

Speech delivered before
Evening Seminar Session,
School of Banking, University of Wisconsin
Madison, Wisconsin
September 1, 1948

BANK RESERVES AND MONETARY RESTRAINT

The present inflationary situation is so patent that no analysis or description of it is necessary; certainly not here. Consumer prices are up 70 per cent over what they were in 1935 to 1939, and they have gone up 10 per cent within the past year. On some items, of course, the increase is much larger, for the figures I have mentioned are averages.

We are taught to think of an inflationary situation as one in which there is a wide disparity between the available purchasing power of the public and the available supply of goods and services. At the present time there is little, if any, productive capacity that is not at work, and we can not expect any great increase in production. There are, to be sure, some points at which inflationary pressures are less strong than they have been, but it is too early to say whether production is catching up with demand. We can only note the fact that crop prospects are extremely good and that a shortage in farm production should therefore not be a factor. The supply of certain nondurable goods, such as shoes, appears to be catching up with demand. The same is true of certain durable goods, such as radios. Despite these few signs, however, the present outlook on the production side is still inflationary.

Turning to the other side of the picture we find that total commercial bank credit, other than credit extended to the United States Government through purchases of its securities, has increased nearly \$20 billion since the middle of 1945. In this same three-year period privately owned deposits have increased about \$27 billion. In the first half of the present year bank loans have expanded \$1.7 billion. This recent growth is the net result of several different trends. The first of these is that real estate loans and consumer loans have continued a substantial growth, whereas business loans have declined slightly, loan demand being seasonally slack during the first half of the year. Most of the mortgage loan expansion has occurred at country banks, where all types of loans have shown an increase. City banks have increased their real estate and consumer loans substantially, but this increase has been partly offset by the decline in business loans. Total loans at city banks, however, increased nearly a half billion dollars. Since the end of June the current loan expansion has been accelerated, and at weekly reporting banks, loans to businesses, and to real estate buyers have been increasing at the rate of about \$100 million a week. This postwar credit and deposit expansion is in addition to the large expansion of purchasing power during the war. It has raised the volume of deposits and currency in the hands of the public to over \$165 billion, more than 2-1/2 times as great as at the end of 1939.

Any attempt through the central banking mechanism to curb the expansion of bank credit than I have been describing brings up the question of bank reserves immediately. Originally, as you know, bank reserves were thought to be of importance because they were supposed to

insure the ability of banks to redeem their circulating notes. When deposit liabilities came to take the place of note liabilities, bank reserves were conceived of as a means of assuring the ability of banks to pay their depositors. Now, however, our concept of the role of bank reserves has developed into a very different one. They no longer are thought of merely as assets which banks maintain in readiness for instant use. Being the assets upon which a bank's freedom of action depends, they have come to be the direct object of regulatory effort. The Federal Reserve System can, under proper conditions, increase or decrease the volume of bank reserves. Hence, reserves now have their principal significance as an instrument for influencing the supply of money.

At the present time a given addition to reserves makes possible about a six-fold increase in bank deposits. A contraction in reserves of a given amount tends to produce a six-fold contraction of deposits.

The basic principle underlying this possible expansion and contraction is that bank deposits have their principal source in bank credit. If a bank were without any competitors to which it might lose deposits, it could expand its deposits indefinitely by making loans to its customers and placing the proceeds of the loans to their credit in their checking account. The only limitation would be the amount of reserves it had to maintain in proportion to its deposits as a result either of its own rules or of legal reserve requirements. At the present time member bank reserve requirements are on demand deposits 24 per cent at central reserve city banks, 20 per cent at reserve city banks, and 14 per cent at country banks and on time deposits 6 per cent at all classes of banks. These requirements average about 15 per cent of deposits. Fifteen per cent reserves permit deposits to expand about six and two-third times. Thus, if there were but one large commercial bank serving the entire country and holding all the deposits of the people, its deposits could expand to \$666 for each additional \$100 of reserves. This expansion could be effected by lending and investing, deposits being set up on the bank's books in payment for the loan and investment paper acquired. Being the only bank it would not need to fear loss of deposits and inability to honor the checks of its depositors. It would, therefore, not be subject to the inhibition that banks are under in actual competitive situations. Persons who receive checks on the bank would deposit them in the bank and the effect would be a transfer of deposit ownership on the bank's books without any actual transfer of deposits from the bank.

But we have approximately 14,000 commercial banks. Therefore, in the actual competitive situation that exists where there are many banks in existence, as in the United States, no bank dares to lend six and a fraction times the amount of newly acquired reserves. It dare not do so because bank customers do not borrow with the expectation of leaving the borrowed funds on deposit; they borrow in order to expend, and the funds they borrow are more apt to be checked out to another bank than to remain with the bank which lent them. Actually, when a bank receives a deposit of \$100, it must put aside \$15 as a reserve against the deposit and it can lend \$85. This \$85 will probably be transferred in a monetary payment to a depositor of a second bank. The second bank receiving the \$85 deposit must increase its reserves by 15 per cent of the deposit; that is \$12.75. It then has \$72.25 left which it can lend

and which will probably find its way through a monetary payment to a third bank.

This process continues through a succession of banks, assuming there is an aggressive demand for bank credit, until taking all the banks together a result is reached which is the same as would be reached if there were only one bank. That is, all banks taken together constitute a system analogous to a single bank performing all the banking business. Deposits may shift from bank to bank but, as a general thing, they do not leave the banking system. So, the process of lending and moving funds from bank to bank with resulting increases in deposits and in required reserves can continue through a succession of banks until the total of the new deposits, counting the original deposit of \$100 at the first bank and the successive deposits created through the successive loans, will amount to \$666. The reserves set aside by the banks involved will amount to \$100, which is the 15 per cent required against the aggregate deposit of \$666.

Since the amount of deposits is keyed to the amount of bank reserves, control of the volume of bank reserves and of the percentages of reserves that must be held against deposits gives the Federal Reserve System power to restrain or encourage the expansion of bank deposits and their adjustment to the needs of the economy. These controls over bank reserves have been exercised traditionally in three different ways:

The first and basic means of control has been through changes in the rediscount rate, for these rates by being raised or lowered, respectively, discourage or encourage banks to borrow from the Reserve System in order to obtain additional reserves.

The second means of control has been through open market operations, the effects of which are to decrease or increase bank reserves. This instrument was partly used for making discount rate policy effective.

The third device is that of varying reserve requirements. The generally accepted thought has been that this was a device to be used only occasionally to effect broad general changes in the credit situation and to make the other instruments of control more effective.

The power to change reserve requirements was first granted to the Federal Reserve Board in 1933. Through a series of changes maximum requirements gradually came into effect in 1937 and in 1938 they were slightly reduced. Subsequently they have been raised. Before the enactment of recent legislation allowing higher requirements to be imposed, requirements under the earlier authorization were at a maximum except for central reserve city banks, where requirements were 24 per cent against net demand deposits as compared with the possible maximum of 26 per cent.

In what I have just said the traditional instruments of credit control have been described as they might operate under ideal conditions. As you know, ideal conditions never exist. Actually, the Board's freedom of action is constantly subject to conditions and limitations over which it has no control. Thus at the present time the Federal Reserve

System has the responsibility for maintaining orderly and stable conditions in the Government security market. With this responsibility it is not possible to use aggressively the open market and rediscount power the Federal Reserve System possesses to contract the volume of bank reserves.

If, for example, the Federal Reserve withdrew support from the Government securities market and undertook to sell Government securities in the market to absorb bank reserves, long-term yields on Government securities would rise until investors would find Treasury securities attractive as compared with competing demands for their funds. This balance would be reached at some yield level as the larger return on Government securities attracted funds out of hoards or from spending and as rates to private borrowers rose to levels which would cause some of them to abandon their less urgent expenditures. If (as pointed out recently by Mr. Allan Sproul, President of the New York Federal Reserve Bank and Vice Chairman of the Open Market Committee, in a letter to a President of an insurance company) the level of long-term rates at which this would occur should be 4 per cent, then the Treasury 2-1/2 per cent bonds of 1967-72 would need to decline to about 77. The shock of such a move on business and markets would probably be severe. We would get results, but in the way of bringing about a decline in production, a decline in employment, and a reduction in the income of a large segment of the consuming public. As it is, therefore, open market operations under the support program must operate within the framework of the support structure. The central bank authorities have, in fact, little initiative; control of the situation being largely in the hands of bank and nonbank investors.

The rediscount rate is also of very limited importance at the present, because banks generally adjust their reserve positions by sales in the security market and not by borrowing from the Reserve Banks. An increase in the rediscount rate may effectively accompany a rise in short-term rates but an increase in the rate by itself would be only psychological in its effect.

This leaves only the third device still available for use, especially since Congress has recently given the Board limited additional authority over reserve requirements. However, if banks are required to hold reserves in excess of what they now are required to hold they might meet the situation by the sale of Government securities. If the Federal Reserve Banks purchase these securities it would simply be providing the additional reserves that it had just required; and thereby it might undo with one hand what it did with the other.

These recent additions to the Board's authority over reserve requirements do not by any means settle this country's central banking problem. In its immediate aspects, this problem is one of helping control the current inflation. In its larger aspects it is the very old one of finding more efficient means of credit control than have yet been devised. The instruments we possess result from a long and rather haphazard history, and the Board has for many years been seeking to develop ways of improving and strengthening them particularly with respect to reserve requirements. I wish now to describe to you some of the proposals that have been given consideration in recent years.

Before going into these proposals, however, let me remind you that we have followed since the war a program of action which has generated a moderate amount of credit restraint. The rate on short-term Government securities has been permitted to rise from the wartime levels of $3/8$ per cent on 91 day bills and $7/8$ per cent for one year certificates to about 1.1 per cent and $1-1/4$ per cent, respectively. The rediscount rate has been raised from $1/2$ per cent to $1-1/2$ per cent. Surplus Treasury funds, particularly over the past year, have been used to retire securities held by the Federal Reserve Banks, a process that drains away bank reserves.

I wish first to refer to the reserves to which the Reserve Banks themselves are subject, for the matter has been brought up frequently of late.

As you know, the Reserve Banks are required by law to hold reserves of gold certificates equal to 25 per cent of their note and deposit liabilities. The proposal has recently been made by the House Banking and Currency Committee to increase this requirement to 35 per cent against the deposit liabilities of the Federal Reserve Banks (that is, the reserve balances due their member banks) and 40 per cent against their note liabilities. The proposal, in other words, would restore the requirements that were in effect before the middle of 1945 when the present requirements were adopted.

Restoration of the previous ratio of required gold certificate reserves held by Federal Reserve Banks of 40 per cent against Federal Reserve notes and 35 per cent against Federal Reserve bank deposits would make no contribution whatever to the fight against inflation. It would not sterilize new acquisitions of gold nor would it give the Federal Reserve System any additional powers to curb inflationary expansion of bank credit.

The present reserve requirements of the Federal Reserve banks stand at a uniform level of 25 per cent. Congress established them at this level in consequence of the wartime expansion of currency and Reserve bank credit. The previous requirements of 40 per cent against notes and 35 per cent against deposits, incorporated in the Federal Reserve Act of 1913, were largely arbitrary.

To restore the prewar levels now would only entail needless operating difficulties for some of the Federal Reserve banks. The combined banks at present hold gold certificates amounting to 50.6 per cent of their total note and deposit liabilities, or approximately \$6,000,000,000 in excess of the proposed higher requirements. Thus, they would not prohibit Reserve banks from providing member banks with additional funds on which to base a considerable further expansion of bank credit.

Although the Reserve System as a whole has gold certificate reserves in excess of the proposed higher requirement, there is considerable variation among individual Federal Reserve banks. As a practical operating matter, these banks cannot permit the ratios to go down to the vanishing point and hence require a working margin of at least three percentage points.

If the higher requirement were restored, some Federal Reserve banks would have a substantial deficiency, others would be below or close to the necessary operating margin, while still others would have a large excess.

Reserve banks with a deficiency would be obliged to sell some of their Government securities to or to borrow from Reserve banks which had an excess. The reserve position of the individual Federal Reserve banks is constantly changing with seasonal and other movements of funds in the economy. Therefore, the proposal would entail operating difficulties and constant inconvenience without accomplishing any useful purpose.

Expansion or contraction of Reserve Bank credit should be determined by the needs of the economy and not by the amount of gold certificates which Reserve banks happen to have, which in turn is contingent upon international movements of gold.

The Reserve banks do not control the amount of currency which the public wishes to hold. It is the depositors of the banks and the recipients of checks who determine the volume of outstanding currency. They create the demand and member banks come to their respective Federal Reserve banks to obtain such amounts of currency as their depositors or others presenting checks may desire to have.

Next let me discuss with you reserves as they relate to member banks. First among these plans is the optional or special reserve proposal, which was recommended to Congress in the Board's Annual Report for 1945 and again was recommended to Congress in November 1947. This proposal is that for the period of this inflation emergency the Federal Reserve Board be authorized to impose on all commercial banks, member and nonmember, a special reserve requirement up to 25 per cent of aggregate demand deposits and 10 per cent of time deposits.

This is called an optional requirement because the reserves required could be held at the option of the individual bank either in specified cash assets, that is vault cash or interbank deposits, or in certain marketable short-term Government securities.

There are several important advantages in the plan. First, it would immobilize a portion of each bank's holdings of short-term Government securities. Instead of selling them, banks would have to sell their higher yielding long-term issues if they wished to increase their reserves. Second, the plan would bring about a decrease in the ratio of multiple credit expansion; for the higher the requirement the less the ratio of expansion can be. Third, the plan would not reduce the amount of earning assets from longs to shorts held by banks. Fourth, the rise in interest rates consequent upon recourse to the plan would be limited largely to the field of private credit. The effect would not be to increase the cost of carrying the public debt.

The plan to increase primary reserve requirements also was proposed in the Board's Annual Report for 1945 and again in April 1948, the recommendation being that the maximum requirements authorized by law be increased by 10 percentage points for demand deposits and 4 percentage

points for time deposits. The recent increase in authority granted by Congress in August was in terms of this plan but the amount of authority given was smaller and its application was limited, as you know, to member banks and does not include nonmembers.

The advantage of increased primary reserve requirements is that it is in line with traditional practice. Furthermore, the increases can be imposed as a means of mopping up additional reserves resulting from the flow of gold into the country, which has amounted to about three billion dollars last year and one billion thus far this year, from the return of currency from circulation which over the last twelve months has amounted to about \$300 million, or from the purchase of Government securities by the Federal Reserve System in supporting the Government securities market. The power can also be used to force banks to sell Government securities to the System and thereby reduce a source of secondary reserves potentially convertible into primary reserves.

A disadvantage of this plan is that increased primary reserve requirements tend to diminish the earning assets of banks.

Next is the Uniform Reserve Plan, which is still in the study stage and is subject to change, and which is based on the consideration that changes in reserve requirements may become our major instrument of credit control, especially in view of the limitations imposed upon open market operations and discount policy by the need of supporting the Government security market. If this is so, changes should be made in the present system of reserve requirements so as to make the instrument of changing reserve requirements more flexible and to eliminate inequities that would become burdensome as the requirements were increased.

There are six features of the Uniform Reserve Plan considered from this point of view. First, central reserve city and reserve city designations would be abandoned. Second, the following initial reserve requirements would be prescribed against classes of deposits:

- a. 30 per cent against interbank deposits less cash items in process of collection.
- b. 20 per cent against other demand deposits, less cash items in process of collection.
- c. 6 per cent against time deposits.

Third, banks would be permitted to deduct from their required reserves a percentage of balances due from other banks equal to the percentage of reserves required to be held by them against interbank deposits.

Fourth, banks would be permitted to count vault cash as a part of required reserves. Fifth, during a transition period the Federal Reserve Board would be empowered to waive, by regulation, penalties for deficiencies in reserves resulting from increased requirements on the new basis. Sixth, the Federal Reserve System would be empowered to increase or decrease basic reserve requirements by some suitable percentage (say a maximum of 50) in either direction as to any or all classes of deposits.

The Uniform Reserve Plan has several advantages. To begin with, it would eliminate fundamental inequities in the present system which involve higher reserves for some banks than for others similarly situated simply because of the arbitrary classification of the communities in which the respective banks are located. Another advantage is that long standing problems incident to reserve city designations would be ended. Banks whose business requires them to hold large amounts of vault cash would no longer be under the disadvantage of having to maintain the same required reserves at the Reserve Banks as other banks which have to carry little vault cash. Furthermore, under the Uniform Reserve Plan, changes in the volume of interbank deposits would no longer affect the volume of other deposits that could be supported by a given aggregate volume of reserves. Finally, increases could be made in reserve requirements, with the same advantages and disadvantages as attend a straight increase in reserve requirements. The Uniform Plan is now getting further serious study from the System.

There is another plan for reserve control which I should like to present to you for your study at this time. I am not recommending it but am only submitting it. It has been named the Optional Ceiling Reserve plan. The effect of this plan would be to restore monetary control to the monetary authorities and at the same time permit continued stabilization of the Government security market. The plan would make this possible, moreover, without causing a single bank to undergo any transition adjustments. The plan would not reduce bank earnings and it would not prevent an individual bank from making as many loans as its resources might permit.

The features of the Optional Ceiling Reserve would be as follows:

1. At the Federal Reserve Bank two deposit accounts would be set up for each member bank. One of these would be the member bank's Reserve Account and the other its Clearing Account.
2. Each member bank would start with an amount in a Reserve Account equal to its reserve requirements at the time. Any excess reserve (or deficiency) that it might have at the time would be posted to its Clearing Account.
3. Only those funds in a bank's Reserve Account could be used to satisfy basic reserve requirements.
4. All ordinary transfers of funds, including the clearing of checks by the banks, would be effected with the funds in Clearing Accounts. Thus, when a bank received from one of its customers a check drawn on another bank, it might send the check to its Reserve Bank for deposit to its Clearing Account. The paying bank would in turn have its Clearing Account reduced by the amount of the check. When a member bank found itself in possession of more currency than it needed and sent it for deposit to its Federal Reserve Bank, credit would be given in its Clearing Account.

5. A bank might buy or sell Reserve Account deposits in the market just as Federal funds are now traded, and such funds would be transferred from the Reserve Account of the selling bank to that of the buying bank. As at present a bank might also borrow Reserve Account deposits from its Reserve Bank at the discount rate set by the Reserve Bank. The Reserve System might also buy or sell Reserve Account funds in the market.
6. Government securities bought in the market by the System and securities sold by the System would be paid for with funds drawn from the Clearing Account deposit.
7. The computation of reserve positions under this plan would be simple. For reserve city banks, for example, Reserve Account requirements would equal 20 per cent of net demand deposits less Clearing Account balances, and plus 6 per cent of time deposits. Some of these Clearing Account balances might be invested at the option of a bank in a security issued by the Reserve System or perhaps by the Treasury.

The Optional Ceiling Reserve plan that I have just described would seem to make bank reserves independent of the influence of the erratic haphazard factors that now tend to increase or decrease them. These are principally the flow of gold into and out of the country, the movement of currency in and out of circulation, fluctuations in Treasury working balances, and fluctuations in foreign deposits at the Reserve Banks. The volume of existing bank Reserve Account balances would be subject to increase or decrease by action of the Federal Reserve System in buying or selling Reserve Account balances in the open market. These transactions would be carried out in accordance with the needs of the economy.

It would be neither necessary nor desirable for the Reserve System to have authority to vary reserve requirements under this plan. Individual member banks would adjust their reserve position as they gain deposits either by buying Reserve Account balances in the market or by exercising the option of holding larger Clearing Account balances or of investing in Reserve Securities. When a bank lost deposits, its Clearing Account balances would be reduced and if it wished to replenish them, it could do so by cashing Reserve Securities. It would also have some excess Reserve Account balances to sell if it chose to do so.

Let me give you an example of how this plan would work. Suppose the X Bank of Chicago has an increase in its demand deposits of \$100,000 as a result of a favorable balance in its check clearings with other banks. How would the bank adjust its reserve position? Under the Optional Ceiling Reserve Plan the X Bank could send the balance to its Reserve Bank for credit to its Clearing Account. The X Bank's Clearing Account would be increased by \$100,000 which would match the increase in its deposits, and its reserve needs would be fully met. Or, if it chose,

the X Bank could invest the \$100,000 in interest bearing Reserve Bonds. Again its reserve needs would be fully met. Or, third, the X Bank might purchase, or borrow from another bank or from the Reserve Bank, a Reserve Account deposit sufficient to meet the rise in its Reserve Account requirements implied by a \$100,000 increase in its demand deposits. With a 20 per cent reserve requirement, this would mean that the X Bank would have to acquire \$20,000 of Reserve Account deposits. Having done this, the X Bank would then have the remainder of the newly acquired funds available for lending or investment.

In adjusting to a \$100,000 demand deposit loss--a result of an unfavorable clearing balance, or a withdrawal of currency by depositors say for Christmas or Easter shopping--the X Bank could again follow alternative procedures. It could permit its Clearing Account balance or its holdings of Reserve Bonds to decline by \$100,000. Since the decline in these items would match the decline in deposits, the reserve position of the X Bank would be unchanged and all reserve needs would be satisfied. Alternatively, the X Bank might decide to keep the total of its Clearing Account balances and holdings of Reserve Bonds intact, and provide funds to meet the deposit loss by liquidating other assets, such as selling Government securities to the Reserve Banks. In this case, the volume of Reserve Account deposits that the bank would need to hold would automatically decline. With the 20 per cent requirement, a \$100,000 deposit loss would release \$20,000 of Reserve Account deposits which could be sold in the open market established for Reserve Account funds. The remainder could be raised through liquidation of other assets.

What about a bank's lending operations under the Plan? When a customer wishes to borrow money the X Bank might be able to accommodate him out of funds received from repayment of other loans. If not, the bank might need to liquidate other assets to make the loan, say short-term Government securities. Under the plan the sale of securities, which would increase the bank's Clearing Account balances, would provide the reserve offset needed to set up a deposit to the borrower in making the loan. These clearing balances would be drawn upon as the loan deposit was checked on by the borrower. Except for a difference in timing, the net result corresponds closely to the way that an individual bank meets its loan demand now--that is, by selling Government securities to meet deposit losses that may result from lending.

The crux of the Optional Ceiling Reserve Plan is that, from the standpoint of an individual bank, lending activities and operations might go on in about the same way as now. But taken as a whole, the banking system would not have the multiple monetary expansion it has today. I discussed this multiple expansion early in my talk. As a system, banks could not base a multiple deposit and credit expansion on a given volume of new funds.

As I said before, I am not proposing the Optional Ceiling Reserve Plan as my solution to the problem of monetary stability. I have told you about the plan so as to set you thinking about it and more generally to thinking about the broad problem of what we can do to establish our money and banking systems on a sounder basis following the most costly war in history.