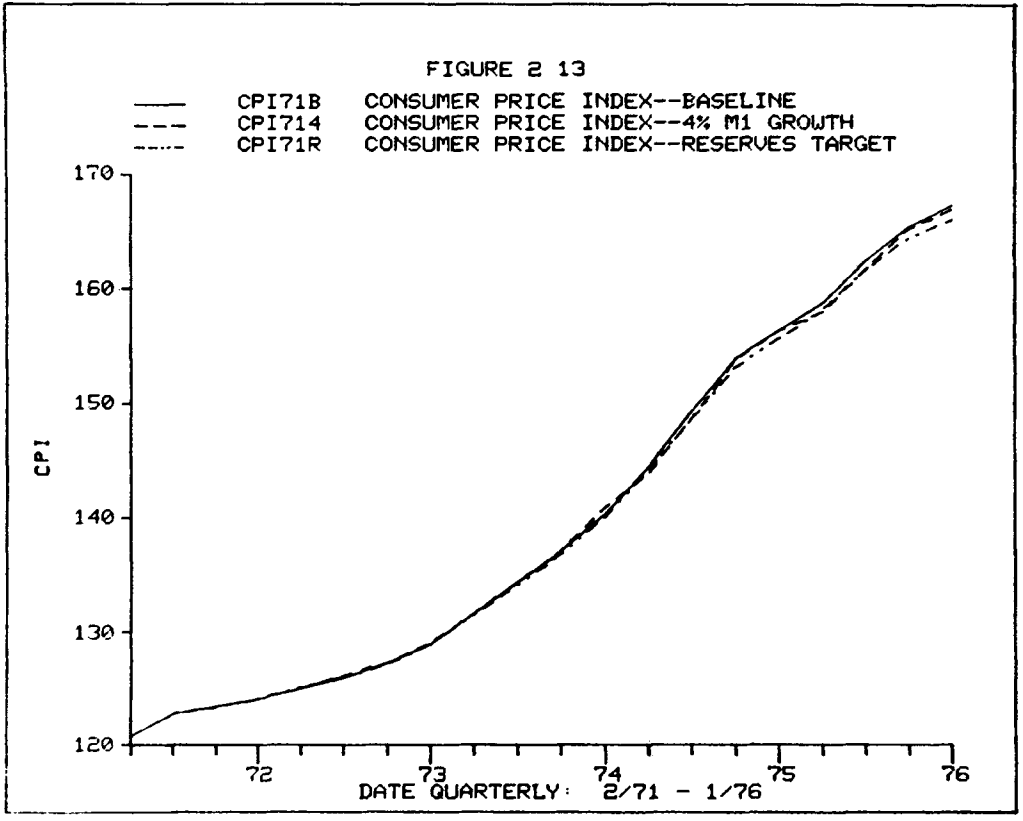

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2.36

1965, First Quarter

One extremely interesting result of both simulations which started in 1971.3 was that during the first quarter of 1976, real growth is higher under the tight monetary policy simulations than in the baseline. However, the 1971.3 simulations alone do not indicate whether this higher real growth was due to cyclic conditions or whether the negative effects of a tighter monetary policy can be completely eliminated if one's time horizon is sufficiently long. To test the impact of monetary policy over a "long-run" simulation period encompassing more than one cycle, the staff of the Subcommittee specified the following three simulations, each beginning in 1965.1:

a. 8 Percent M1 Growth - The rate of growth in M1 was to be increased gradually until it reached an 8 percent annual rate. The 1.5 percent growth rate was then to be maintained through the simulation period.

b. 4 Percent M1 Growth - The rate of growth of M1 was to be maintained at a 4 percent annual rate through the simulation period.

c. 1.5 Percent M1 Growth - The rate of growth of M1 was to be reduced gradually to 1.5 percent. The 1.5 percent growth rate was then to be maintained through the simulation period.

Simulations (a) and (c) were chosen to represent two extreme types of monetary policy. Simulation (b) was chosen to represent a middle course, albeit one which is more restrictive than the policy actually followed. Since many previous simulations had demonstration the difficulties of reaching a target growth rate in any single quarter, it was agreed that whenever the resulting fluctuations were deemed too great, it would be satisfactory if the target were reached over a six-month span.

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The cyclical aspects of these simulations indicated that the policies actually followed by the Fed were pro-cyclical during the recession periods covered. In each of the simulations, including simulation (c), the 1.5 Percent M1 Growth Rate case, real growth grew or fell less during 1970 and 1975 than during the (actual monetary policies) baseline! In simulations (a) and (b) real GNP grew more, or fell less, than in the baseline during both 1967 and 1974. The results of these simulations for these critical years are shown in Table 2.7. Thus, it seems clear that monetary policy as actually followed during the last decade was more pro-cyclical than almost any rule-of-thumb policy would have been.

Perhaps even more significant are the long run implications of these scenarios. At first, it might be imagined that at least one of these radically different monetary policies would have led to a spiralling recession, "stagflation," super-boom, or at least to wide variations in interest rates in the final years of the simulation. Yet none of this occurred. For example, for 1975 the Treasury bill rate differed from the baseline by less than .60 percentage points in every case. The differences were greater for long-term rates. However, even here, the largest difference in, for example, the AA Utility Bond rates was 1 percentage point in 1975 (Interestingly, the lower inflation and real growth resulting from the slower M1 growth scenario caused the lowest long-term interest rates, despite the presumably "tighter" monetary policy.)

This is not to say that the differing monetary policies did not have great impacts on the economy. However, it does appear that to the extent that the model represents the complex inter-relationships of the economy, the American economy is incredibly stable and able to adjust reasonably well to even massive exogenous shocks and major differences and/or errors in policy.

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TABLE 2.7
REAL GROWTH BEHAVIOR DURING RECESSIONS

	1967	1970	1974	1975
Percent Change in Real Gross National Product				
Baseline	4.9	.9	-1.4	-2.1
8% M1 Growth	5.3	1.5	-.9	-1.5
4% M1 Growth	5.2	1.4	-1.4	-1.6
1.4% M1 Growth	4.6	1.2	-1.7	-1.2

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2.39

Since the simulations are compared to a baseline, it is to be expected that significant differences would appear at different times. Simulations (a), "8 Percent M1 Growth," and (c), "1.5 Percent M1 Growth," showed very significant differences from the baseline by 1967, while simulation (b) "4 Percent M1 Growth," resulted in only minor differences from the baseline until 1972.

As shown in Table 2.8, the 1965.1 simulations demonstrate a tremendous difference between the short-run unemployment/inflation tradeoff and the long-run unemployment/inflation tradeoff. By 1966, simulations (a) and (b) both exhibited significant differences from the baseline in real growth in the directions one would expect. In simulation (c) cumulative real growth was .4 percent lower than the baseline. For both simulations, the changes in inflation were a trivial .1 percent, in the same directions as the movements in real growth. (It should be recalled that the immediate impact of tighter monetary policy is higher interest rates and higher inflation.) Until late 1968 the unemployment/inflation tradeoff was clearly in favor of the higher monetary growth scenarios. For example, during 1969, cumulative real growth in simulation (a) was 1.6 percent higher than the baseline and 1.7 percent higher than in simulation (c).

By 1975, the tradeoff had become much less pronounced. In simulation (a), real growth was 1.8 percent higher than the baseline and 3.6 percent higher than in simulation (c). In terms of the unemployment rate, the advantage gained by the easier monetary policy was 1.2 percentage points realtive to the baseline and 3 percentage points relative to simulation (c). However, the differences in inflation were also substantial. In simulation (a),prices were 6.3 percent higher than the baseline by 1975 and 12,6 percent

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TABLE 2.8
SUMMARY OF THE 1965.1 SIMULATIONS
(PERCENT DIFFERENCES FROM THE BASELINE*)

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975
Gross National Product (Constant dollars)											
Cumulative Difference											
a) 8% M1	-.1	.4	.7	.7	1.6	2.2	1.8	1.4	.8	1.3	1.8
b) 4% M1	-.1	-.1	.1	-.3	-.2	.3	-.4	-1.0	-1.5	-1.5	-1.0
c) 1.5% M1	-.1	-.4	-.7	-1.4	-1.3	-1.0	-1.6	-2.0	-2.4	-2.6	-1.8
Yearly Difference											
a) 8% M1	-.1	.5	.3	0	.9	.6	-.4	-.4	-.6	.5	.5
b) 4% M1	-.1	0	.2	-.4	.1	.5	-.7	-.6	-.5	0	.5
c) 1.5% M1	-.1	-.3	-.3	-.7	.1	.3	-.6	-.4	-.4	-.2	.8
Consumer Price Index											
Cumulative Difference											
a) 8% M1	0	-.1	.1	.4	.8	1.7	2.9	3.9	4.8	5.4	6.3
b) 4% M1	0	0	0	.1	0	0	.4	.5	.2	-.9	-1.2
c) 1.5% M1	0	.1	0	-.2	-.9	-1.5	-1.9	-2.6	-3.6	-5.0	-6.3
Yearly Difference											
a) 8% M1	0	-.1	.2	.3	.4	.9	1.2	1.0	.9	.6	.9
b) 4% M1	0	0	0	.1	-.1	0	.4	.1	-.3	-1.1	-.3
c) 1.5% M1	0	.1	-.1	-.2	-.7	-.6	-.4	-.7	-1.0	-1.4	-1.3
Unemployment Rate											
Cumulative Difference											
a) 8% M1	0	-.1	-.3	-.3	-.5	-1.0	-1.1	-1.0	-.6	-.6	-1.2
b) 4% M1	0	.1	0	.1	.1	-.1	.1	.6	.8	.9	.8
c) 1.5% M1	0	.2	.3	.6	.7	.7	1.0	1.5	1.7	1.9	1.8

* Actual differences for the Unemployment rate

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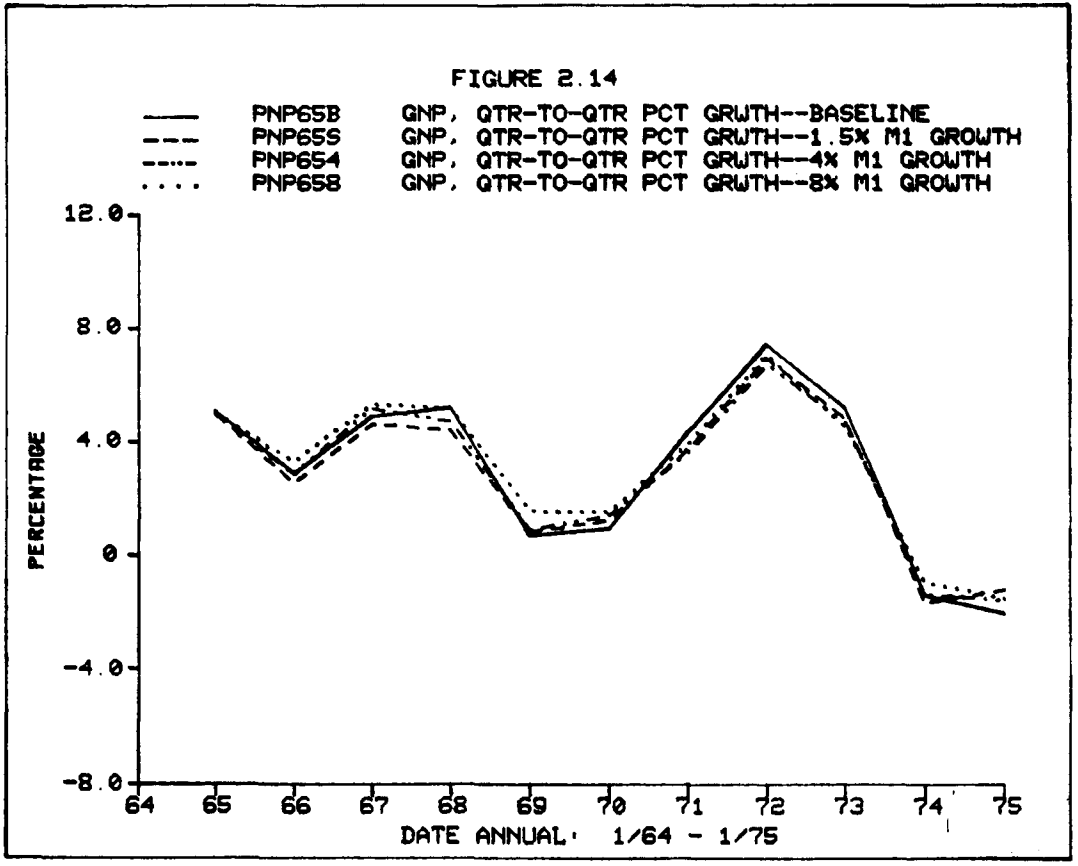

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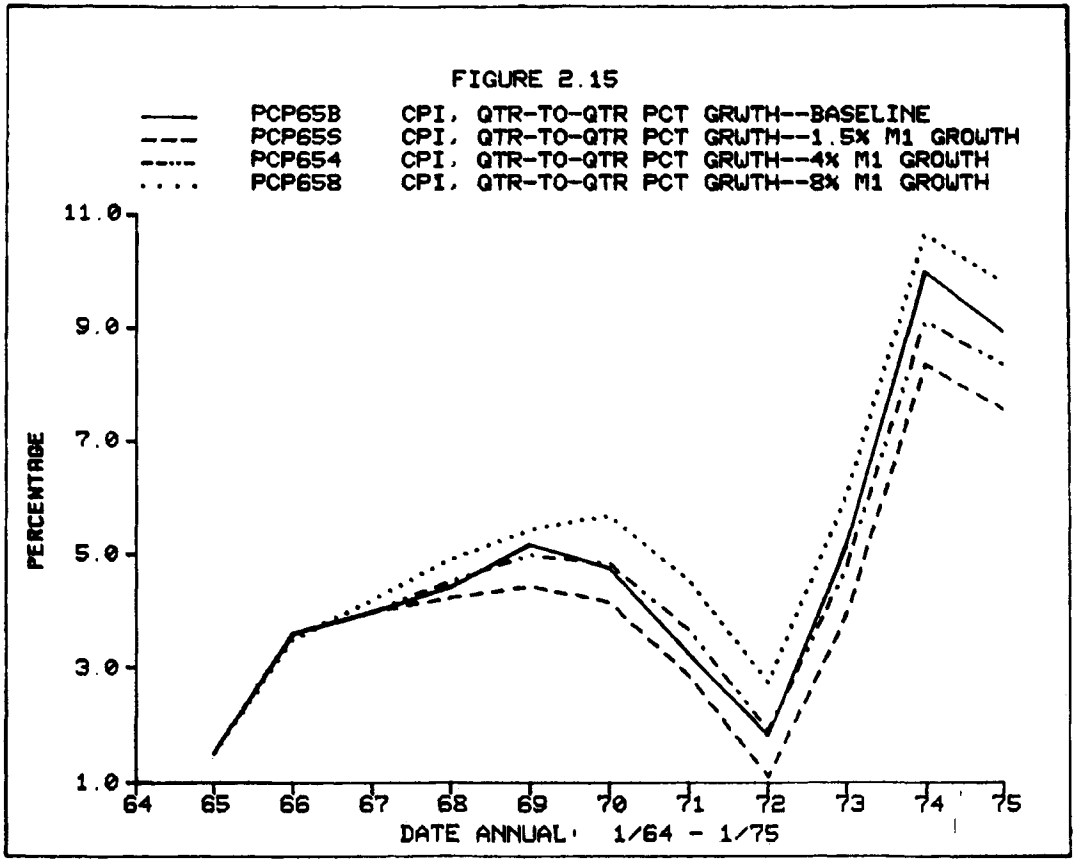

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higher than simulation (c) by the same date. Perhaps most significantly, during 1975, real growth, for the first time, was actually greater in simulation (c) than in simulation (a). This means that the difference in the inflation rate (2.2 percent) was so great that the impact of the easier monetary policy was completely overcome.

In analyzing these simulations, it should be recalled from Section I that the prices of several basic commodities -- farm goods, petroleum, and imported goods -- are exogenous to the model. Thus, especially in the long run, the differences in inflation for the alternative monetary policies may be underestimated in this study. This fact is particularly important, since changes in those prices which are exogenous to the Chase Macroeconomic Model would generally have a greater effect on real income than changes in prices resulting endogenously from a wage-price spiral. This problem could be remedied by running satellite models which are designed to predict the prices which are entered exogenously into the Chase Macroeconomic Model. However, such a task was outside the scope of this project.

It should also be remembered that simulations (a) and (c) required, respectively, a continual loosening and tightening of monetary policy, rather than a one-time change. Thus, the policies were not fully implemented until late 1968 and 1967, respectively.

Simulation (b) is quite interesting in that it demonstrates the consequences of maintaining a fixed "rule-of-thumb" monetary policy in the face of changing economic conditions. If it is assumed that the actual mix of fiscal and monetary policies followed was able on average to achieve the desired unemployment/inflation tradeoff possible at a given time, it is clear that through 1970, simulation (b) represented an acceptable policy.

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Until 1971, the only difference between simulation (b) and the baseline was a slight dampening of both the peak and the trough during the 1968-1970 period. However, when the "underlying" rate of inflation in the economy began to grow at greater than historical rates, the policy used in simulation (b) became increasingly restrictive relative to the baseline. As a result, during the period 1973-1975 the simulated unemployment rate averaged almost 1 percentage point higher than the baseline. Thus, even with fixed goals, it is necessary to change monetary policy targets on at least an occasional basis. Further evidence that a "fixed" policy will have differenct consequences under varying economic conditions is provided by a supplemental simulation performed by Chase Econometrics. In this simulation, "non-borrowed reserves" were increased steadily at their average rate of growth for the 1965.1-1976.1 period. This resulted in a policy which was on average more expansionary than the policies actually followed prior to and during 1970, and more contractionary than the policies followed thereafter. Given the lags in the unemployment/inflation tradeoff discussed earlier, these differences resulted in both lower real growth and higher inflation by 1975, despite the previously noted tendency for the economy, as represented by the CEAI model, to react favorably to the stabilizing impact of a "non-borrowed reserves" target.

One interesting question which remains is, "Would a combination of alternative fiscal and monetary policies have been able to promote a better unemployment/inflation tradeoff than the tradeoff actually achieved?" It appears that this would have been the case, particularly in the long run (5 to 10 years) when monetary policy seems to have a considerable direct impact upon inflation. However, this question was outside the scope of this study and must be reserved for future study.

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CONCLUSIONS

1) Monetary policy, as actually followed seems to have been pro-cyclical in the 1970 recession and 1967 "growth recession" as well as during the 1974-1975 recession, although in some cases expansionary monetary policy during recessions seems to have promoted a faster recovery than would have occurred with a stable monetary policy.

2) Monetary policy seems to have a much greater short-run impact upon real growth than upon inflation. Thus, for the range of policies considered by this study, the short-run (0-4 years) unemployment/inflation tradeoff of a more restrictive monetary policy will almost always be unfavorable. The short-run unemployment/inflation tradeoff of a more expansionary policy will almost always be favorable.

3) In the longer-run (5-10+ years) the unemployment/inflation trade-off of a more restrictive monetary policy become increasingly less unfavorable. It is not possible to specify when the trade-off becomes favorable, since this requires a) an analysis of the social costs of unemployment and inflation, b) a system for discounting over time, and c) an analysis of possible offsetting fiscal policies. Nevertheless, there does appear to be a substantial conflict between our society's short-run and long-run economic goals.

4) While a variety of "rule-of-thumb" monetary policies would have been more counter-cyclical than the policies actually followed during the last decade, a refusal to change monetary policy when economic conditions changed would have had even more harmful impacts. In particular, a fixed monetary policy target during the decade studied would almost certainly have been either too expansionary during the first half of the decade or too restictive during the second half.

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