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## *Studies in Applied Economics*

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### **FISCAL VERSUS MONETARY POLICY IN THE 1960s**

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*Milton Friedman*

Johns Hopkins Institute for Applied Economics,  
Global Health, and the Study of Business Enterprise



## **Fiscal versus Monetary Policy in the 1960s**

By Milton Friedman

This was a lecture delivered in Tokyo, in September 1969. It was recorded and subsequently transcribed by John Greenwood, who at the time was a student of economics in Tokyo. In 2016, Greenwood was appointed a Fellow of the Johns Hopkins Institute for Applied Economics, Global Health, and the Study of Business Enterprise.

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### **About the Series**

The *Studies in Applied Economics* series is under the general direction of Professor Steve H. Hanke, co-director of the Johns Hopkins Institute for Applied Economics, Global Health, and the Study of Business Enterprise ([hanke@jhu.edu](mailto:hanke@jhu.edu)). This working paper is one in a series on currency boards and monetary systems. The working papers will fill gaps in the history, statistics and scholarship of the subject. The authors are mainly students at the Johns Hopkins University in Baltimore.

### **About the Author**

Milton Friedman (1912-2006) was one of the most prominent American economists of the second half of the twentieth century and a leader of the “Chicago School” of economics. His writings, speeches, and media appearances covered theoretical, empirical, and popular topics. He is probably best known among economists for his challenges to Keynesian economics, notably through his theoretical and empirical studies on the consumption function and on monetary history and theory, for which he won the Nobel Prize. The attached paper is an example of his extraordinary ability to popularize complex economic theory in a way that even a non-economist can readily understand.

### **Abstract**

In this lecture, Milton Friedman reviews the role of fiscal and monetary policies on the course of the U.S. business cycle, during several episodes from 1961 to 1969. He relates these developments to shifts in contemporary popular and scientific opinion about the determinants of the business cycle. In each episode of expansion or contraction, he shows that monetary policy – in the sense of changes in the rate of growth of the quantity of money – was at least as

important as fiscal policy in determining the pace of economic activity and the rate of inflation, and always dominated when these policies were moving in opposite directions. During the lecture, Friedman makes several digressions to explain the variability of the lag in effect of monetary policy, the reason why interest rates are a poor guide to the stance of monetary policy, and why the downward-sloping liquidity preference function is a poor model that fails to comport with the real world. He also explains why tax increases are not necessarily contractionary, and why tax decreases are not necessarily expansionary.

## Fiscal versus Monetary Policy in the 1960s

A Lecture by Milton Friedman at Nikkei Hall, Tokyo, September 1969<sup>1</sup>

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I am very flattered and honoured indeed to be able to talk again under the auspices of the Nihon Keizai Shimbun, and I appreciate very much the number of you that have wanted to come out and hear the latest heresy emanating from Chicago!

The decade of the 1960s in the United States has been dominated by two closely related problems: first the problem of internal inflation, and second the problem of the external balance of payments. The attempt to meet these problems has had very mixed success. But whatever the success from the point of view of practice, these attempts have been extremely fruitful on the scientific level because they have provided an unusually good opportunity to test various theories about economic policy. The result of this experience has been a very sharp swing in informed public opinion in the United States.

The swing in opinion has had two major elements. In the first place there has been a great change in the relative importance attributed to monetary policy on the one hand, and fiscal policy on the other in affecting prices and incomes. In the second place there has been a great change in the interpretation of monetary policy – a change in the relative importance attached to interest rates on the one hand, versus the quantity of money on the other hand as an indicator of monetary policy. The early part of the decade saw an almost uniform acceptance of the view that fiscal policy – changes in taxes and spending – were the major, most important, most potent instrument of economic management. The last few years have seen a shift in the opposite direction to a great reduction in the importance attributed to fiscal policy and a great increase in the importance attributed to monetary policy.

In the same way until the last few years most observers of the economic scene – informed or otherwise – tended to judge monetary policy in terms of interest rates. Again, in the past few years there has been a widespread change: increasing recognition that what happens to the quantity of money is a far more meaningful indicator of the character of monetary policy than what happens to interest rates.

That change is all the more striking as a result of the coming into power of a new Administration in Washington. By contrast with the economic policy under the Kennedy/Johnson Administrations, the new Nixon Administration has been putting far more stress on monetary policy and far less stress on fiscal policy than did the earlier Administration. In addition the new Administration has moved sharply away from the philosophy of fine-tuning – from the philosophy of the New Economics – that it was both desirable and possible for government economic planners to offset every small change in the economic condition by delicate adjustments in fiscal and other policies.

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<sup>1</sup> Recorded in 1969, and later transcribed and edited in 2010 by John Greenwood, Chief Economist, Invesco.

The new Administration has moved away from an emphasis on fine-tuning toward an emphasis on gradualism and steadiness, toward an emphasis on a stable framework of monetary and fiscal policy, permitting the economy to adjust to that framework, rather than trying to intervene continuously and delicately. Similarly, the actual emphasis of policy has moved away from almost exclusive stress on interest rates to a far greater emphasis on monetary aggregates.

What I want to do in the talk today is to discuss with you the background of these changes as they appeared during the 1960s, and then to discuss the current situation in the United States in consequence of these changes.

I want to start by looking back over the experience of the earlier years of the decade -- 1961-63 -- when real GDP growth, following the initial recovery in 1961, had been rather weak in 1962. [At a seasonally adjusted annual rate, real GDP growth had slowed from 8.4% in 1961 Q4 to just 1.0% in 1962 Q4 – ed.] As a means of promoting the recovery the New Economists proposed a substantial tax cut. This tax cut was enacted in 1963 and it was given, by the public at large as well as by many informed economists, primary credit for the rapid expansion in the American economy which got under way in late 1962 and continued for some years thereafter. In point of fact, the evidence on the tax cut is very mixed indeed. The problem is that the economy started speeding up its rate of growth before the tax cut took effect and continued well after it took effect. In order to explain both the early expansion and the continued expansion by the tax cut, one must argue that the tax cut had a large part of its effect in advance through anticipations, but then had a further effect again afterward.

As it happened, two things were going on at the same time: there was a tax cut on the one hand, but on the other the rate of growth of the quantity of money speeded up rather sharply in the middle of 1962, and this preceded, by roughly six months, the speeding up of the economy which in turn preceded the tax cut, so that from a scientific point of view the evidence of the period from 1961 to 1964 or 1965 is very mixed. You had two factors at work: on the one hand the changes in fiscal policy and on the other hand the changes in monetary policy. They were both working in the same direction, and therefore one cannot, on a simple view, determine which was primarily responsible.

But whatever may be the scientific judgment, there is no doubt what the popular judgment was. Because so much emphasis had been put on the tax cut and because it had been so widely advertised, you had, almost for the first time in the American experience, an almost universal acceptance – by politicians, by senators, by congressmen, by businessmen, by journalists, and by the public at large – of a very simple-minded, fiscal view of economic policy. You had the acceptance of the view that the tax lever had a sure-fire or certain way of altering the trend of economic policy.

To begin with, the expansion was primarily in output, and prices showed very little effect. From 1961 to 1964 consumer prices or the implicit price index used to deflate the GNP rose at perhaps 1-1.5% per year—an amount which may well reflect statistical error rather than the true price rise – an amount which was widely regarded as roughly stable prices. But beginning in 1964 and 1965, there was a distinct shift toward a tendency for the rate of price rise to creep up. Again, in

terms of the policy instruments that were at work, the movement toward inflation could initially be attributed either to monetary change or to fiscal change. Both were very expansionary.

The quantity of money started increasing at a faster rate than it had before, but also the budget of the federal government shifted substantially toward a larger deficit. The reason, of course, was that simultaneously you had an expansion in military expenditures associated with the Vietnamese war, and also in governmental expenditures of a non-military kind associated with the introduction of new welfare programs. On both defense and non-defense grounds governmental expenditures rose very much more rapidly than governmental income and there started to develop a substantial deficit. So on both the fiscal and monetary side, policy was highly expansionary.

There was increasing public concern with the inflation, even though by the standards of the kind of inflation Japan has become accustomed to, the inflationary developments at that time were very small indeed. At the time when public clamour arose about the dangerous inflation we were experiencing, prices as measured were rising at perhaps 2-3% per year. You Japanese, accustomed as you are to a rate of rise in consumer prices of the order of 6-7% a year for the last 8-9 years, will think the US public was abnormally sensitive – and so they are, largely because the long background of the US has been a background of a high degree of price stability. In American experience over 200 years the only really substantial price increases have come during and just after wars.

Prices in the United States in 1939 before the outbreak of World War 2 were at roughly the same level as they had been a century and a half earlier in 1800. Prices today are higher in the United States than they were in 1800 primarily because of the price rise during World War 2 and during the Korean War. Inflation during periods of relative peace is not a phenomenon which is typical of the American economy. At any rate the tendency for creeping inflation to take over – for prices to start rising at 2-3% -- created a great deal of concern and led, in 1966, to a sharp tightening of monetary policy.

In 1966 when the Federal Reserve tightened its policy very sharply we had for the first time a rather interesting experiment in which monetary policy and fiscal policy were going in different directions. Beginning in April 1966 the Federal Reserve reduced the rate of monetary growth essentially to zero. It stepped on the monetary brake very sharply. The quantity of money had been rising significantly before April. From April to December it essentially did not change, it did not grow. The precise results are different depending on which monetary total one looks at, but they all show essentially the same pattern, and there is no need to go into the details of different totals.

At the same time that the Fed was tightening sharply the rate of monetary growth, the Federal budget continued to be in substantial deficit. Indeed, the deficit tended to increase during the year. As a result, we had monetary policy moving in a highly contractionary direction; we had budgetary policy moving in a highly expansionary direction. What was the result?

The result was that in the first half of 1967 the US experienced a significant slowdown in economic growth. We had what I have tended to call a Japanese-style recession. As you may

know the particular technical definition of a recession which has been adopted in the U.S. by the National Bureau of Economic Research (NBER) does not call an economic movement a recession unless it produces an absolute decline in real output for two quarters. I think this a mistake from an economic analysis point of view. What we are concerned with in cyclical matters are changes in the rate of change. In Japan a situation in which real output did not grow at all would involve an extremely severe reaction given that a normal or actual rate of growth on the average for the past few years has been of the order of 8 to 9 to 10 percent per year. In the same way in the United States we had a very sharp slowdown in real growth. We had what by Japanese standards would have been called a recession, but what we in the United States called a either a mini-recession or a slowdown. However you interpret the data, it is clear that the tight monetary policy had a greater effect on the course of economic activity in 1967 than the expansive fiscal policy.

Let me emphasize one point about this episode which is of the greatest importance. I mentioned that the slowdown in monetary growth started in April of 1966. I mentioned that the slowdown in economic growth came in early 1967. This is a typical relationship over the long past period of over more than 100 years in the United States in the relationship between monetary change and economic change.

Monetary change operates on the economy only after a considerable lag. It takes about 6 to 9 months before a change in the rate of monetary growth is reflected in the change in the rate of economic growth or the change in the rate of income growth. The lag in the particular episode in 1966-67 was just about 8 or 9 months from April 1966 to about December 1966 or January 1967. Obviously what I am calling a lag in effect is not a single precise number that is always exactly 176 days 3 hours and 5 minutes. It is a variable magnitude that is sometimes more, sometimes less. The change starts having an effect right away; then it is built up and spread out over time, so the average impact may sometimes come after 6 months, sometimes after 9 months, sometimes after 10 months -- there is a good deal of variability of course.

This episode illustrated first the apparently stronger effect of monetary policy than fiscal policy. Second it illustrated the typical lag in effect. In the third place it illustrated an extremely interesting feature about monetary change, and this has to do with the rather complicated relation between changes in the quantity of money and changes in interest rates.

Almost every student of economics, if asked, "What will be the effect of a slower rate of growth in the quantity of money?" will tend to answer "Higher interest rates". Every student of economics has in his mind's eye the downwards sloping liquidity preference function that he learned in class. And he knows, or he thinks he knows, that if you reduce the rate of monetary growth it will lead to higher interest rates. Now there is such an effect, but it is only a temporary effect, and it is not the most important effect. Indeed, if we look at the experience of the world it goes in precisely the opposite direction to what every economist thinks he learned from the liquidity preference function.

If we ask, "In what countries of the world are interest rates high?" the answer will be in countries like Brazil or Chile. There you will find interest rates of 50%, 60% or 70% per year.

And now I will say to you, "As good students of the liquidity preference function, I take it that means that Chile and Brazil have been keeping down the quantity of money." And you will say to me, "Oh no, it is just the other way. They have been increasing the quantity of money very rapidly." The reason interest rates are high is that those countries have been having inflation. On the other side if I ask you, "In what countries are interest rates lowest?" you will tell me Germany and Switzerland. And I will say, "Therefore those countries have been increasing the quantity of money rapidly?" "Oh no," you will say, "They have been holding down the quantity of money."

So the more important relation between money and interest rates is that rapid monetary growth depresses interest rates for a short time but then tends to raise them. The more permanent -- the longer term effect -- is to raise them. Similarly a slower rate of monetary growth raises interest rates for a time in its initial effects, but then lowers them. Why? Because the slower rate of monetary growth after a time reduces the rate of income growth, and this reduces the demand for loans. This tends to lower interest rates, not to raise them.

Now the 1966 episode gives a beautiful example of that relationship. The tightening of money in April was followed by a very sharp rise in interest rates until we had the so-called credit crunch in September 1966, but then interest rates started to come down. So interest rates were falling from September 1966 to the end of the year even though - I shouldn't say even though, I should say **because** -- the quantity of money was still growing very, very slowly.

Concerned by the signs of the slowdown that was beginning to emerge at the end of 1966 the Federal Reserve reversed its policy and started to expand the quantity of money very rapidly. The lag in effect meant this didn't show up in the economy as a whole until 1967. Beginning in 1967, under the stimulus of the more rapid rate of monetary increase, the temporary slowdown in the rate of price rise was reversed, and succeeded by the resumption of inflationary pressure, or of upward movement of prices.

The continuation of price rises and their acceleration in 1967 and early 1968 led to renewed pressure to do something about inflation. The official attitude was still one of putting primary emphasis on taxation -- on fiscal policy rather than on monetary policy.

There was a proposal -- made in 1967 and enacted in 1968 -- to impose a surtax of a 10 % increase on individual and corporate taxes collected by the federal government. This surtax was enacted to be effective in the middle of 1968 and, unfortunately for the economy but very fortunately for economic science, the Federal Reserve seized the opportunity to provide us with another controlled experiment. The appropriate policy would have been to have been for the surtax to have been accompanied by a slowdown in the rate of monetary growth -- for monetary and fiscal policy to have moved in the same direction. But official Washington, including many of the people at the Fed, were so persuaded of the potency of fiscal action that they were afraid of overkill. They were afraid that the surtax was going to slow down the economy too much. In consequence the Federal Reserve accompanied the surtax by continuing and even increasing the very high rate of monetary growth. It therefore provided us with another controlled experiment

in some ways even more dramatic than the experiment I described for 1966: fiscal policy contractionary, monetary policy expansionary – which was going to dominate?

Now in order to answer that question one must look not only at the last half of 1968 but also at the first half of this year (1969). I stressed earlier that monetary policy operates with a considerable lag -- it requires 6 to 9 months before it takes effect. But in the same way there is no reason to expect fiscal policy to operate immediately. It also should be expected to operate with a lag. And therefore for a fair test of the two, one should not judge just on the basis of 1968, but on the basis of what happened later. And it is very interesting to note that the predictions that various people made for 1969 depended very much on their attitude towards fiscal policy.

The New Economists, the fiscalists -- the people who stressed the potency of fiscal policy -- were taken aback when the economy failed to slow down in 1968, but they said that this just showed there was going to be a delayed effect. And so they predicted that the first half of 1969 would see a distinct slowdown to be followed by an acceleration of activity in the second half of 1969.

Those like myself that put major emphasis on monetary policy rather than fiscal policy argued very differently. We said that we do not know what will happen in the last half of 1969. That depends on what monetary policy does in the first half of 1969. But we do know that the first half of 1969 will be very expansionary in consequence of the expansionary monetary policy in the last half of 1968.

Well, the experiment has by now been conducted, and the initial results are in. We know that economic expansion or expansion of nominal GNP continued at an unabated rate during the first half of 1969 and the rate of price increase even stepped up, so that it is clear that up until the middle of 1969 the evidence suggested that the expansionary monetary policy was considerably more effective, having a greater effect than the supposedly contractionary fiscal policy.

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Let me digress at this point briefly from the historical analysis to try to answer the question that must be foremost in your mind. How can it be that an increase in taxes is not anti-inflationary? Is it not the most obvious thing in the world that if you raise taxes and thereby cut the incomes of tax-payers -- that they will have to reduce their spending, and that this in turn they will reduce the pressure of prices? How can anybody be so foolish as to suppose anything else?

But then how do you explain the results of the two experiments that I have just described? How is it that the sharp tax increase in the middle of 1968 in the U.S. appeared to have had little effect on the pressure of spending? The answer is that the usual analysis of the tax increase of the kind that I have given is only half the story. It is true that if taxes are increased, then tax-payers have less to spend. So far as that goes, that does reduce the pressure of demand.

But we have to look at the other side of the government's accounts. If the government continues to spend what it otherwise would have, it has to borrow less in order to finance it. If it raises \$10 billion more in taxes, it needs to get financing from other sources of \$10 billion less. If the reduction from other sources occurs because it borrows \$10 billion less, then that means that those who would have loaned funds to the government have \$10 billion more to pay their taxes, or to maintain consumption, or to lend to somebody else. Tax-payers have less; potential lenders have more. So far as that goes, there is no net effect of a tax increase on the funds available. So far as that goes the effect of the tax increase will be to lower interest rates, but it will not directly reduce spending. It will mean that people who would otherwise have loaned the funds to the government will now have to find other borrowers. In order to find other borrowers they will have to offer slightly lower interest rates. This will induce business investors – maybe people who want to build houses or various other people -- to borrow the funds that otherwise would have gone to the government. The effect of the higher taxes will be lower consumption and higher capital formation – and that is precisely what happened in the last half of 1968.

Of course, if the higher taxes are matched not by a reduction in borrowing from the public, but by a reduced printing of money then the situation is different. Then the tax increase is accompanied by a slower rate of monetary growth, and that will have a definitely deflationary effect. So the reason in 1968 in the United States why you had a controlled experiment was because the counterpart of the tax increase was a reduction in [household] spending but not a reduction in monetary growth. So monetary policy remained expansionary, while tax policy became contractionary. And the results were those that you would expect from the kind of theoretical analysis I just have just given – namely there was no slowdown in the rate of economic expansion, but there was a shift in the composition of output with some slowing down in the rate of consumption spending and some increase in the rate of investment spending.

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Returning to the historical analysis, I mentioned that monetary policy had been highly expansionary in the last half of 1968. But starting in the spring of 1969 there was a distinct change in monetary policy. The monetary expansion started to slow abruptly, so that the narrow money supply – currency plus demand deposits -- slowed down from a rate of about 4% a year. From April to now (September) that quantity has grown at the rate of about 2% a year. So there was a very sharp and significant deceleration of the rate of monetary growth. At the same time there was a change in fiscal policy in the same direction. The surtax continued to yield additional tax revenue, and in addition the new Administration brought great pressure to bear on the rate of government spending. The rate of increase of government spending was slowed down with the result that the budget continued to shift from the high deficits of a year earlier to surpluses. Consequently, since December 1968 both monetary policy and fiscal policy have moved in the same direction. They have both been directed at slowing down inflationary pressures.

So far it is too early to see the full impact of this policy on the economy, but up to date I think it is fair to say that the results have been roughly on schedule -- that they have been about what could have been expected in terms of past relationships. We know from earlier experience that

the first impact of a slowdown in the rate of monetary growth is on the security markets. As I mentioned earlier, the initial effect of a tightening of monetary policy is to raise interest rates, and later on to lower them, but for the first months to raise them. In the United States interest rates had been climbing in 1968, as a delayed impact of the earlier easy money policy. In early 1969 they climbed still higher as a result of the new monetary tightening. A little later the stock market – the market for equities – reflected the monetary tightening. Stock market prices reached a peak in early 1969, and prices have been very weak and declining since.

We know that the effect on aggregate spending, on nominal income and GNP comes later. In the first half of 1969 income grew very rapidly under the delayed impact of the monetary expansion of the prior year. But by now we are about in the period when the monetary slowdown should be expected to show its effect. And there are many signs that such an effect is occurring. As yet they are not decisive. As yet they are limited. But the evidence, such as it is, is consistent with the view that we are having a distinct tapering off in the rate of growth of monetary totals such as nominal GNP or nominal incomes and so on, and that the fourth quarter of this year will see a distinct slowing up or decline in the rate of nominal GNP.

There have also been signs of a distinct slowing up in real magnitudes: the rate of growth of real GNP has come down sharply and is now at about 2% a year. A year ago it was at the rate of about 6% a year. Employment is rising at a slower rate than it was earlier. In one area of the economy after another, particularly in those that tend to react early to economic change, there are signs of a slowdown.

Again, experience shows that the effect occurs first on output, and only later on prices, and again, this is what is happening. Prices rose rapidly during the first half of 1969 and are still rising rapidly under the combined impact of the rapid monetary growth of 1968, and the effect on anticipations of the earlier price growth. As you very well know here in Japan from your experience, when people generally come to expect a more rapid rate of price growth, this tends to get built into their bargaining for wages, for prices and as a result prices will continue to rise for some time after the pressure of demand has been reduced. So I do not expect myself to see much – if any -- decline in the rate of price rise until the final quarter of this year. I think we shall be doing well if by the end of this year we will have got the rate of price rise down to about 4%.

So my anticipations are that as of now everything is about on schedule and we are seeing the signs of the effect of our tightened monetary policy in the early part of the year, and that we shall continue to see their effects. The US is scheduled for a slowing down in the rate of income growth, for a slowing down in the rate of output growth, and for a slowing down in the rate of price growth. Indeed, the problem that bothers me at the moment, and the one that I shall turn to in my final comment, is whether we may not be in danger of an over-tight monetary policy at the moment – of not allowing sufficiently for the lagged effect of what we have already done.

I mentioned earlier that the rate of monetary growth had apparently been reduced still further in April. If we take currency plus demand deposits – money narrowly defined – the rate of growth

of that total from December 1968 to April 1969 was about 4%, whereas from April to August (the latest figures we have available) it has been at the rate of about 1.8% per year. This deceleration in monetary growth is even greater if you use other broader monetary totals; I have used the one that shows it to be least.

Now unfortunately one of the great difficulties in governmental and other policy is a lack of patience. Everybody always expects things to happen overnight. We have seen that experience shows that it takes a considerable time for a slowdown in monetary policy to have its effect on the economy. But in the meantime everybody says, "Your policy isn't working! Prices are still rising. Why don't we see more striking results?" And this produces a tendency on the part of the authorities to step still harder on the brake, and to overdo the process. And I am afraid that this is what has happened in the past few months. If we continue to have as tight a monetary policy as we have had since April, then I am very much afraid that this will produce a more severe recession than we need to have.

There is no way of going from the inflationary path that we have been following to a non-inflationary path that does not involve some cost, some slowdown in the economy, some increase in unemployment. But if we move gradually and slowly, I believe it is possible to keep that cost to a low amount. It is possible to keep to a minor level the cost imposed on the community by the necessity of getting people to re-adjust their expectations -- breaking the inflationary expectations which are now so widespread.

The die is not yet cast. So far we have had this tighter monetary policy for only a few months, and I am optimistic that the authorities will recognise the problem and will move to ease slightly the monetary policy that they have been following; that they will permit monetary expansion to resume at a rate which is higher than we have been experiencing recently, but not so high as to set off another inflationary spiral.

What will in fact happen in the United States economy in the early part of 1970 depends very much, in my opinion, on what monetary policy in this respect is followed in the next few months. So as of the moment I remain hopeful that we will succeed in sticking to a policy of gradualism, to a policy of moderation which will slow down the economy moderately, which will bring down the rate of price growth, and will do so without any substantial, serious or sustained recession.

Thank you.

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Questions:

Q1. Surely real growth is not incompatible with a moderate degree of inflation?

A1. The first problem is that once you start on a process of inflation, for a time it produces an artificial stimulation to growth. You have over-activity. But this is temporary. But as soon as

everyone comes to expect the inflation, it no longer fools them – it no longer has this effect. And then if you want to continue to have an artificial stimulus, you have to speed up inflation. So if you want to use inflation to promote growth, you must reconcile yourself to inflation at an ever-increasing tempo. You must be prepared to go from 5% to 6%, to 7%, to 10%, to 15% and so on.

The second thing that is true is that once you have started on an inflationary path there is no way of reducing the rate of price increase except by reducing demand pressure, and that produces a temporary period of economic slowdown. So all you can do by inflation is to transfer to a very limited extent some expansion – you can have some increased expansion now at the expense of a slower expansion later on.

Q2. It seems to me that there are two problems. One, how narrow is the range of the appropriate rate of growth of money supply? If 6% is too high and 2% is too low, how important is the difference of a percent or a percent and a half? Related to that, how wide is the range between the definitions of money supply? If that range is 3%, and the sensitivity range is one or two percent, then aren't you going to have big problems?

A2. Let me take the second of those questions first -- because it's so much easier! The difference in growth rates between the different money supply definitions arises solely as a result of mistaken governmental policy with respect to Regulation Q. Regulation Q is a foolish regulation which limits the rate of interest which banks may pay on deposits. It's a regulation of a foolish kind that is just as widespread in Japan as it is in the United States. But in the United States it is this Regulation Q which has limited the interest rates that may be payable on time deposits and on certificates of deposit, which has produced a difference in the behaviour of different monetary totals. Over any period of the past during which Regulation Q has not been of significant effect, there has been little difference in the relative behaviour of different money supply totals. And so if you abolish or reduce the influence of Regulation Q it makes almost no difference which monetary total you take.

Now let me turn to the first question. In the first place, in talking about the rate of economic growth, I want to emphasise that the long run rate of economic growth does not depend in any significant way on the rate of monetary growth. In the long run it depends on such fundamental factors as productivity, capital stock, population growth and the like. This is the answer I gave to the first question.

In the long run the rate of monetary growth affects not the rate of real growth, but what happens to prices. I have always chosen a rate of monetary growth in the neighbourhood of 3-5% because it has seemed to me that that growth rate in the United States would produce roughly stable prices. For Japan such a number would be higher. You require a rate of monetary growth of something around 11% in order to have relatively stable prices. Now, no great harm is done to a country if prices are rising at 1% a year or falling at 1% a year, so I would not want to make a fetish of having precisely 4% or precisely 3% -- somewhere in the range of 3-5% or 2-6% -- so

long as you stay anywhere in that reasonable range it seems to me that you will not have major problems over the long run.

The real difficulty arises in the short run. If a country has been experiencing inflation as we have at the rate of 6% or 7%, then unfortunately there is no way to get down to a 2% or 1% or zero rate of price increase without a temporary period of a slower rate of growth, and that's the period I was referring to in my final comment.

END.