MONEY AND THE MONETARY SYSTEM

27 August 1956

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Professor E. Gordon Keith, University of Pennsylvania, was born in Brockton, Massachusetts, 8 July 1905. He received his A.B. degree from Amherst College and his Ph.D. degree from Harvard. He became associated as an instructor in economics at Amherst College in 1934-35, and an instructor in economics at Harvard during 1936-38. From 1939 to the present time he has been associated with the Wharton School of Finance and Commerce, University of Pennsylvania. During 1941-47 he was an economist and assistant director in the Division of Tax Resources, United States Department of the Treasury. He also lectured at Swarthmore College during 1947-49.

MONEY AND THE MONETARY SYSTEM

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DR. KRESS: General Hollis, members of the class: It is fitting that our formal series of morning lectures in the basic review course in economics should be opened with a talk on money and the monetary system and some of its current problems. It is also fitting that our speaker, Dr. E. Gordon Keith, spent the years 1941 to 1947 in the United States Treasury and part of 1954 on the Council of Economic Advisors to the President. So by experience and training he is well qualified in his subject.

Last year and the year before, this talk was given by Dr. Charles Whittlesey, also of the Wharton School. I used to tease him by saying that you introduce a professor in money and banking by saying that he knows everything about money except how to get it for himself. But I will not say that this morning, Dr. Keith.

Dr. Keith has been a teacher since 1933, and that plus the experience in practical ways that I have already outlined to you makes him an ideal speaker for this morning. It is a pleasure to present Dr. Keith.

DR. KEITH: Thank you, Dr. Kress.

Gentlemen, I am very happy to be here this morning, especially to be here in the place of my good friend Dr. Whittlesey, who has conducted the lecture in prior years. I think I can do no better than to follow the outline of the talks which he has given here in the past.

Money and the Monetary System is a big subject. I think it's a tribute to your capacity to absorb that I will attempt to cover here in forty minutes subject matter that we take a good many hours to develop in the universities. I will have to assume that you have done your homework, and what I shall try to do is to build a sort of outline or skeleton, to give you the whole picture, and to tie it together. Then perhaps we can talk about some of the current problems.

I would like to start by pointing out a few things that you probably have read, just to reemphasize them. First, let's take the concept of money. I think it's important to note that the concept of money embraces two quite distinct ideas, one of which is abstract and the other

is concrete. The abstract idea conveyed by the term "money" is that of the unit of account--the dollar, the pound, the franc, and so forth. The concrete idea is that of a means of payment--a coin, a piece of paper money, a dollar bill, or a check.

Now, the unit of account which we call money and the means of payment which we call money are not, of course, identical. But they tend to become closely identified with each other if the units of payment, as is true in this country, and the means of payment are themselves identical; and the price of the means of payment is expressed in terms of the unit of account. In other words, we can think without error of ourselves as reckoning with the same dollars that we actually spend. But I would point out that this is not always the case. For example, in England there was the guinea, which was a means of payment but was not the unit of account.

Furthermore, there have been times when new units of account have been adopted, old ones being discarded. That was true in Germany after the First World War. And, of course, there are times when people discard old means of payment, particularly during extreme inflation, and turn to something else as the means of exchange. You are all, I am sure, familiar with cigarette money.

So we have to bear in mind that there are two concepts here. One is abstract; the other is concrete. What we shall have to say here today will be mainly about the concrete concept of money as something which you can take hold of and put to use.

Now, what do we mean by money in the concrete sense? Well, money is one of those concepts which are definable in terms of the use or purpose which they serve rather than in terms of the character of the thing or its outward appearance. In other words, money is anything that regularly performs the functions of money; it is anything which serves as a means of payment.

Money, I might say, is also a social institution. What makes a thing money is its general acceptance in a society as a means of payment.

Now, this isn't always understood. There was a book brought out several years ago by a lawyer, I think, in one of the Midwestern States, the title of which is "What Are We Using for Money?" The thesis of this book was that the things we were using for money were not money at all.

Now, of course, this author was taking his own idea of what money is rather than using that which the public has accepted. I presume, however, that if you followed this fellow up and down the street, you would not have found him refusing to take the notes or the checks which he was offered. Perhaps what he was really trying to say was that he didn't like the type of money that we have. Probably if you queried him further you would have found him saying that it wasn't sound money. But certainly in terms of his thesis--that what we were using for money was not money--he was wrong, since what was being used for money was money, simply because the test of money is whether or not it is being used as a means of payment.

There have been times, of course, when the acceptability of money depended on something other than custom or convention. You can go back to times when, in order for money to be acceptable, it had to be convertible into some asset or metal which had a stable value in the market, or when the acceptability of money depended upon its being legal tender. But these are necessary qualities of money only if without them the public would have no confidence in the money itself. Our monetary system and that of most modern countries rests today on confidence in the Government and in those public servants who are responsible for the management of money.

There are some other functions of money which we should mention here. Besides serving as a means of payment, money in its concrete sense serves two other major functions.

First, it serves to satisfy the need or the desire for liquidity. We may hold wealth in a number of forms, but there is a certain advantage in holding at least some of one's wealth in the form of an asset which can be quickly and readily converted into goods, to take care of any sudden or unexpected need which might arise or to take advantage of an opportunity which might present itself. If you suddenly found that you had an opportunity to acquire an asset--and this is particularly important to business firms--you might not want to have to scurry around and try to borrow the money. If you had the cash or the deposit already, you could close the transaction on the spot.

This is why we can speak of a part of our money supply as "money on the wing"; in other words, money that is flitting about from hand to hand in making payments. But a part of the money supply might be regarded as "money sitting." In other words, it is being held as a liquid asset.

Another way of contrasting these two uses of money is to say that there is active money, that which is being used to make payments, to pay debts, and so forth; and there is inactive money, that is, the money which is being held against some future need or opportunity.

Second, money serves as a monetary reserve at the commercial banks and at the central bank. While these banks have a special need for monetary reserves, because they have to be able to meet their own demand obligations when they are presented, the primary purpose of these reserves today is to regulate the supply of money. As we shall see later, it is through manipulating the reserves that the Federal Reserve bank, our central bank, is able to control the total supply of money.

We've mentioned the concept of money. We've said something about the nature of money, and mentioned some of the other functions of money besides those of the medium of exchange and the unit of account. Now let's look at the characteristics of our modern money.

Generally speaking, our money supply can be broken down into three main categories. First, there is what we might call pocketbook money. Today this comprises 30 billion dollars worth of coins and paper notes that are supplied by the Treasury and the Federal Reserve banks. Second, there is what we might call checkbook money. This money takes the form of some 110-odd billion dollars of demand deposits on the books of the commercial banks credited to the general public and to the Federal Government. Third, there is reserve money. The reserve money of the Federal Reserve banks takes the form of 22 billion dollars of gold in Fort Knox. The reserve money of the commercial banks takes the form of deposits on the books of the Federal Reserve banks ($18 billion); and to a certain extent the deposits which the banks have on the books of other banks ($16 billion).

We cannot add up the three categories that I have mentioned here to arrive at the total money supply, since there would be a certain amount of double counting if we did. But we can measure the effective supply of money that is available for the public to use, to go out and bid for goods, if we add to the pocketbook money outside of the banks ($27.5 billion), the checkbook money which the public holds in the form of demand deposits ($105 billion). The gold at Fort Knox and the reserves of the banks are not usually regarded as a part of our effective money supply, although the size of these reserves does affect the money supply.

Now, if you run down this list, I think it becomes apparent that modern money is by and large what we call debt money. That is, it consists of promises to pay, not assets which have any intrinsic value in themselves. The only exception is the gold at Fort Knox, which can be drawn on only for special purposes, such as the settlement of our international accounts. But except for this gold, all of these items of money which I have mentioned are promises to pay.

Now, if we took a step further, we would find that those promises to pay really are promises to pay other promises to pay. The author I mentioned earlier tried a little experiment. He took a Federal Reserve note and saw that it said: "The United States Government promises to pay five dollars." He sent it to the Treasury and they sent him back a United States note. He looked at that and it also said: "The United States Government promises to pay five dollars." When he sent that in and asked for payment, he got the U. S. note back. That was it. A dollar was a dollar, and he couldn't go any further.

It is important to note that a money supply which consists largely of debt money is expansible, since the quantity of money is not limited by the supply of any particular commodity, such as gold or silver. If we were using asset money, the amount of money would depend on the amount of the asset--the silver or gold--which we had to serve as money after satisfying the demands of industrial users. With debt money, the expansibility, and the contractibility too, of money are not limited in any such way.

This leads to a third point, namely, that since most of our money is debt money, and since it is expansible and contractible, it has to be managed. Debt money doesn't manage itself automatically. When asset money is used, the money supply is self-adjusting. In other words, if there is too little money, prices go down, the profits from gold mining go up, and more money is produced. If there is too much money, prices go up, the profits from gold mining go down, and there is less money produced. This isn't any longer true. The supply of money has to be managed. It has to be managed by some administrative authority.

Now, this brings up the point of changes in the quantity of money. If money has to be managed, how do we bring about changes in the supply of money?

The significant changes in the supply of money today take place in the category which we have called checkbook money. The supply of pocketbook money changes from time to time. It rises a little around Christmas. It rose very substantially during the war, when it was wanted by people engaged in black market operations and income tax evasions. Generally speaking, what the public wants in the way of pocketbook money will depend on what their income is and what the prices are of the things they want to buy. So that you would probably find the amount of pocketbook money rising and falling as levels of income and levels of prices rise and fall.

On the other hand, checkbook money, as we saw, is a deposit on the books of some bank. A deposit gets on the books of a bank when people bring pocketbook money to the bank. But a deposit also gets on the books of a bank when somebody comes into the bank with a promissory note that he wants discounted, and the bank makes the loan by crediting the borrower's account. It then has an asset in the form of a loan and a balancing liability in the form of a deposit. The bank has increased the amount of checkbook money by increasing its own liabilities.

So the amount of checkbook money depends, first, upon how much the public--businessmen and individuals--and the Government want to borrow; and, second, on how much the banks are able to lend. This ability to create checkbook money is, of course, not unlimited. Banks must maintain a correspondence between the amount of deposits which they show on their books and the amount of reserves which they have in the form of cash, or of deposits at other banks including the Federal Reserve.

Thus the supply of checkbook money is determined by how much businesses and individuals want to borrow, by how much the Government borrows, and by how much the banks are willing to lend. Finally, it is determined by the central bank, the Federal Reserve bank, which can increase or reduce bank reserves. The Federal Reserve bank can create additional bank reserves through purchases of securities or through loans to commercial banks, and in so doing they add to the supply of reserve money.

So that the picture I would like to leave with you is that our monitary system is something like an accordion. It can expand and contract at three levels. The Federal Reserve can create reserve money; the more reserve money the banks have the more thay can create in the way of

checkbook money; and, of course, the more checkbook money there is, the more the public can draw out as pocketbook money. So that the money supply has considerable flexibility. But, because it is so flexible, it, of course, needs to be managed. And that brings us to the question of monetary policy.

Now, how does the Federal Reserve manage money? And what is its objective in managing money? Is there such a thing as a right supply of money?

There are three major objectives, I think, today which the Federal Reserve would stress in managing money. One objective is to stabilize prices. We want our monetary unit to represent roughly the same amount of purchasing power tomorrow that it does today. The dollar, everybody knows, is not like the yard or the quart. It is not an invariable standard. But we like to think that it is not too rubbery. We don't like to have it stretch or shrink too much. We like to feel that the dollar will not depreciate or appreciate over a period of time. So this is the first objective of monetary policy--to regulate or manage money so that the value of money or the purchasing power of money does not change too much relative to the goods which are purchased.

A second objective is full employment, or you might say, a high level of employment. In other words, the Federal Reserve is conscious of the desirability of achieving a high level of employment and of using its monetary powers in such a way as to bring this about.

A third objective of monetary policy--and this is one which you won't find mentioned very often--is economic growth. We want not only a stable monetary unit, we want not only full employment, but we also want a growing, expanding economy.

Now, let's look at these three objectives briefly. First, take money and prices. We all know the proposition that the value of money varies inversely with the quantity, which is sometimes expressed in terms of the familiar equation $MV=PT$, M being money, V being velocity, P being prices, and T being total transactions. This is, of course, just a shorthand way of saying that the work that money does equals the work that money does. In other words, we have the money that buys things on the one side, and that equals the things that money buys on the other side. There's nothing magic about this. It's just a truism.

If you could assume, let us say, that two factors remained unchanged namely, velocity and transactions, then prices would move with changes in the quantity of money. In this way one may develop from this equation what is known as the quantity theory of money, which attributes changes in prices to changes in the quantity of money.

Now, the important thing to note is that the other factors do not always remain the same. V, which stands for velocity, or the average number of times which units of money turn over, does not remain unchanged. For example, at the outbreak of Korea we found that people who had been holding cash balances, to satisfy the liquidity motive, suddenly thought that it would be much better to hold refrigerators, automobile tires, and other things which might be in short supply a little later on. The result was a tremendous acceleration in V. There wasn't any change in the amount of money, but a lot of idle money was becoming active money. The impact of this was just the same as that of a change in the quantity of money. So V, we see, is largely determined by the attitudes of individuals and businesses with respect to holding money. The smaller the idle balances, the greater the velocity, and vice versa. Consequently this proposition that the value of money changes with its quantity has to be qualified.

We are witnessing at the present time an attempt to stabilize prices. As most of you know, since the beginning of the year prices have been rising, and the Federal Reserve has been attempting to exercise its influence the best it can to check that rise. It has been doing this in part by raising the interest rate, in order to make it less attractive to borrow money. It has been doing it in part by holding down the reserve money of the banks and therefore making it more difficult for them to make loans. Most bankers today have many more loan applications than they can possibly meet, and it is proving a source of some embarrassment, particularly in the case of old customers. This represents an attempt on the part of the central bank to exercise its function of money management in attempting to stabilize prices.

When we turn to money and income, another principle is involved. This is the principle of total effective demand. In brief, what this principle says is that there is some ideal level of total spending which will achieve full employment without any rise in prices.

Now, of course, total spending is monetary spending; and what people spend as a rule is their income. You can think of it as a sort

of circular flow of money. You can picture people receiving payments for services rendered to business and then in turn paying their income out to business for the goods and services produced by business. But the circular flow may be broken into. Some of the spending by business may be financed not out of cash receipts, but out of new money borrowed from the banks. Some of the consumption of individuals may also be financed in this way.

On the other hand, it is not necessary that all the receipts should be spent for goods. People can hoard money or they can use their receipts to retire bank loans and thereby reduce the total amount of checkbook money. But the idea is that there is this ideal level of total spending, and that the banks can, by making money easier to get or harder to get, influence the total spending.

In practice this doesn't always work out the way it does in theory. The banks tried to increase total spending in the thirties by making money very east to get, by putting the interest rate way down, and by building up the reserves of the member banks; and yet there was no appreciable effect. Income remained low and unemployment remained high. Despite the low interest rate and despite the increased reserves, the banks simply couldn't find any people who wanted to borrow from them. Businessmen didn't want to borrow, and without a borrower there was no way to create the additional checkbook money which would be then available for spending and which would increase the total effective demand.

Finally, with respect to money and growth, the third objective, the principle might be stated as the idea that the growth of the economy, by which we usually mean the rate at which we build up our capital stock and improve our methods of production, is in some way connected with the level of the rate of interest. In other words, you will get more investment the lower the rate of interest, because then investments which would be unprofitable at a higher rate become attractive. So the idea is that the central bank by operating on the rate of interest can in some way influence the rate of investment and therefore the rate of growth.

Now, the difficulty here is, of course, that the central bank, insofar as it operates in the money market, typically operates more at the short end than at the long end. Bank loans are typically short-term loans. The rates which the central bank is able to influence primarily are the

short-term rates, whereas it's the long-term rate which is more likely to influence the level of investment. Still, the two compartments are not completely watertight; and pressure on the short end will tend reasonably in the long run to also create pressure on the long end.

Now that we have discussed how money is created and what the objectives of monetary policy are in expanding and contracting the money supply, let's turn briefly to some of our current monetary problems.

First, there is the question of whether we should manage money at all. Some people haven't accepted wholeheartedly this idea of money management. Proposals have been made to return to the old gold standard. It is advocated by some as a return to sound money, and others support it primarily because they look on it as a way of curbing Government spending.

What these people would do, would be to permit you and me, if we had checkbook money or pocketbook money, to go to the bank and insist on getting some gold coins for it. You will notice that these gold coins fall into the category of reserve money. Of course, if they were drawn out and put into circulation and became in a sense a part of our pocketbook money, they couldn't also serve at the same time as a part of our reserve money. This is a disturbing thought, because in a sense it would mean that a significant measure of credit control would be shifted away from the monetary authorities into the hands of people swayed by rumor and mob psychology. In other words, if there was a sudden wave of fear or distrust, either on the part of people in this country or on the part of foreigners, they might all dash into the banks and ask for gold coins. If this happened, then the Federal Reserve System would lose its reserves. It would not be in a position then to create as much checkbook money as before--in fact, they might have to reduce the supply--and this in turn would lead to a decline in total spending.

So that most students of money don't take very kindly to this idea of returning to the gold coin standard. They feel that if we want to control Government spending, we ought to do it directly, through the congressional appropriation committees, not indirectly, by typing the hands of our monetary authorities.

Another automatic device which has been proposed would use, in place of gold money, what is called composite commodity money. The

idea, very simply, is that certain basic commodities, lumped into a so-called "bale," would be made interchangeable with money.

It would work a little bit like the farm support program. If prices were falling and producers found themselves with more of these basic commodities than they could sell to their regular customers, instead of having to shut down the plant, they would take their surplus stocks to the Treasury. And the Treasury, just as in the case of gold, where it is committed to pay 35 dollars an ounce for all gold turned in to it, would in this case be committed to pay an established price for each "bale." So, you see, this would provide an automatic method of adjusting the money supply. If prices went down, more producers would be selling their output to the Treasury and the money supply would go up. When market prices rose to the point where you could buy the bales from the Treasury more cheaply than you could buy them in the market, the Treasury would be able to unload its stocks; and the volume of money in the hands of the public would go down.

Composite commodity money would, I think, be a more effective type of automatic device than the gold coin standard. But it would present serious practical problems. And I think that by and large we are at the moment not very much attracted to these automatic devices. This means, of course, that we'll continue to have managed money.

But this raises some questions. If we say we are going to manage our money, the first question is, Who is going to do the managing? Although the Federal Reserve has been assigned this role, there are other parties who feel that they should at least have some voice in policy formulation. There was a period, you may recall, after World War II when the Treasury and the Federal Reserve were somewhat at odds with each other as to who should call the tune. Most students of money would say that the primary responsibility for monetary policy ought to rest with the central bank, but that the Federal Reserve certainly ought to give attention to the views of the Treasury, the Council of Economic Advisors, and other interested Government agencies. After all, monetary policy has a wide impact, and other voices than those of the central bankers ought at least to be heard.

Second, there is the problem of conflicting objectives. With price stability on the one hand and full employment on the other as two of our primary objectives, it's not inconceivable that we should have a situation where unemployment was increasing at the same time that prices

were rising. For example, many of the wage increases that have been granted in recent years have exceeded the productivity increases of the workers. Now, when wages rise faster than productivity, this tends to push prices up, because the businessman has to get his money back. On the other hand, it is conceivable that some firms might not be able to sell as much at these higher prices, and therefore they would have to lay off workers. If they did, there would be unemployment.

What does the Federal Reserve do at this juncture? Do they look at the unemployment and say: "What we've got to do is to make money easier, to increase total spending?" Or do they look at the higher prices and say: "What we've got to do is to make money tighter and reduce spending?" We may be approaching a time--conceivably within the next year or two--when the Federal Reserve will have to face this question and decide which line it is going to follow.

Third, there are problems of forecasting. How do you know when to act? What indicators do you rely on? And how do you interpret them?

Fourth, there is the question of instruments. There have been differences of opinion as to whether we should rely solely on indirect controls, those which operate on the reserves, such as open market operations, or whether we should also use direct controls, such as Regulation W, which would limit consumer credit, or Regulation X, which would limit real estate credit. At the present time the only direct control we have is the control over margin purchases of stock. But there are still a good many people, including the former president of the Federal Reserve Bank of New York, who believe that consumer credit and real estate credit controls ought also to be available for use in fighting inflation.

Finally there is the question of whether monetary policy is enough. Can monetary policy alone achieve stability of the value of money? Can it achieve full employment? Can it achieve growth? I think the answer is that it can contribute, but it cannot always do the job unless it has the support of appropriate fiscal policies.

England has been experiencing a situation recently in which a tight money policy has not been able wholly to check inflation. Part of the explanation of this lies in the fact that her fiscal policies have been mildly inflationary. If a country is spending more than it is taking in,

in other words, if a country is spending money, some of which is being created by the banks, high rates of interest designed to keep businessmen from borrowing will not guarantee price stability. Monetary policy won't be effective unless fiscal policy is in line with it.

So, if we are going to have managed money, we can't leave it all to the Federal Reserve. This agency has been very successful as a money manager during the last three or four years. Each time that it has adjusted the reserve requirements or the discount rates, the economy has responded in the way it was expected to. But I think they are a little worried now lest the public is coming to expect too much from monetary policy, and is becoming too complacent about our ability to avoid the twin evils of inflation and depression. Monetary policy has yet to meet a major postwar test of its capacity to maintain price stability and high-level employment; but if we are able to synchronize our fiscal policy and our debt-management policy with our monetary policy, we should be in a position to achieve these objectives.

DR. KRESS: Dr. Keith is ready for your questions.

QUESTION: I would like to know percentagewise how much money is available that is not subject to Federal Reserve control. There are these small loan companies. There might be other sources.

DR. KEITH: The small loan companies' money in a sense is subject to Federal Reserve control. They get some of their funds by floating their own securities. They also borrow from the commercial banks. To the extent that they are borrowers, and the Federal Reserve tightens up on money, this in turn makes it more difficult for them to get funds. You may have noticed that the commercial loan companies recently raised their rates. In other words, they passed along the higher cost of money to them at the commercial banks. A tighter management policy on the part of the Federal Reserve will mean higher interest rates to their loan customers. So they are not altogether out from under.

And, of course, direct types of credit control, such as Regulation W and Regulation X, apply across the board. These restrictions upon borrowing apply just as much to the lending of the finance companies as they do to the lending of the commercial banks. So my answer would be that they are not altogether out from under the control of the Federal Reserve bank.

QUESTION: My question has to do with what is a relatively new thing in the economics field, as I understand it, and that is this budget buying. It has increased by leaps and bounds among the population in the last few years, to the extent where a great segment of our population is living on the future. They have obligated themselves for money which they do not have now but hope to have next month, and so forth. Doesn't that have a significant impact on our economy? What would happen, theoretically, if large segments of the population suddenly were not able to pay for all these things which they have bought?

DR. KEITH: Yes. The total volume of consumer credit has risen very sharply. Our total installment debt at the present time is about $28 billion, as against a total installment credit of only $2 billion at the end of the war. We have, as you say, had a tremendous expansion in the amount of purchases of goods bought in expectation of future income.

Now, this has a good side and a bad side. The good side is that in this way the total effective demand has been increased. We have had increased spending. We have had producing and selling of automobiles, radios, and durable household goods which simply wouldn't have been bought in the absence of consumer credit. So this has contributed in a sense to the growth of the economy.

Furthermore, although this has been a very sharp increase in debt, you must remember that personal income has been rising too. So that actually, as of the present time, there has been very little evidence of inability to carry the debt.

The danger, of course, lies in the possibility that we might have a turn-down, in which case personal income would fall. While consumers now can carry the volume of consumer debt that they have, if they lost their jobs or were put on short work weeks, then the problem would become acute. There probably would be defaults. Moreover, repayments would probably exceed new loans, and this would accentuate the decline in total spending. This is the danger.

The second point that you mentioned, namely, that they have in a sense anticipated future wants, also has some people worried. The fact that so many people bought cars last year has meant that there were fewer customers for cars this year. Only so long as net outstanding debt is rising is consumer credit a force contributing to a higher

level of employment. When we reach the point where income stops rising and no more debt is being incurred, the process works in reverse. Repayments would tend to exceed new loans. Contributing to a decline in total spending. So I think it is a danger and has to be watched very carefully.

QUESTION: I would like to pursue that for a moment, if I may. I have heard a lot said about it and a lot of people worrying about it and you have just discussed the thing, but I haven't heard anything said about what we are going to do about it if we do have bad times. We have had them in the past. We presumably have plans to take care of bad times in the future by managed money, public spending, and so forth. What are we going to do about this? May it be a problem like the farm debt in the last depression, with sale moratoriums?

DR. KEITH: I think the answer to what we are going to do about it is that our first objective is to prevent a serious recession which would aggravate this problem. In other words, I haven't heard much discussion of what would be done about this particular thing, whether there would be a moratorium or something like that if we actually got into a serious recession. I think the aim is to prevent us from getting in. Of course there will be little dips, but we don't want any big dips.

QUESTION: In one of the Washington papers over the weekend there was an editorial on the action of the First National Bank of Boston and also of the New York Bank of the Federal Reserve System to some extent following through. I am curious as to the control that the Government exercises over the Federal Reserve System. How tight is that? How independent is the Federal Reserve System over current policy? Is there any comment you can give on that?

DR. KEITH: I'm not sure that I should try to answer that, since I understand you are going to have an official of the Federal Reserve System here tomorrow. But I think it can be said today that the Federal Reserve System is at the moment quite independent.

You may remember, when the discount rate was raised just a few months ago, that it was reported that Burns, Humphrey, and Weeks were opposed to this policy. They didn't think the timing was right. Nevertheless the Federal Reserve System went ahead with it. Unless the President or his close advisors are convinced that an action proposed to be taken by the Federal Reserve is clearly wrong, they will

not interfere. They may say: "We don't think this is wise. We think you ought to wait"; but they let the Federal Reserve go ahead.

You mentioned the action taken by the First National Bank of Boston. As I recall, this was merely a matter of raising their prime rate in anticipation of a similar move in New York. Of course that is the way the bankers try to hold businessmen off. They haven't much lending capacity. They have sold most of the securities they can sell, they can't get more reserves, and they hope that by making the interest rate high enough, they will discourage some businessmen from trying to borrow.

QUESTION: Obviously over the years the supply of actual currency changes, usually upward. Would you comment on who decides what the mechanisms are and what the criteria are for setting the Treasury presses rolling to turn out more paper money?

DR. KEITH: Yes. First, I should like to point out that the amount of paper money in circulation is not regarded as a policy matter. If the public wants more money, it can get it.

Now, how does the public get more money? Well, you go to the bank and you say you want to draw out some of your deposit. The bank may have some cash in the till; but if a lot of people like you want money, it will soon run out of cash, because no bank likes to keep too much on hand at any one time. The bank will go back to the Federal Reserve bank, if it is a member bank, and draw on it's deposit. The Federal Reserve will debit the bank's account and give it Federal Reserve notes.

The Federal Reserve banks get these notes printed for them by the Treasury. The only stipulation with respect to the issuance of Federal Reserve notes is that the Federal Reserve banks must have 25 cents in gold for each dollar of notes outstanding. But so long as they have enough of this reserve money, they can issue as many notes as the public wants.

The only other source of currency, i.e., of pocketbook money, is Treasury currency. This doesn't usually vary very much. There has been a gradual increase, largely in silver certificates and in subsidiary coin. But the amount is small--about $5 billion as compared with $20 billion of Federal Reserve notes.

QUESTION: You mentioned that the Federal Reserve Board can change the reserves and also change the rates of interest and thus control the amount of money and control the prices. Isn't there another factor which can be used, that is, taxation? Isn't taxation another method of controlling the amount of money in circulation?

DR. KEITH: Well, the answer to that is "Yes, and no." Taxation is another way of controlling total spending, because if you have a budget surplus, as we now have, that means that the Government is taking more out of the income stream than it is putting back in. Ordinarily the excess is used to retire some of the public debt. So you can say that when a government is running a surplus, it is tending to contract total spending and it is acting to restrain inflation.

But this affects the money supply only insofar as the debt which the Government retires is bank-held debt. If the securities held by the banks are retired, then what happens is that the bank gives up a claim against the Federal Government (the security), and the Federal Government gives up a claim against the bank (the deposit), and both disappear. And with the disappearance of the deposit, we have a reduction in checkbook money.

Take for an example the situation right after the last war. We were operating with a very large surplus. This was a powerful force containing the inflationary pressures at that time, because the Treasury used that surplus in large part to retire bank-held debt. Actually the money supply didn't change, because businessmen were going into debt to the banks faster than the Government was getting out. But it prevented the money supply from increasing as much as it would if you hadn't had a surplus.

QUESTION: Taxation takes more of our income from us than is paid back to us through debt retirement?

DR. KEITH: Yes.

QUESTION: On the other hand, the Federal Reserve Board can influence the bank lending and thereby increase and decrease our buying power?

DR. KEITH: Yes. I agree. It can reduce your buying power. But the money which the Government takes from you, unless it is used in

this particular way I mentioned, comes back into somebody else's hands, and these persons spend it in purchasing commodities, paying wages and salaries, and so forth. So the money doesn't disappear unless they use it to retire this bank-held debt.

QUESTION: The experience of this century would indicate that inflation goes hand in glove with an expanding economy. The question is, Must we look forward to inflation if we expect future expansion of our economy? Or is there some method by which we might ultimately reach this happy alternative or happy position of being able to control money values as the economy expands?

DR. KEITH: This is a pretty big question and it is not an easy one to answer.

There are some economists--Professor Schlichter of Harvard is one example--who take the position that a slight rise in the price level will make it easier to maintain full employment and make it easier to maintain a steady rate of growth.

I am not sure that growth necessarily means inflation. Conceivably we could keep the money supply small enough so that prices were prevented from rising even though we had a growing economy. But this might not be easy to do.

In a sense we may have to choose between two not entirely consistent objectives: the rate of growth which we want to attain and the stability of our money unit. If we have to face up to this issue, I don't know what our decision will be. How long will we insist on absolute price stability if it appears that this is incompatible with full employment? I don't know.

QUESTION: I was interested in your remarks about gold and the possibility of returning to the gold standard. I think it was somewhere around 1932 that the price of gold was fixed at around 35 dollars an ounce. The result of this has been that gold is about the only commodity we have that has not risen in price. The effect of that has been to force many gold mines throughout the world out of business because of the rise in the cost of labor and materials, and therefore the production at the fixed price has had to go down. Another effect has been that the world supply of gold is short and many countries have a very small percentage of gold reserves to support their monetary systems. I realize that this is

a rather tough question, but I would like to know what the opinion of you and your associates is as to the possibility of the price of gold being increased, and, if so, when this might happen.

DR. KEITH: You wouldn't be thinking of buying some gold mining shares, would you?

QUESTION: Or if you don't want to hazard that guess, what circumstances might be necessary to bring about a rise in the price of gold?

DR. KEITH: This is a very interesting question. If you peruse the financial journals, you will find from time to time articles discussing this very point--what is the likelihood of a rise in the price of gold and what effect would it have on gold mining shares?

I don't need to point out that the proponents of the higher price of gold argue, as you,have, and point out, as you have, that gold is possibly the only commodity the price of which has not risen since 1940. On the other hand, the United States Government, as the party that would be expected to pay the higher price, is not at this time in favor of a price increase; and we can, of course, point out that the price of gold rose during the thirties when prices generally were falling.

It is true that the world's supply of gold is unevenly distributed. We have a large part of it, in part because other countries wanted dollars more than they wanted gold. It was more important for them, they felt, to get the things which dollars will buy--machinery, foodstuffs, and so forth--than it was to stock up with gold, as we have in Fort Knox.

I don't know what the likelihood is of the gold price going up. I think this will be a political decision, and a political decision is not the sort of thing which an economist will make any predictions about. The point has been made that the prime function of gold today is to serve as a reserve, and to serve as a means of payment in international transactions.

Now, if gold is needed for the second of these purposes, then you might say that we should increase the stock of gold as the volume of international transactions expands. Then if the ratio between the reserve stocks of gold and the volume of international transactions has fallen, as it has, and if the only way of increasing that ratio would be to raise the price of gold, then a case might be made for raising the price of gold.

But this assumes that gold is indispensable or at least quite important as a means of settling international accounts. What you have to consider is the fact that most countries have given up using gold as pocketbook money, and a lot of countries have even given up the use of gold as reserve money. The question is whether or not gold is really necessary to settle international balances.

Some people who claim that we really don't need gold any more contend that gold is over-priced. They believe that if you were to cease to use gold as reserve money, the market price would drop very sharply, because the industrial demand alone would simply not be sufficient to keep it up. In other words, the price of gold is 35 dollars an ounce because the United States Government will pay 35 dollars an ounce for it. But if we stopped doing that, and particularly if we were to decide that we didn't really need the gold we have stored at Fort Knox, there is little doubt that gold prices would drop.

I am not saying that that is going to happen either. I suspect that we will continue to pay 35 dollars an ounce at least until the pressures become considerably greater than they are now for a price increase. There is still a lot of gold being produced, even though the profits of the mining companies are not as great as they were.

QUESTION: Doesn't the trend by industry to finance its own ventures without recourse to the banks have an impact on these monetary controls?

DR. KEITH: Yes, it does. At the end of the war, bank investments in Government securities greatly exceeded their business loans. At the present time the proportion of loans in the portfolios of the banks is higher, because the demand for loans has been so great. But business firms are still less dependent on bank loans than they were in the early twenties. That means that the banking system is much less sensitive to changes in business conditions than it used to be, and that business is less subject to banking pressures.

QUESTION: Dr. Keith, are we to infer from your previous answer that an international gold standard is not absolutely essential to promote or make payments in international trade; that is, that we could do away with the exchange of gold in connection with international trade?

DR. KEITH: Well, I suppose we could, if you wanted to. In other words, we could get along without gold as a means of international payment just as we get along without gold as a means of making domestic payments. If all nations were willing to use as international money the promises to pay of some super bank, say the International Monetary Fund, you could get along without gold. You would have to use other commodities, or allow debts to be accumulated.

QUESTION: You mean it might be feasible because the International Bank operates on the basis of a fund toward which all the member countries have contributed in coin of the realm themselves, and therefore you do establish a sort of international unit?

DR. KEITH: That's right. For the countries that are members of the Fund, it would be less expensive to use these balances than it would be to use gold. The gold you have to store, protect, and insure. There is a lot of expense involved. That is why a lot of countries adopted the so-called gold exchange standard after World War I--because it was less expensive to hold foreign currencies, such as pounds, than it was to hold the gold. The element of risk was, of course, as some people found in the case of the pound, that foreign currencies can depreciate. But that is a risk that you have to take.

QUESTION: I am interested in the size of the national debt--its effect on our present economy and its projected effect on our future economy. Would you like to discuss that?

DR. KEITH: I am sure that one of your lecturers is going to take up this subject at some later date here. But I will say that I don't think the size of the national debt is a matter of great importance, although I wouldn't deprecate its importance entirely. It depends on how you think about the burden of the debt.

The real burden of the debt is, of course, the cost of servicing it and the taxes which have to be raised to do this. If you have a large debt, this in a sense mortgages a substantial amount of your tax revenues and therefore leaves you less to do other things with.

Of course, if we should get into another world conflict and we had to incur deficits again, the fact that we would start out with a huge debt might make the problem of financing the next war that much more difficult for the Treasury. In that sense too large a debt is perhaps a disadvantage.

QUESTION: Speaking of the national debt, would you classify that in any of these categories of money that you have mentioned?

DR. KEITH: No. I don't think the national debt is money at all, by our definition, because it is not a generally acceptable medium of exchange. A Government bond perhaps might fall into the category of what we call "near money." In other words, if you were to take all your assets and arrange them according to their liquidity, or the ease and certainty with which they could be used for purchasing things, money would be at the top of the list. That's the absolutely liquid asset.

Now, with a Government bond, such as an E bond, you can go into a bank and get it converted into money. But this takes time and some trouble if you are not near a bank. The ordinary marketable bonds suffer from the added disadvantage that the price may change. You may find that you have bought bonds and when you come to sell them, the market has dropped, as it has from time to time. So Government bonds are not assets which are generally acceptable and therefore they do not fall within our concept of money.

But this point should be made: that if you have a large amount of debt, which is either short-term, or which is like the E bond, redeemable at the wish of the holder, then you have a large amount of what you might regard as potential money. Should the public lose confidence in the Government, or in the dollar, then it might want to convert its debt into cash. The Government couldn't refuse to convert it. Then when the public spent that cash, the increase in total spending would be that much greater. This would present a severe problem for the monetary authorities, because they couldn't control this sort of an increase in the money supply. That's a risk we run with our public debt. It's not money now, but a lot of it could be converted into money in a relatively short period of time.

QUESTION: I would like to know what percentage of the Federal Reserve control the Government has and what percentage the local banks have. In other words, how much influence does the Government have on either the policy or the control of the Federal Reserve?

DR. KEITH: I am sure that is going to be answered in considerable detail tomorrow, when you have a representative of the Federal Reserve here. I will say just this: that the members of the Board of Governors of the Federal Reserve System are all appointed by the President. The Board of Governors in turn appoints three of the nine directors of each

Federal Reserve bank. The local banks elect the other six. This isn't the whole story but I am sure this will be developed tomorrow when you have a talk on the Federal Reserve System.

DR. KRESS: Dr. Keith, on behalf of all of us, we thank you for a very interesting lecture and a very fine presentation.

DR. KEITH: Thank you. It was very enjoyable.

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