Liberty Loan Publicity Committee
Temporary Headquarters, 120 Broadway, New York.

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July 16, 1917.

GOVERNMENT LOANS

By

Benjamin Strong, Jr.,

Governor, Federal Reserve Bank of New York,

and Chairman, Liberty Loan Committee.

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While this country with its vast material and banking resources has made a notable record in the facility with which large loan operations have been conducted - the largest until recently being the placing of the Anglo French bonds - it has nevertheless been apparent during the past two months that people have not fully grasped the significance of a loan of, say, $2,000,000,000, the entire proceeds of which must be paid over in a very short period, as we say, "in cash."

Government loans of this magnitude, necessitated by the war, require a thorough examination and understanding of the principles of credit, as otherwise unskillful management of operations of that size are certain to put banking machinery out of order and disordered banking machinery means disturbance of business.

No loan of $2,000,000,000. can be paid for as we commonly express it "in cash." The amount is too large and payment must be made by complicated bookkeeping operations which can be roughly described as "transfers of credit." To do this successfully, credit must be shifted from the account of one bank depositor to the account of another bank depositor, from one bank to another bank, from one part of the country to another part of the country, and these shiftings of credit involve a temporary shifting of a certain proportion of bank cash or reserve money and therein lies the danger.

If every purchaser of Government bonds could make payment at his own bank and this amount be transferred by that bank to the credit of the Government, then the credit could be disbursed by the Government in the community where the bank is located and no disturbance of credit whatever would arise because no bank reserves would need to be shifted. In a great loan of $2,000,000,000. subscribed and paid for in varying amounts in all parts of the country, it is inevitable that preliminary withdrawals of bank balances from one part of the country to another will be made in anticipation of payment and again after the funds are placed at the credit of the Government throughout the country; they must be gradually withdrawn to those points where the Government has various bills to pay. The machinery of the reserve banks proved to be adequate to meet the necessity of shifting credits from one part of the country to another. Possibly a correct view of their function would be to say that they were the chief bookkeepers of the transactions and the books being kept in twelve separate places at each of the Reserve banks, the only shifting of reserve money occasioned by the movement of credit is that which takes place between the twelve reserve banks through the normal machinery created for that very purpose.

Look at the problem from the standpoint of the bond buyer. There are in this country, (exclusive of a negligible number of those who own securities of foreign origin which could be resold in foreign countries), only four classes of people who can subscribe for Government bonds.

The first class of buyers comprises those who have hoarded actual cash or currency in their houses or safe deposit vaults, who are induced to buy Government bonds and who produce that cash for the purpose. Purchases of Government bonds by such people (of whom there are few in the United States), have the effect of strengthening the banking position because it brings reserve money, that is, gold, out of hiding and puts it in bank reserves where it serves as the basis of credit. The change occasioned in the nation's general bank account as a result is not simply to add a given amount to the bank deposits, but to also add an equal amount, dollar for dollar, of reserve cash. France, prior to the war held a vast store of gold tucked away in peasant's hiding places and the production of that gold in response to the Government's call has immensely strengthened its banking position.

The second class is composed of the capitalists and corporations with balances in the bank in excess of needs. When bonds are purchased by a member of this class, the owner of the bank balance, Mr. X. Y. Z., sells or transfers that balance to the Government in exchange for a government bond. If the Government leaves the deposit with the bank which holds Mr. X. Y. Z.'s. account, it is simply a transfer of the balance of Mr. X. Y. Z. to Mr. U. S. A. No cash reserves shift, no loans would need to be called and no change would take place in the balance sheet of the bank, either of assets or liabilities.

The third class of bond buyers is that which has bank accounts but has no surplus balances in bank to spare for investment in Government bonds. Having credit at the bank, however, they are induced to buy government bonds and borrow from the bank temporarily in order to pay for them. This is the least desirable buyer of Government bonds, although a necessary one at the commencement of the war when the expected savings of the future must be advanced to the Government. Such a bond buyer pays for his bond out of a bank deposit which is created by making a loan. The deposit so made is transferred to the credit of the United States of America and the bonds are turned over to the bank by the buyer to secure the bank for its loan. By that operation, bank deposits and bank loans are both expanded and the percentage of reserve money held by the bank is correspondingly reduced. Loans of that character cannot be avoided because earnings that are converted into savings become capital and are generally invested very promptly in securities, or property, or improvements to property, so becoming unavailable for Government loans. In a general banking sense, it does the country no good to have its citizens sell one kind of investment in order to make another kind of investment. It produces no new money or credit. All buyers of the class who have engaged themselves to pay loans to their banks, are forced therefore to economize in order to pay off the loans and in that way savings out of future earnings are made available to the Government in advance of the earnings being made.

The fourth class of bond buyers and in some respects the most important in time of war, is the great body of wage earners and salaried people who frequently have no bank account and spend about all that they earn. There are many millions of such in this country whose material welfare will be improved and whose attitude toward their government will be benefitted if they can be induced to buy bonds. But how can this be brought about? Only by showing them how to cultivate the habit of saving and this kind of saving should be developed in advance of investment so as to avoid the necessity for borrowing also.

Take one industrial organization as an example, employing, say, 20,000 laborers: If these men earn an average of $1,200. each per annum and can each afford to save $100. per annum, their employer could enter into agreements with them by which, say $8. would be deducted from the payroll of each man every month and deposited in bank for future investment. $50. apiece in six months is $1,000,000. During the process of setting aside and earmarking these earnings or savings, they could be temporarily invested in short obligations of the Government, convertible at a later date into Government long time bonds. By this process, no permanent bank expansion arises. As rapidly as savings accumulate, they are turned over to the credit of the Government which issues its short notes therefor and these short notes later are converted into long bonds. The bank balance which was originally the bank balance of the employer out of which wages were paid, has through the savings process been transferred to the credit of the Government without disturbance to bank credit.

Assuming that our Government finds it necessary, say every six months, to borrow large sums for war purposes, how readily might this be accomplished if all classes were induced to save in anticipation of such investment in the bonds of their Government? The rich man appropriates so much of his income, the rich corporation so much of its profits, the poor man, so much of his salary or wages. During the period between bond issues, these savings are turned over to the Government in installments in exchange for short notes. When the bond issue comes along, the short notes are converted into long bonds. The whole operation has been conducted without the use of cash or reserve money but by simply bookkeeping entries on the books of banks, which result in a gradual but constant transfer of bank deposits representing the nation's savings to the credit of the Government.

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This country is confronted by a vast problem of finance, but fortunately, with vast resources in gold reserves and credit machinery by which these operations may be handled. In furnishing the Government with the credits required, the primary necessity is for people to save and save in advance of the Government's requirements in order that bond buyers may not be required to make loans to be repaid out of future savings.

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But the question will be asked, "Will not this enormous transfer of bank credit from individuals and corporations to the credit of the Government itself cause expansion?" If will not do so for these credits are not created by bank borrowings but by savings. The Government is spending money as fast as it receives it. The very credit so set aside for Government use must be instantly paid out by the Government for supplies, wages of soldiers and sailors and for the civil establishments. As soon as the credit is inscribed on the books of the bank for the use of the Government, the Government checks against it and turns it back to the very individuals, corporations and wage earners who have produced it. A new credit is not created but existing credit moves faster around this circle from the wage earner and saver to the Government and back to the producer and manufacturer, and through them to the wage earner. The speed with which credit moves in these operations bears a direct relation to the "speeding up" in the production of our farms and forests and mines and our manufacturing establishments.

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THE PREVENTION OF CREDIT INFLATION THROUGH WAR LOANS BY SAVINGS IN ADVANCE OF THE LOANS.

By Benjamin Strong, Jr.

Governor, Federal Reserve Bank of New York; Chairman, Liberty Loan Committee.

WHILE this country, with its vast material and banking resources, has made a notable record in the facility with which large loan operations have been conducted—the largest until recently being the placing of the Anglo-French bonds—it has nevertheless been apparent during the past two months that people have not fully grasped the significance of a loan of, say, $2,000,000,000, the entire proceeds of which must be paid over in a very short period,—i. e., as we say, "in cash". Government loans of this magnitude, necessitated by the war, require a thorough examination and understanding of the principles of

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The fourth class of bond buyers—and in some respects the most important of all in time of war—is the great body of wage-earners and salaried people who frequently have no bank account and spend about all that they earn. There are many millions of such in this country whose material welfare will be improved and whose attitude toward their Government will be benefited if they can be induced to buy bonds. But how can this be brought about? Only by showing them how to cultivate the habit of saving—and this kind of saving should be developed in advance of investment, so as to avoid the necessity for borrowing also.

Take as an example, one industrial organization employing, say, 20,000 laborers: If these men earn an average of $1,200 each per annum and can each afford to save $100 per annum, their employer could enter into agreements with them by which, say, $8 would be deducted from the payroll of each man every month and deposited in bank for future investment. The aggregate of $50 apiece in six months is $1,000,000. During the process of setting aside and earmarking these earnings or savings, they could be temporarily invested in short obligations of the Government, convertible at a later date into Government long-time bonds. By this process no permanent bank expansion arises. As rapidly as savings accumulate, they are turned over to the credit of the Government, which issues its short notes therefor; and these short notes later are converted into long bonds. The bank balance which was originally the bank balance of the employer out of which wages were paid, has through the savings process been transferred to the credit of the Government without disturbance to bank credit.

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Manuscript of B. Strong

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FINANCING GOVERNMENT LOANS.

The first offering of our Government's bonds to provide it with funds for the prosecution of the war, produced $3,035,000,000 of subscriptions from over 4,000,000 subscribers, and the loan was a success beyond parallel in the history of government finance. The appearent ease with which the loan was taken and paid for must not, however, delude us into the belief that succeeding loans can be subscribed without equal or greater effort and certainly not without more thorough and extensive preparation than was possible last time.

It must be made clear to our people that loans of the magnitude now required by our Government cannot be paid for in cash, or, as we commonly express it, in "money" but they must be subscribed by transfers of bank credit to the Government in exchange for its bonds, which credit the Government must at once disburse, in order to avoid disordered money markets. Cash, which we commonly call "money" must not be confused with credit, which is also too often confused in casual conversation with "money." Cash is what we carry in our pockets in order to make hand to hand payments and is what banks carry in their vaults as reserve in order that their depositors who require cash for making pay roll and other cash payments may be able to get it when needed. Bank credit on the other hand is what is owing by banks of deposit to their depositors, and is not necessarily created by depositing cash in banks, but is, in fact, principally created by loans which banks make to their customers, and which are entered on the books of the bank as a deposit credit, owing to the borrowers, or to those to whom the borrowers have transferred the credit by drawing checks in their favor.

If subscribers for Government bonds paid for them in "cash", all of the cash held by the banks as reserves, would be transferred to the Government's vaults,when payment was made, the banks would be denuded of reserves and would be obliged to liquidate their loans, or they would be unable to meet the demands of their depositors for cash.

The payment to the Government therefore of such a vast sum as $2,000,000,000 must be made by transfers of bank balances to the Government's credit so that the Government in turn may check on these bank balances and pay the bills which it incurs for the support of a great army and navy.

But we must not overlook the fact that bank credit consists as a rule of two kinds of credit; one being the liquid or working capital employed by business men and corporations for business purposes, which they cannot spare without impairment of the efficiency of their businesses, and the other consists of idle capital and of the savings of people and corporations who receive salaries or earn profits, which they do not need to spend and some part of which they can spare and turn over to the Government in exchange for the Government's bonds. This process of transfer of credit to the Government cannot very well exceed in amount the total of idle capital and savings which is not required for business purposes, unless, of course, the effective conduct of the business of the country is to become impaired by too great a reduction of the working capital now employed in business affairs.

Without enlarging upon the imperative necessity for economy and the creation of savings in the form of bank balances, which may be transferred to the Government's use, it is well to see just what changes take place in banking affairs, when these loans are paid for, and this may be illustrated by a brief description of the English system, which has proved such a striking success during all of the three years of the war.

Practically all of the banks of England "clear" their checks (that is settle the differences between those which are presented for payment and those that they hold for collection) through the London Clearing House, which has only sixteen members, outside of the Bank of England. The membership consists of the principal great London joint stock banks, which have many branches throughout the Kingdom. They all carry reserve accounts with the Bank of England, and what they receive or pay as a result of each day's "clearings" is simply settled by a credit or debit in their accounts with the Bank. When a large payment is made to the British Government by subscribers to its loans, these subscribers draw checks on their banks and pay them in to the Bank of England. The payment of these checks by the sixteen clearing banks transfers to the Government an immense credit on the books of the Bank of England from the reserve balances carried with it by these sixteen banks. If one hundred million sterling is paid, it simply means that one hundred million sterling which had formerly stood on the books of the Bank of England to the credit of the joint stock banks was transferred when these checks were paid to the credit of the British Government on the books of the Bank of England. This transfer may at times so considerably impair the reserve balances of the sixteen banks with the Bank of England, that they find it necessary to discount bills with the bank in order to restore their reserve balances. At once that this great credit is transferred to the British Government, the Government draws checks to pay its debts, bills for supplies, maturing obligations and various items, the checks being payable to hundreds and thousands of people and institutions, who are creditors of the Government. These checks are at once deposited by those to whom they are payable with their banks, largely of course with the sixteen clearing banks, which in turn re-deposit them with the Bank of England, thereby restoring their reserve balances, or giving them sufficient balances to enable them to pay off their discounts.

It will be seen that the British Government has taken 100,000,000 pounds of bank credit which was originally owned by the subscribers to its bonds. This has been used in payment of Government bills and those to whom the bills are paid immediately deposit the checks and so return the credit to the banks from which the credit was originally drawn; the net result of the operation is to leave the cash reserves of the banks substantially unchanged, although the government has borrowed 100,000,000 pounds and paid 100,000,000 pounds to its creditors. One may ask why this does not create some inflation, or require some liquidation, or at any rate affect some considerable change in the banking position? Why do not deposits suddenly shrink or suddenly expand, or why do not the banks lose cash? The answer is that those who subscribed for the bonds in the first instance have been saving "money," that is saving bank credit out of their earnings, for the purpose of subscribing; they have not been wasting the money in extravagant living or by buying new houses or automobiles or luxuries.

It is to some such thoroughly scientific basis that our banking system must now be developed and it is only when people of all classes are willing to economize, accumulate their savings in banks and then transfer them to the Government in exchange for government bonds, that we can enable our government to meet the huge financial obligations imposed upon it by its participation in the war.

There is a vast difference between what is possible in England and what is possible in this country in handling banking transactions of such volume as those involved in war finance. In England there are less three hundred commercial banks; practically all of them carry accounts with the sixteen clearing banks in London and these sixteen banks clear practically all bank checks and bills through the London Clearing House, so that the balances resulting from these clearings are settled at once place, namely on the books of the Bank of England. In this country we have nearly thirty thousand banks, over two hundred and fifty Clearing Houses scattered throughout the country and the twelve Federal Reserve Banks are only able at the present stage of their development to clear a moderate proportion of the checks drawn on the banks of the United States. Our country is of such vast extent, our banks are so numerous and we have so many reserve centers, that the actual settlement, that is the bookkeeping required in connection with these credit transfers, must be planned and conducted with the greatest possible skill in order to avoid disturbance of money rates and disorganization of business in various sections of the country, every time a Government loan is paid for. That it can be done was demonstrated by the success with which the transfers involved in the last loan were conducted.

To illustrate the difference between the operation of the fairly simple English machine above described and the more complicated working of our system, an account of the transfers resulting from the loan of last June is necessary:-

Prior to the offering being made it was known that banking institutions throughout the country carried balances with New York banks amounting to about $1,000,000,000 and in addition had some hundreds of millions loaned on the New York Stock Exchange. It was fully expected that in anticipation of making payment for the Liberty Loan, these interior banks would draw a large part of their balances from New York, and transfer them to their respective Reserve Banks in their own districts, so as to have funds available at home with which to pay for the bonds subscribed by their customers. This movement of bank credit from New York to the interior had to be provided for. At the same time, inasmuch as the greater part of the payments made by our government and by its allies to whom loans were being made, were to be disbursed in

New York, interior sections of the country had reason to expect that large transfers of bank credit would be made from the interior to New York after the loan was paid for. In order to meet these movements of credit various expedients were employed and some were arranged which it never became necessary to employ. The preliminary withdrawals from New York commenced about June 1st and exceeded $500,000,000. They were met principally by the Reserve Bank discounting bills and making loans freely for its members, its loan and bill accounts increasing in the first twenty-eight days of June from $____________ minimum to $____________ maximum. At the same time the British Government, which had considerable payments to make in this country, shipped $__________ of gold from Canada to New York, all of which was purchased by the Federal Reserve Bank of New York, which correspondingly increased the reserve money in New York City and made it so much easier for the New York banks to meet the withdrawal of balances made by their interior correspondents. It was also arranged with the Treasury Department to make certain transfers of Government deposits to New York, thereby somewhat offsetting the movement to the interior. The fourth expedient, a very effective one, it never became necessary to employ. Each of the Reserve Banks, well in advance of the commencement of this movement, completed all the details of an arrangement by which any one of the Reserve Banks might settle debit balances owing to any of the others, if found necessary, by transferring loans and discounted bills instead of gold (that is its reserves) and under a simple plan by which these bills and loans need not even be shipped to the bank which purchased them, but could be held in trust by an officer of the borrowing bank who had already been appointed agent of the lending bank for that purpose.

The arrangements just described facilitatedthe movement of credit from New York to the interior without disturbance in the money market, but the return of this credit to those parts of the country from which Liberty Loan payments have been transferred to New York is a gradual process, depending upon many factors, and brought about largely by the country's commerce and trade. The funds subscribed for the purchase of Liberty bonds on the Pacific slope will ultimately be largely expended there by the Government in the construction of ships, the purchase of cattle, grain and food stuff, canned produce and the other products of that section. On the Eastern slope of the Rockies the production of oil, sugar, grains, cattle and of the mines will likewise find their way into the hands of our Government, or of its allies, and the proceeds of subscriptions to the loan in that district will gradually return to that section of the country. In the same way, the products of the cotton and woolen mills, shoe factories, munition plants, etc., of New England, which are largely purchased by the Government, will inevitably draw back to that section the funds that have been temporarily transferred to the Government and disbursed principally in New York.

The twelve Reserve Banks settle balances owing between themselves once every week and for that purpose they carry in the neighborhood of $500,000,000 of gold in Washington, the ownership of which changes from week to week, according to the amount owing by or to the respective banks. It will be seen that the machinery above described which operates by telegraph, is simply a means of overcoming the disadvantages of distances and mail time and avoiding too heavy interior shipments of cash, or reserve money. Considering the unprecedented amounts of the transfers of credit involved in these government transactions, it may be considered to be a fairly effective machine and one which can be relied upon to accomplish the objects for which it has been created.

But after all, those who buy the bonds of our Government are not so much interested in the details of this complicated accounting, which becomes necessary every time the Government places a large loan, as they are in more specific statements of the probable amounts to be borrowed and to what extent these borrowings may prove a financial burden and involve sacrifice and hardship. It is impossible for any one to state what may be the financial requirements of our Government in connection with the war. If the war continues, we must simply expect that these requirements will be beyond all precedent and likely beyond those of our allies in Europe. We must not only finance our own armies and navy, but as the tremendous natural resources of this country must produce a part of the supplies required to sustain the armies and home people of our allies, we must prepare to make great outlays in the way of loans to those governments that find it necessary to buy supplies in this country. The problem is not so much to convert the wealth of the nation so that it may be invested in Government loans. Our wealth is largely fixed property. We must arrive at a correct understanding of what income the capital wealth of the nation produces, how much of that income is absolutely essential to the comfortable support of our people and, lastly, how much in excess of that may be saved and turned over for use by the Government; it is undoubtedly a vast sum. The capital, wealth and income of this nation exceeds that of any other nation in the world and probably that of any two nations in the world, but we are an extravagant and wasteful people. We have lived in a land of such abundant prosperity, that we have reckoned less on the cost of things than we have on the profits resulting from the application of our energies to developing our resources. The time has now come, however, when this great capital wealth of the United States will not avail us to meet our obligations incurred in the war unless we see to it that it produces the greatest possible income and that that income is not wasted.

Various estimates have been made as to the amount of loans which it would be possible to place in this country. It is stated that as England has a wealth of less than $100,000,000,000 and can borrow $20,000,000,000 or more, therefore this country with a national wealth of from $175,000,000,000 to $225,000,000,000, should have no difficulty in borrowing $40,000,000,000. But such statements are rash, if they fail to take into consideration the habits and purposes of the people. The French peasants aim to save from 25% to 50% of their incomes. How many of us, rich or poor, can say that we are influenced by any such purpose? In France economy is hardly less than a national institution, the tradition of saving is so deep-rooted in the minds of the people.

The Liberty Loan just placed brought forth a fine exhibition of patriotism and self-sacrifice by those who gave freely of their time and services without compensation, in order to ensure its success; but no effort, however energetically applied or intelligently directed, can be expected to enjoy continued success, unless our people spend less than they earn, and very much less than they earn, and employ the difference in the purchase of government bonds.

Manuscript of B. Strong

Aug 3, 1917

WASTE AND ECONOMY.

For three years we have been reading of the wastage of war and the necessity for economy. The daily papers and magazines recount the destruction of property, the shortage of various kinds of food and supplies and the necessity for enlarging the production of things that are required to destroy human life abroad, or to support human life at home. It has, in fact, become imperative the world over that people should practice rigid economy in order to meet the various demands occasioned by the war.

We have not as yet felt in this prosperous country the real pinch of self denial; prices have somewhat advanced, but the average man is still going about his affairs much as usual, buying and consuming what he needs, or thinks he needs, (and possibly with some lack of forethought) thereby adding to the burdens of a situation which may well become intolerable if the people of this nation disregard the experiences of our allies and fail to appreciate the perils with which the world is confronted.

At the same time we are being asked to make large loans to the Government, and it is important that we should consider just what relation these loans bear to the problems of waste and economy, and why success in placing them is of supreme importance, both for military reasons as well as for the nation's material prosperity and financial security. These and allied questions comprise the great economic problem of warfare, and, as this is the greatest war in the world's history, so the economic problem is the greatest and most serious that the world has ever faced.

The wastage of war, aside from the actual destruction of property in the war zone, may be exhibited by a few simple examples for which, without authoritative information, I am arbitrarily supplying figures for purposes of illustration only.

When a man is called upon to increase his physical exertion, an increased wastage of the tissues of the body results and they must be restored by an increased consumption of food. The human engine generates more heat, and, consequently, must receive more fuel. If there are 30,000,000 men under arms, either on the fighting line, or undergoing intensive training, or engaged in the multefarious activities of war, all requiring unusual physical exertion, the increased consumption of food by these men corresponds roughly to the increased exertion expended over what is usual in time of peace. If each man normally consumes 4 ounces of bread when at home and when engaged in the army consumes 9 ounces, the activities of these 30,000,000 men will increase the demand upon the bread supplies of the world by no less than 150,000,000 ounces per day. If, in time of peace he wears out 2 pairs of shoes a year and when in the army 8, the world must produce 180,000,000 pairs of shoes per annum in excess of its former production. If 4 additional suits of clothes are required over normal, 120,000,000 additional suits of clothes must be produced every year.

The consumption of fuel illustrates wastage with equal force. In time of peace the world's great navies are, in part, held in reserve and in part pursue a leisurely course from one port to another, at such speed and under such conditions as result in the greatest possible economy of fuel. Today these great fleets are mobilized and are patrolling the seas at high speed. Thousands of new motor trucks are conveying ammunition and supplies in vast quantities at high speed; thousands of new aeroplanes are also consuming gasoline. The increase in the demand for fuel, both coal and oil, growing out of these enlarged activities, has placed an immense strain upon the capacity of the world to produce coal and oil.

In the same fashion the metals required for war purposes are being consumed at a rate hitherto unknown. Until the war broke out very little copper was permanently wasted or lost; old copper roofs and gutters, copper fixtures and all the various appliances in which copper was used when no longer serviceable, were scrapped and the copper melted and re-used. Today thousands of tons of copper are being shot away and otherwise destroyed so that they are not recoverable for re-use; all the implements of war which necessitate the use of this and other metals are being consumed in such quantities that the production is hardly equal to supplying the demand. These are but few of many possible illustrations of the vast increase in the demand upon the world's productive capacity over the demands of normal times, and summed up in one great total would produce a figure that would be appalling, were it possible to state it. It must be borne in mind that this increased consumption and wastage of goods of many kinds consists in general of those things which are now being purchased by the governments of the belligerent nations for use by their armies and navies and, consequently, the world faces two problems: First to increase production and to reduce peaceful consumption of foods and materials required for war purposes; and, Second, to furnish the governments at war with the necessary credits, that is banking funds, to enable them to pay for these goods which are being in a sense wasted, because their consumption does not result in the production of other goods required for sustaining human life or for affording customary pleasures.

The situation is, of course, the more serious because at the same time that the war tremendously increases demands for the production of goods, these 30,000,000 men have been taken out of agricultural, industrial and commercial occupations and, consequently, the number of human beings available for producing goods has been correspondingly reduced.

Various means must therefore be employed to enable our government to furnish our own armies and those of our allies with the supplies which they require, and to provide which necessitates our placing at the disposal of the government vast sums of money or credit as they are needed. The principal means possible may be briefly summed up as follows:

1. The deficiency in labor caused by the withdrawal of man from normal occupations must be made up by supplying other labor, - that is men who have not worked in the past, also women and even children.

2. Increased production must be stimulated by the employment of labor saving devices and by cooperation among producers, so as to bring about greater efficiency and economy in the application of labor, and thereby increase the output even

though at higher costs.

3. Economy must be practiced by people at home in the consumption of those things, particularly food, which are needed abroad for war purposes.

4. The purchase of articles of luxury - that is things which simply afford pleasure - must be curtailed or discontinued in order that labor now engaged in producing such articles may be released for employment in producing those things which are essential both for war purposes and for sustaining human life.

5. General economy of expenditure must be practiced by everyone, in order that a large surplus of earnings over expenses may be turned over to the government, thus enabling it to pay and sustain a great army and navy.

The problem of war finance is, after all, a rather simple one. A government engaged in war can employ three possible means for furnishing itself with necessary supplies: It might confiscate the goods required for war purposes and pay nothing to the owners or producers; this was the means employed centuries ago in feudal Europe and was the equivalent of a tax collection. Or it might levy taxes, payable in money or credit, and use the funds so produced to pay war bills. Or it might even require its citizens to lend it their funds, giving to the lenders its obligations payable at future dates.

To a certain extent, all three means are now being employed by all the governments at war. To use certain arbitrary figures, illustrating this process:- If our Government must have twelve billion dollars for one year's conduct of the war, it might produce or save two billion dollars thereof by arbitrarily fixing the prices of the goods which it buys somewhat below the actual market value of those goods. This is a partial confiscation of goods produced by the farmer and manufacturer and is in the nature of a tax upon the country's production. The government then might say to its citizens - "We will now require you to furnish us ten billion dollars; two billions payable as taxes, that is to say by confiscation of your funds, for which we will give nothing in return", - and for the remaining eight billions it might say to its citizens - "We will not require you to furnish this fund without giving you anything in return, but we simply ask you, voluntarily and to the extent of your means, to turn over eight billion dollars to your Government, for which in return we will give you our promise to pay at some future date, with interest." The Government would then proceed to collect taxes enough during the period that these bonds are outstanding to enable it to pay the interest and to amortize the principal; that is to say to set aside a sufficient amount every year for the retirement of the principal of the bonds, so that the total would have been retired at maturity.

Viewing the problem of war wastage and economy in its broadest sense, it will be seen that the Government requires certain goods for war purposes, the goods required must largely result from a production in excess of the amount normally produced and to produce these goods not only must output be increased, but consumption at home must be decreased. Although these goods will be wasted by the armies and navies, they must nevertheless be paid for by the government. Payment by the government will be

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possible only if the people of the country economize so generally that they will be able to provide the government with sufficient credit so that it may purchase this vast store of goods, which is to be promptly destroyed.

It will be observed that in the present, as in past wars, the greater part of the credit required by the Government is that which it asks its citizens to contribute voluntarily by purchasing government bonds, which is simply another way of saying that the government asks its citizens to set aside a proportion of their earnings and invest what they save in government bonds. Should the people of our country fail to voluntarily furnish the government with funds, the consequences would naturally be fatal to the successful prosecution of the war, unless the government thought best to employ the other two means; that is arbitrary confiscation and taxation, exclusively for financing its war operations. Such a policy would disorganize the business of the country by rendering much of its agricultural, industrial and commercial activities unprofitable. This would simply be restraining rather than stimulating the country's productive capacity at a time when production must be tremendously increased.

If democratic institutions, such as the people of this country value and enjoy, are to endure, in other words if this war is to be promptly and decisively won, our people must either freely furnish the government with the funds that it requires or they must submit to a surrender of that democratic freedom for which their fathers fought, and permit the government to commandeer goods and credit as it may be needed; there is no middle ground.

FINANCING GOVERNMENT LOANS.

The first offering of our Government's bonds to provide it with funds for the prosecution of the war, produced $3,035,000,000 of subscriptions from over 4,000,000 subscribers, and the loan was a success beyond parallel in the history of government finance. The appearent ease with which the loan was taken and paid for must not, however, delude us into the belief that succeeding loans can be subscribed without equal or greater effort and certainly not without more thorough and extensive preparation than was possible last time.

It must be made clear to our people that loans of the magnitude now required by our Government cannot be paid for in cash, or, as we commonly express it, in "money" but they must be subscribed by transfers of bank credit to the Government in exchange for its bonds, which credit the Government must at once disburse, in order to avoid disordered money markets. Cash, which we commonly call "money" must not be confused with credit, which is also too often confused in casual conversation with "money." Cash is what we carry in our pockets in order to make hand to hand payments and is what banks carry in their vaults as reserve in order that their depositors who require cash for making pay roll and other cash payments may be able to get it when needed. Bank credit on the other hand is what is owing by banks of deposit to their depositors, and is not necessarily created by depositing cash in banks, but is, in fact, principally created by loans which banks make to their customers, and which are entered on the books

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of the bank as a deposit credit, owing to the borrowers, or to those to whom the borrowers have transferred the credit by drawing checks in their favor.

If subscribers for Government bonds paid for them in "cash", all of the cash held by the banks as reserves, would be transferred to the Government's vaults, when payment was made, the banks would be denuded of reserves and would be obliged to liquidate their loans, or they would be unable to meet the demands of their depositors for cash.

The payment to the Government therefore of such a vast sum as $2,000,000,000 must be made by transfers of bank balances to the Government's credit so that the Government in turn may check on these bank balances and pay the bills which it incurs for the support of a great army and navy.

But we must not overlook the fact that bank credit consists as a rule of two kinds of credit; one being the liquid or working capital employed by business men and corporations for business purposes, which they cannot spare without impairment of the efficiency of their businesses, and the other consists of idle capital and of the savings of people and corporations who receive salaries or earn profits, which they do not need to spend and some part of which they can spare and turn over to the Government in exchange for the Government's bonds. This process of transfer of credit to the Government cannot very well exceed in amount the total of idle capital and savings which is not required for business purposes, unless, of course, the effective conduct of the business of the country is to become impaired by too great a reduction of the working capital now employed in business affairs.

Without enlarging upon the imperative necessity for economy and the creation of savings in the form of bank balances, which may be transferred to the Government's use, it is well to see just what changes take place in banking affairs, when these loans are paid for, and this may be illustrated by a brief description of the English system, which has proved such a striking success during all of the three years of the war.

Practically all of the banks of England "clear" their checks (that is settle the differences between those which are presented for payment and those that they hold for collection) through the London Clearing House, which has only sixteen members, outside of the Bank of England. The membership consists of the principal great London joint stock banks, which have many branches throughout the Kingdom. They all carry reserve accounts with the Bank of England, and what they receive or pay as a result of each day's "clearings" is simply settled by a credit or debit in their accounts with the Bank. When a large payment is made to the British Government by subscribers to its loans, these subscribers draw checks on their banks and pay them in to the Bank of England. The payment of these checks by the sixteen clearing banks transfers to the Government an immense credit on the books of the Bank of England from the reserve balances carried with it by these sixteen banks. If one hundred millions sterling is paid, it simply means that one hundred millions sterling which had formerly stood on the books of the Bank of England to the credit of the joint stock banks was transferred when these checks were paid to the credit of the British Government on the bokks of the Bank of England. This transfer may at times so considerably impair the reserve balances of the sixteen banks with the Bank of England, that they find it necessary to discount bills with the bank in order to restore their reserve balances. At once that this great credit is transferred to the British Government, the Government draws checks to pay its debts, bills for supplies, maturing obligations and various items, the checks being payable to hundreds and thousands of people and institutions, who are creditors of the Government. These checks are at once deposited by those to whom they are payable with their banks, largely of course with the sixteen clearing banks, which in turn re-deposit them with the Bank of England, thereby restoring their reserve balances, or giving them sufficient balances to enable them to pay off their discounts.

It will be seen that the British Government has taken 100,000,000 pounds of bank credit which was originally owned by the subscribers to its bonds. This has been used in payment of Government bills and those to whom the bills are paid immediately deposit the checks and so return the credit to the banks from which the credit was originally drawn; the net result of the operation is to leave the cash reserves of the banks substantially unchanged, although the government has borrowed 100,000,000 pounds and paid 100,000,000 pounds to its creditors. One may ask why this does not create some inflation, or require some liquidation, or at any rate affect some considerable change in the banking position? Why do not deposits suddenly shrink or suddenly expand, or why do not the banks lose cash? The answer is that those who subscribed for the bonds in the first instance have been saving "money," that is saving bank credit out of their earnings, for the purpose of subscribing; they have not been wasting the money in extravagant living or by buying new houses or automobiles or luxuries.

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The arrangements just described facilitated the movement of credit from New York to the interior without disturbance in the money market, but the return of this credit to those parts of the country from which Liberty Loan payments have been transferred to New York is a gradual process, depending upon many factors, and brought about largely by the country's commerce and trade. The funds subscribed for the purchase of Liberty bonds on the Pacific slope will ultimately be largely expended there by the Government in the construction of ships, the purchase of cattle, grain and food stuff, canned produce and the other products of that section. On the Eastern slope of the Rockies the production of oil, sugar, grains, cattle and of the mines will likewise find their way into the hands of our Government, or of its allies, and the proceeds of subscriptions to the loan in that district will gradually return to that section of the country. In the same way, the products of the cotton and woolen mills, shoe factories, munition plants, etc., of New England, which are largely purchased by the Government, will inevitably draw back to that section the funds that have been temporarily transferred to the Government and disbursed principally in New York.

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ADDRESS

BY

MR. BENJAMIN STRONG

GOVERNOR OF THE FEDERAL RESERVE BANK
OF NEW YORK

at the

LUNCHEON

of

THE BOND CLUB OF NEW YORK

held at

THE BANKERS' CLUB

September 14, 1917.

MR. STRONG: This meeting is to me the visible manifestation of what is taking place all over the country: the consciousness is growing that we are at war, and with that consciousness is developing a sense of personal responsibility in the mind of each citizen. The discharge of that responsibility can only be effected by organization, and without invitation, without greater incentive any ~~more stimulation~~ than the consciousness that we have a responsibility, we are organizing to discharge it.

Your organization we look upon as an adjunct of the Federal Reserve Bank of this city, and I would like to say a few words about the particular tr functions which this bank performs generally in the Government's financial transactions in connection with the war. There are three:

tr One is generally to supervise the selling of the Government's obligations. For that work of course the Reserve banks were not equipped and they could not be equipped without the assistance of the bond men and of the bankers - it wouldn't have been possible without the help of you men - we had to rely upon the voluntary organizations which were created and which did the work so effectively when the last issue was sold. You know the work in detail - I won't enlarge upon that feature of it.

Our supervision of it is indirect, is through committees, which at this time I think are organized along lines that will cut out a great deal of lost motion and make it easier for all of us.

The second function (and in some ways a more important one from our standpoint) is to conduct the financing of these payments that have to be made when the instalments become payable. We are too apt to consider that when the Government places a loan, amounting to thousands of millions of dollars, that we are handling money. We are not handling money, we are handling credit. These Government loans are simply the instruments through which the Govenmment finds it possible to buy goods and services, and to the extent that the Government borrows money for that purpose, the production of goods has to be increased over normal production and consequently the mills have to work faster, the farms have to produce more wheat and cereals; everything has to move faster, and one element in the problem is to make credit move faster.

You might say that the Reserve banks in a sense are the bookkeepers in this transaction. They must see that this great tide of credit flows from its original owners, the subscribers to the bonds, through the subscribing banks, into the Reserve banks to the credit of the Government, out again into the depositary banks, when it is finally distributed by the Government and ultimately flows back where it came from, to those very people who are producing these very goods that the Government is buying out of this great credit fund. To do that successfully, to conduct this so-called bookkeeping operation successfully, very extensive machinery has to be devised.

Our experience in the last loan has thrown a good deal of light upon the problem. I think you will all agree that, considering the magnitude of these transactions, (for the Reserve banks now have borrowed for the Government a total of nearly three and one half billion dollars since the war started,) they have been conducted with reasonable success and without great disturbance of money conditions. If the Reserve banks can continue to do that, our function as bookkeepers will be successfully performed.

The third function is that of the Government's fiscal agent in a direct sense in handling the Government's funds. It is now eighty years since the Government had a true fiscal agent, and I think it is no exaggeration to say that these transactions could not be conducted with our complicated banking machinery,

there being

~~with~~ 27,000 banks to be dealt with in the United States, without the employment of a machine of this character, and the Government is fortunate in having had a

Reserve System to employ for managing these great Government transactions. This function of handling the Government's deposits, which is conducted, of course, under the direction of the Secretary of the Treasury, has been going on for some time, but its magnitude and importance has only developed in the last few months. I think the Reserve banks have handled practically all of the money that has been paid in from the proceeds of the certificates of indebtedness and the issue of two thousand million Liberty Loan bonds without any of it going directly into the Treasury of the United States, as it did in former years. Had it been paid into the treasury of the United States, we would certainly have had money market convulsions that would have ~~paralyzed~~ disorganized business in this country. In that sense again, however, the Reserve banks are simply bookkeepers.

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Take the Pacific coast: they are starting to build immense numbers of ships on their seaboard; they are shipping timber to the East; they are shipping vast amounts of oil; they are enlarging constantly the area of distribution of their sugar; they are shipping grain, cattle and the products of their mines, not necessarily directly to the Government, but indirectly they are filling the vacuum that is created by the draft of the Government on sections that are nearer the Atlantic seaboard. As payment for their products gradually progresses throughout the year that credit automatically flows back to that very section which has subscribed to these bonds. I anticipate no difficulty whatever so long as we have the Reserve bank machinery to fall back on, or the "bookkeeper" to fall back on, during the interval between the time when the subscriber pays for the bonds and the time when the Government's disbursement of the money effects its return to the section it came from originally.

I have already said more than I intended to say, but I want to conclude with one word suggested by Mr. Vanderlip's remarks. He spoke about the difficulty of compensation for the work that was being done by this organization and by many others, in assisting the Government in financial and other matters. I look at it in this way: it would certainly be presumptuous of me or of any officer of the Reserve banks, or possibly for any officer of the Government, to say "thank you" for that work. If thanks are due, they are due from the American people. You are acting for them, for all of them, but as a reward - and I have seen evidence of it, as all who have been to Europe since the war started have seen - there are millions of anxious, careworn people there who have their eyes turned toward this country; they are looking to us for help. Our entrace into the war is interpreted by those millions of people as the harbinger of some brighter day that is going to dawn, and if you gentlemen want your reward, your real reward, you will find it by searching the hearts of those careworn people that need help.

ADDRESS BY BENJAMIN STRONG
GOVERNOR OF THE FEDERAL RESERVE BANK OF NEW YORK
at the Luncheon of
THE BOND CLUB OF NEW YORK
Held at The Bankers Club, September 14, 1917.

Mr. Strong: This meeting is to me the visible manifestation of what is taking place all over the country: the consciousness is growing that we are at war, and with that consciousness is developing a sense of personal responsibility in the mind of each citizen. The discharge of that responsibility can only be effected by organization, and without invitation, without any more stimulation than the consciousness that we have a responsibility, we are organizing to discharge it.

Your organization we look upon as an adjunct of the Federal Reserve Bank of this city, and I would like to say a few words about the particular functions which this bank performs generally in the Government's financial transactions in connection with the war - there are three.

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Government loans are simply the instruments through which the Government finds it possible to buy goods and services, and to the extent that the Government borrows money for that purpose, the production of goods has to be increased over normal production and consequently the mills have to work faster, the farms have to produce more wheat and cereals; everything has to move faster, and one element in the problem is to make credit move faster.

You might say that the Reserve banks in a sense are the bookkeepers in this transaction. They must see that this great tide of credit flows from its original owners, the subscribers to the bonds, through the subscribing banks, into the Reserve banks, to the credit of the Government out again into the depositary banks, when it is finally distributed by the Government and ultimately flows back where it came from, to those very people who are producing these very goods that the Government is buying out of this great credit fund. To do that successfully, to conduct this so called bookkeeping operation successfully, very extensive machinery has to be devised.

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ADDRESS

by

MR. BENJAMIN STRONG

GOVERNOR OF THE FEDERAL RESERVE BANK
OF NEW YORK

at the

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September 14, 1917.

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ADDRESS DELIVERED BY BENJAMIN STRONG AT THE AMERICAN BANKERS

President ASSOCIATION, ATLANTIC CITY, SEPTEMBER 28, 1917.

Fellow members A.B.A.
" " F.R. System

The invitation which your officers were good enough to extend to me to address this Convention was accompanied by the suggestion that I should say something about the relations of the Federal Reserve System to government financing. But those who have sent sons to France, find it difficult to discuss the war in terms of dollars. Some of us have just said good-bye to boys who are leaving their homes to make the supreme sacrifice for their country. They are our real investment in the war. Our return on that investment will not be valued in rates of interest, but in the consciousness that it has again been shown that under our form of government ~~and our institutions~~ we develop in our citizens that generous altruism which is our proudest national tradition.

We look to these armies of the best the nation has to offer for the victories which can only be won by individual heroism. They look to us for the support which must be accorded through personal self-denial.

The great military organization now being created is only one part of the fighting machine with which we must equip ourselves if the sacrifice of sons and husbands is not to be in vain. The first army to be mobilized is the army which must shape and control the economic activities of the American people, so as to produce material for conducting warfare. Our battles can be won only by turning over to our government as rapidly as needed billions of dollars of credit, which must be drawn from the earnings and economies of the people of the country.

The general character of the financial organization needed for the work of raising funds had been determined by statutes already enacted before our entrance into the war. Congress has for many years provided by law that government bonds should be sold by popular subscription without deduction of bankers commissions, and in December, 1913, when the Federal Reserve Act became law the Secretary of the Treasury was authorized to appoint the Federal Reserve Banks to act as the Government's Fiscal Agents. These two brief ~~paragraphs~~ provisions in our statutes, supplemented by the patriotism and energy of American bankers and their aids, are all that was required to lay the foundation for an organization which I believe can be relied upon to furnish credit at a minimum cost just as rapidly as the government can raise armies ~~armines~~ and the country can produce supplies.

(built)
~~Secretary McAdoo foresaw~~ that ~~upon this foundation~~ he There is now being ~~could~~ build up a machine for war finance which ~~would~~ brings into cooperation in one great army, the bankers, the press and a multitude of other organizations not ordinarily related to the financial operations of the government, but so coordinated that their services ~~would~~ supplement those of the Treasury Department and of its fiscal agencies.

Each reserve bank was advised of its appointment as fiscal agent and directed to proceed with the development of the machinery needed to place the first Liberty Loan on May 3rd, 1917. While the organizations were different in each district, the main characteristics were the same. Committees were appointed to cooperate with the reserve banks and upon these committees - largely composed of bankers - there devolved the duty of sub-dividing each Federal reserve district into sub-districts and even smaller divisions so that ultimately in the Federal Reserve District of New York (and I believe in practically all the others), we had committees or representatives actively at work in every city and town within a few weeks of the day we were told to start. In conjunction with the committee appointed to actually sell bonds, publicity ~~organizations~~ bureaus were created in all parts of the country, which had particular charge of news, publicity, advertising, public speaking, distributing posters and managing a great variety of other activities aimed to educate the people of the country to the importance of saving and of buying the bonds of the government.

Most of you are familiar with the way in which this matter was handled. Notice was necessarily so short that it was an almost superhuman task to cover the ground adequately between the ~~first~~ third of May and the middle of June. Plans made so hastily cannot be expected always to work smoothly, nor did they when the first loan was placed. But much of the difficulty was due to a general lack of appreciation on all hands of the magnitude of the task. Many bankers expected the bonds to be delivered immediately upon payment~~s~~; others failed to realize what a magnificent response would result from this offering and were inadequately equipped with clerks to handle the subscriptions; still others failed to take into account that the placing of a loan for the government must be handled by most precise methods requiring accurate reports which must be filed on time. We have learned how to do it better hereafter. Whatever friction and difficulties may have developed in the course of

our own force too small. Volunteers

the campaign, nothing can really mar the magnificence of the response. During the last few days before the subscriptions closed, when we were handling in the Federal Reserve Bank of New York alone some thousands of telegrams and telephone calls each day, we could feel the impending rush of subscriptions as one would sense the approach of a storm. Nor need we be ashamed to admit that at the close, the flood of subscriptions was completely beyond the handling capacity of even some of the largest and best organized banking instituions in the district.

It is stated that there were four million subscribers to the loan. I believe this underestimates the actual number of subscribers by at least ~~by~~ 25%. In the Second Federal Reserve District, we have delivered 1,931,666 full paid interim certificates which in number equals about 14% of the population of the district. If less than one-half of this proportion prevails throughout the country, it would indicate at least five million subscribers, - a response which makes this first war loan an achievement of the first rank in government finance. The record in the City of Rochester indicates what is possible in the whole country. I am told that with their population of about 250,000 people they had no less than 61,000 subscribers. Such a response by the whole country would produce

25,000,000 subscribers ~~for a government loan~~.

Every detail of the last loan has been completed in the Second District with the exception of deliveries of the permanent bonds. I think the same will be true in all Districts. Naturally, those who may decide to convert bonds of the first issue into bonds of the second issue will prefer not to require of us the expense and labor of two deliveries. The permanent bonds are rapidly being prepared and I know that I am only expressing the wish of the Secretary of the Treasury, as well as the officers of all the reserve banks in asking that the bankers through whom these subscriptions were originally made, cooperate with us in conducting this complicated operation of making deliveries.

Such complaint as had arisen regarding deliveries of bonds fails to take into account the enormous physical labor involved. The requisitions for bonds by all the reserve banks called for a total of 8,782,000 pieces, which would require 20,000,000 sheets of paper weighing 237-1/2 tons. In the Second District alone we have handled 4,005,657 ~~pieces in issuing~~ interim certificates, in ~~alone.~~ order to make about 2.000.000 final deliveries.

details -

To indicate the amount of labor involved in placing these government loans, the clerical force of our bank has increased from 100 to about 600 people in a few months. The Publicity Division of the Liberty Loan Committee employes about 100 people in addition, and the Committee Organization of the Second Federal Reserve District now embraces ~~about~~ nearly 15,000 individuals and will 2 lake greatly exceed that number when all appointments are made.

The actual machinery for selling the government's bonds, keeping proper records of their issue and making deliveries is not, however, the most important part of the government's financial operations. Of much greater importance, is the problem of so arranging this huge financial operation that it may be conducted without disturbance to money markets and, consequently, causing a disorganization of business. Of this, I should like to speak particularly from the standpoint of the Federal Reserve Bank of New York and of the New York money market, and without reservation.

New York is the country's central money market. From it radiate the principal currents of credit, so that an accurate view of the New York position is illuminating as to the whole country.

Were I asked to state in the fewest words the functions of the Reserve System in relation to government financing, I would say that the reserve banks keep the books of bank reserves and of government credits for the entire country. In a banking sense they run the general ledger. Present conditions afford the first opportunity for you to judge whether they do it well or not, and it is desirable that you should have the facts so that you may judge in this matter, because the confidemce that is based upon understanding of, and belief in, our banking system at this time is essential to success - without it we shall fail, with it, we must succeed.

The amount of banking accommodation required in any well-organized country may be said roughly to correspond to the volume of the country's business. As business increases, bank loans and deposits increase in somewhat like proportion. As business declines, liquidation takes place, bank loans and deposits go down and the proportion of reserve to deposits increases. As an illustration of this formula, take our own experience in the past few years. When the war broke out, after a short period of disturbed business, we were flooded with war orders, and at the same time flooded with gold. Business became increasingly active. Bank deposits and loans increased along with a rapid increase in our gold reserves. The production of our mills had to be speeded up to meet these increasing demands; so at the same time, the circulation of credit had to be speeded up to finance the increased trade. Now our government has entered the war, and is making further demands upon our productive capacity. The volume of these demands may be guaged - roughly, it is true but still with a fundamental accuracy - by the amount of the borrowings and increased tax collections of the government, and we must again speed up the machine of credit to keep pace with the machinery of production. The reserve banks form the center or hub of this credit machine, and I will briefly describe how the conduct of their operations is actually accelerated when the pressure is applied.

When the government makes an offering of securities, whether of long term bonds or short term notes, the banks of the country immediately realize that their customers or clients will subscribe to the offering, and that they, (the banks), will be called upon to make the payment of the subscriptions in their respective localities. Banks located outside of New York City, practically all of which have money on deposit there, prepare for this by drawing on their New York balances or calling in their New York loans, and withdrawing these credit balances to the interior. As a rule they do not take cash but take credit on the books of the reserve bank of their district or of their local reserve agent. This is the first spin of the wheel. The Federal Reserve Bank of New York receives from the other eleven reserve banks a vast sum of New

York exchange for collection and remittance in advance of each loan being placed. It must settle with the other reserve banks every Thursday through the Gold Settlement Fund maintained in Washington. This results in a pull on the reserves of all the banks in New York City. The checks we collect from them reduce their reserve balances at the Federal Reserve Bank of New York and cause the wide fluctuation in excess reserves shown by the New York Clearing House statement. To meet this drain the member banks in New York come to the Federal Reserve Bank and borrow money in one form or another. Sometimes other means can also be employed to recoup their reserves. For example, at the time of the last loan, the Federal Reserve Bank of New York purchased from the British Government $120,000,000 of gold in a period of two weeks, and in addition received payment in gold of certain international obligations amounting to over $50,000,000 which matured on June 20th. All of this gold came to the Federal Reserve Bank of New York but was really for the credit of a large number of New York banking institutions. Their reserves were immediately built up and, to that extent, the drain was offset.

Explain

A further means of relieving the loss is to offset it by transfers of government deposits from those sections of the country which have drawn so heavily on New York that their own reserves have been increased to an amount unnecessarily large. These transfers are accomplished by telegraph through the Gold Settlement Fund, and start currents flowing in the opposite direction, so that the movements between New York and each of the other Federal reserve districts largely offset each other, leaving only net amounts to be transferred.

Still another method has been provided for achieving the desired result with a minimum of delay. Every Federal reserve bank has adopted a resolution authorizing its officers to rediscount its portfolio with any other Federal Reserve bank. This procedure is authorized by Section 11 of the Reserve Act which gives the Federal Reserve Board, upon the affirmative vote of five members, the power to require such rediscounts, and authorizes the Reserve Board to fix the rates. At first this appears to be in the nature of a borrowing operation, but in point of fact it is ~~really~~ not so at all. The Federal reserve bank, in this case, New York, which loses its reserves through the Gold Settlement Fund, is ~~usually~~ in fact simply paying out to the other reserve banks the reserve money which has been deposited with it by its own member banks whose accounts are depleted by these drafts from the interior. The reserve accounts of the members in New York are restored by the New York Reserve bank ~~re~~discounting

~~their~~ its members' paper. If any considerable amount of reserves is moved to the other reserve banks and the amount of these discounts becomes sufficient to impair the reserve position of the Federal Reserve Bank of New York, then is can simply turn over part of its portfolio ~~in part~~ to those reserve banks which are correspondingly strengthened. Expressed differently, instead of settling balances as usual through the Gold Settlement Fund with gold, we would in that case settle our debit balances by the use of paper out of our portfolio, apportioning it with due regard to the reserve position of each of the other reserve banks. This plan for speedy and almost automatic transfers of credit has not yet been put into operation, though in the future it may become a resource of vast strength.

This explanation seems necessary to make clear that the normal function of the Reserve System expressly authorized by the statute and very wisely provided with regard to just such a situation is simply being exercised for the benefit of the member banks as a whole. The statute provides for the cooperative use of the reserves and credit facilities of the twelve reserve banks in time of emergency so that their combined strength may be as effective as though they were one bank instead of twelve.

To return to our chronology: The next step in these

Government ~~financial~~ operations, after the subscriptions are closed, is the~~ir~~ actual payment into the reserve banks by the banking institutions of the country. The preliminary readjustment of credit to enable them to do so, you will observe, has already taken place. These ~~The~~ payments as made are credited to the government on the books of the reserve banks, in some cases actually, in other cases only constructively. Where actual payments are made, the reserve banks, acting as fiscal agents of the government, at once redeposit the funds ~~these payments~~ with the national and state banks where they originate. Where the payment is constructive, it simply means that the bank originally subscribing (~~either for itself or its customers~~) for the government securities, (Either for itself or its customers) instead of making a remittance to its reserve bank, merely credits the government on its books with the amount to be remitted, having previously furnished the government with collateral. At this stage the government has ~~hundreds, and possibly~~ thousands of accounts on the books of banks throughout the country. It is now in position to make disbursements either for its own purchases or for loans to the allied nations. But as these payments must principally be made in New York at the present time, it becomes necessary for the reserve banks gradually to withdraw these deposits and shift them through the Gold Settlement Fund to New York. Then a new set of entries must be made in what we may call the general ledger. The deposits in other districts are drawn down and remitted to New York through the Gold Settlement Fund. As this may reduce the reserves of the banks that held the government deposits throughout the country, the reserve banks of those districts must stand prepared to discount paper for them to the extent necessary to make good the reduced reserves. This was done in a small way when the last loan was placed, and is being done to some extent, although very moderately, to-day as a result of withdrawals of deposits now arising from sales of certificates of indebtedness. As these funds are withdrawn to New York from the interior reserve banks they are immediately disbursed by the government in New York and consequently increase the deposits and reserves of the New York banks, ~~generally~~. The New York banks can then repay the advances which they have received from the Federal Reserve Bank of New York which in turn builds up its reserve. It can then ~~in turn~~ repay to other reserve banks any paper which it previously might have delivered to them if rediscount transactions had taken place between Reserve Banks. Gradually the whole set of entries arising from the preliminary withdrawals from New York will have been reversed and canceled as a result of the ultimate disbursements of the Government. The reserve banks have stepped into the breach simply to make some temporary advances. They have provided the machinery to move a great mass of credits rapidly from one part of the country to another and back again. In a sense the placing of these huge government loans is like moving a crop. When we have a large crop, the credit machinery must move faster. These large government borrowings make it necessary to speed up the credit machine, and that is exactly what the Reserve System is doing.

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But I think I am correct in assuming that you are more interested in a still later stage of this operation. It appears as though at this point the ultimate effect of subscriptions to government loans, the withdrawal of their proceeds to New York and their disbursement in New York by the government has resulted in a permanent loss of deposits ~~and consequently of reserves~~ by the banks of the interior. The fears many bankers have expressed to me on this score would in some sections appear superficially to be well

 Other opinions. will submit facts-

grounded, but the effect will not be permanent. If it were so, that section of the country which suffered a permanent loss of deposits would suffer permanently a corresponding contraction of the savings ordinarily realized from its productive capacity whether it was in manufactured goods, food stuffs, the products of mines or of forests, or what not. This great credit fund being expended by the government, with the exception of the pay of soldiers abroad and of negligible purchases abroad, is being expended in this country in the purchase of materials of great variety, and the amounts loaned to our allies are almost entirely being spent here as well. It means that in all sections of the country these credits must inevitably move back to their points of origin, directly or indirectly through government purchases. New ships, oil and coal, and products of mills, mines and forests in every part of the country now go to the government and each pulls back a share of this great fund. Even those sections which do not directly receive government contracts indirectly receive the benefit. Purchases of materials of various kinds in one part of the country either develop demands for raw materials or create a vacuum of goods which must be supplied or replaced from other sections. The intricate commerce of the country is so interwoven that it is difficult to exactly trace these movements, but the result is inevitable, and in those sections where this movement does not reach, it means that production and savings have been arrested, since the amount subscribed in any locality for loans to the government is measured by the amount which that locality saves out of the profits on what it produces.

It must be admitted that our agricultural products, which are one of the chief instrumentalities for bringing about this readjustment, are in the main marketed at one short season of the year. In the interval, withdrawals of bank credit from those sections of the country will leave a vacuum somewhat longer than in manufacturing sections where production and marketing are continuous the year around. But when crops are moved and paid for this credit will move back inevitably to the agricultural sections so long as profitable crops are produced there.

20 demonstrate.

2,000,000,000. 2,000,000,000. When placed

3.250.000.000

all spent on war materials

Bank dep. double

I refer to this particularly and emphatically because of the fears which some bankers entertain which might induce them to withhold their best efforts from assisting the government in placing the next loan. The last word of assurance on that point, very properly must come from the reserve banks, for during the interval between the marketing of one harvest and the next, when banks in the agricultural sections must both finance the farmers and assist in financing the government, reserves must be bridged by reasonable accommodation at the reserve banks. That is what the reserve banks are for. They expect to be used, and no time like the present will ever arise in our history when this use of our new banking system will be so important to every citizen.

Sav. Banks - I did not intend etc -

Speaking of these matters from the standpoint of the reserve banks themselves, I fear you may have heard careless discussion of their possible intention to attempt arbitrary control of these money matters. Only one kind of control is required, and that is self-control. The reserve banks should not be expected to tie up their reserves in permanent financing for the government or anybody else. Their function is to make these temporary loans during periods of strain, whether occasioned by war and government financing, by domestic difficulties, or by any other cause. The exercise of self-control in these matters means that the reserve banks will see to it that the expansion which they afford to our banking system is that temporary expansion which is represented by a portfolio containing self-liquidating bills and loans which mature within a reasonably short time and which Congress has wisely fixed at ninety days and no longer.

I think I may use the experience of the Federal Reserve Bank of New York to illustrate this point. On the first of June, the discounts and loans of that bank, all maturing within ninety days, amounted to $37,000,000 and its investments, which included $20,000,000 of short term certificates of the government amounted to $29,000,000. At about that time the interior drafts which I have mentioned began to come in, and during the month of June alone we were obliged to settle debit balances to the interior reserve banks aggregating about $550,000,000. During that short period our discounts rose from $37,000,000 on June 1st to $252,000,000 on June 19th. Of this $252,000,000 of discounts

$173,000,000 matured within fifteen days,

$ 19,000,000 matured within thirty days,

$ 29,000,000 matured within sixty days, and

Inv. $8,900,000 $ 31,000,000 matured within ninety days.

By August 15th, our discounts had been reduced to $62,000,000 without any increase in rates being employed to force the reduction. In other words, in two months we liquidated $190,000,000 of paper taken from member banks with practically no disturbance to the money market. On September 19th, our total discounts ~~amounted~~ amount only to $87,000,000 of which

$29,000,000 matured within fifteen days,

$17,000,000 matured within thirty days,

$20,000,000 matured within sixty days, and

$21,000,000 matured within ninety days.

 on Sept 19th

Our investments totaled $8,900,000 of which only $1,300,000 consisted of long time bonds of the government, purchased under statutory provisions of the Act, and $2,600,000 are short term U. S. Treasury certificates of indebtedness.

With this liquidation automatically accomplished it leaves us that is the N.Y. Bank on September 19th with $658,000,000 of Cash reserve, practically all gold, being 89% of our net deposit and note liabilities. The whole Reserve System on September 14th held $1,415,000,000 of cash, practically all gold, as reserve against the liabilities of the whole system. With this magnificent foundation upon which to rest our government's banking transactions, how can things go wrong? There is no occasion for timidity on the part of our bankers in putting the full weight of their influence, their energies and their resources behind the government in the conduct of the war.

digress Savings Blackett

If Every Bank officer Etc. City with 23 new houses.

In conclusion, I wish to say a few words in regard to the Administration's financial policy. On this subject history speaks in no uncertain voice. I wish you would read, as I have, the record of the last one hundred and fifty years of financial operations in war time of certain European governments. You will then realize that any finance minister who has the courage to impose taxes at the outbreak of a war heavy enough to pay bond interest, to rapidly amortize bond issues when peace comes, and to pay a share of war expenses, will have a minimum of difficulty in borrowing money. The records of the British Government in the Napoleonic Wars, the Crimean War and even so recently as the Boer War, demonstrate, by the mistakes disclosed, this fundamental principle of war finance. But we do not need to turn to Europe for examples on this subject. The history of the financial operations of our own government in the Civil War is entirely adequate to justify the policy now being pursued. Within little more than six months of the outbreak of our Civil War our banks suspended specie payment. Sec. Chase ~~Our government~~ was borrowing money from the banks in 1861 at ruinous rates of interest, and only too soon was driven to the diastrous expedient of issuing fiat money. In 1862, ~~the government~~ placed its ~~loans~~ bonds at rates, which on a gold basis produced a value of about 96% of par value for bonds bearing high rates of interest. The funds realized from loans placed by the government in 1863 produced on a gold basis as low as 64 1/2% of par value, and in 1864, as low as 41 1/2%.

On the other hand the clear war revenues from taxes in 1862 were but $52,000,000; in 1863, $113,000,000, whereas, in 1866, after the close of the war, the revenue legislation then in force produced the enormous total for those days of $558,000,000. It is obvious that the failure to support the government's credit early in the war by adequate tax revenues undoubtedly was one reason for the unfortunate later indulgence in every variety of unsound financial expedient, the effects of some of which have dogged our steps for nearly ~~fifty~~ sixty years.

~~Now, let us~~ We need only compare the present tax program with these past experiences. Their dissimilarity is so striking as to be almost startling; and is one of the most hopeful auguries for the success of our whole financial undertaking. Personally, I rejoice that the officers of our government have the courage to face the criticism on the one hand of those who believe the program of taxation is too heavy; on the other hand of those radicals who think it is not heavy enough. Not enough taxes means declining credit, too much taxes means declining industries. The only danger in exacting heavy taxes on profits and incomes is the danger of not allowing sufficient profit inducement to the industries of the country to stimulate production. I confidently believe that our country can pay all the taxes required to maintain its credit and to support all the borrowings needed for the period of the war, without crippling its vital industries, and that those who now cry calamity simply because they don't want to pay heavy taxes will some day see and acknowledge their error. But our Congress must be careful not to destroy the income sources which produce taxes. Industries which must expand to meet war conditions, need earnings for plants and inventories which may be useless when war ceases, and yet they must be built. To take all their income will prevent ~~retard~~ new construction.

Those of us who have sent our boys to France are beginning to realize what the war is. Our part in it and the motive behind it will be an imperishable glory for this great nation. But we must not lose our boys and lose the war for lack of money, nor must we fail in providing the money simply because our financial army is inadequately equipped. I am convinced that the only important weakness in our financial organization is the lack of State bank membership in the Federal Reserve System. One half of our financial army is equipped with modern machinery by membership in the System. The other half, equally patriotic, is ineffectively armed. You will recall the disastrous results to the Russian Armies in the early days of the war when large numbers were sent to the front without arms and ammunition. Don't let us fail of our duty for lack of the strength we can only enjoy if we are united. It may indeed rest with you state bank men to determine what shall happen to our boys - and they must come home victorious.

Canadian Savings Banks: Savings Departments Chartered Banks:

Dec. 31, 1913,	Savings Deposits,	$624,692,000
" 31, 1914,	" "	662,840,000
" 31, 1915,	" "	720,990,000
" 31, 1916,	" "	845,000,000
Mar. 31, 1917,	" "	888,765,000

Postal Savings Banks and other savings banks which include two large banks in Montreal and Quebed:

Dec. 31, 1913,	$97,620,000
" 31, 1914,	94,600,000
" 31, 1915,	92,200,000
" 31, 1916,	93,930,000
Mar. 31, 1917,	94,000,000

New York State Savings Deposits July 1, 1917,
$1,991,469,126.

Amount deposited during year not including dividends credited was $503,048,924

Amount withdrawn during year, 468,850,758

United Kingdom of Great Britain:

Total amount in postal savings banks

Dec. 31, 1913,	£187,248,167
" 31, 1914,	190, 532, 208
" 31, 1915,	186,327,584

Trustee Savings Banks, Great Britain:

Nov. 20, 1913,	£54,258,000
" 20,1914,	53,943,000
" 15, 1915,	51,412,000

ADDRESS DELIVERED BY BENJAMIN STRONG

AT THE AMERICAN BANKERS' ASSOCIATION

ATLANTIC CITY, SEPTEMBER 28, 1917.

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The invitation which your officers were good enough to extend to me to address this Convention was accompanied by the suggestion that I should say something about the relations of the Federal Reserve System to government financing. But those who have sent sons to France, find it difficult to discuss the war in terms of dollars. Some of us have just said good-bye to boys who are leaving their homes to make the supreme sacrifice for their country. They are our real investment in the war. Our return on that investment will not be valued in rates of interest, but in the consciousness that it has again been shown that our form of government and our institutions develop in our citizens that generous altruism which is our proudest national tradition.

We look to these armies of the best the nation has to offer for the victories which can only be won by individual heroism. They look to us for the support which must be accorded through personal self-denial.

The great military organization now being created is only one part of the fighting machine with which we must equip ourselves if the sacrifice of sons and husbands is not to be in vain. The first army to be mobilized is the army which must shape and control the economic activities of the American people, so as to produce material for conducting warfare. Our battles can be won only by turning over to our government as rapidly as needed billions of dollars of credit, which must be drawn from the earnings and economie-

of the people of the country.

The general character of the financial organization needed for the work had been determined by statutes already enacted before our entrance into the war. Congress had for many years provided by law that government bonds should be sold by popular subscription without deduction of bankers commissions, and in December 1913, when the Federal Reserve Act became law the Secretary of the Treasury was authorized to appoint the Federal Reserve Banks to act as the Government's Fiscal Agents. These two brief paragraphs in our statutes, supplemented by the patriotism and energy of American bankers and their aids, are all that was required to lay the foundation for an organization which I believe can be relied upon to furnish credit at a minimum cost just as rapidly as the government can raise armies and the country can produce supplies.

Secretary McAdoo foresaw that upon this foundation he could build up a machine for war finance which would bring into co-operation in one great army, the bankers, the press and a multitude of other organizations not ordinarily related to the financial operations of the government, but so co-ordinated that their services would supplement those of the Treasury Department and of its fiscal agencies.

Each reserve bank was advised of its appointment as fiscal agent and directed to proceed with the development of the machinery needed to place the first Liberty Loan on May 3rd. 1917. While the organizations were different in each district, the main characteristics were the same. Committees were appointed to co-operate with

the reserve banks and upon these committees - largely composed of bankers - there developed the duty of sub-dividing each Federal reserve district into sub-districts and even smaller divisions so that ultimately in the Federal Reserve District of New York (and I believe practically all the others), we had committees or representatives actively at work in every city and town within a few weeks of the day we were told to start. In conjunction with the committees appointed to actually sell bonds, publicity organizations were created in all parts of the country, which had particular charge of news, publicity, advertising, public speaking, distributing posters and managing a great variety of other activities aimed to educate the people of the country to the importance of saving and of buying the bonds of the government.

Most of you are familiar with the way in which this matter was handled. Notice was necessarily so short that it was an almost superhuman task to cover the ground adequately between the first of May and the middle of June. Plans made so hastily cannot be expected always to work smoothly, nor did they when the first loan was placed. But much of the difficulty was due to a general lack of appreciation on all hands of the magnitude of the task. Many bankers expected the bonds to be delivered immediately upon payment; others failed to realize what a magnificent response would result from this offering and were inadequately equipped with clerks to handle the subscriptions; still others failed to take into account that the placing of a loan for the government must be handled by most precise methods requiring accurate reports which

must be filed on time. We have learned how to do it better hereafter. Whatever friction nothing can really mar the magnificence of the response. During the last few days before the subscriptions closed, when we were handling in the Federal Reserve Bank of New York alone some thousands of telegrams and telephone calls each day, we could feel the impending rush of subscriptions as one would sense the approach of a storm. Nor need we be ashamed to admit that at the close, the flood of subscriptions was completely beyond the handling capacity of even some of the largest and best organized banking institutions in the district.

It is stated that there were four million subscribers to the loan. I believe this underestimates the actual number of subscribers by at least 25%. In the Second Federal Reserve District, we have delivered 1,931,666 full paid interim certificates which in number equals about 14% of the population of the district. If less than one-half of this proportion prevails throughout the country, it would indicate at least five million subscribers, - a response which makes this first war loan an achievement of the first rank in government finance. The record in the City of Rochester indicates what is possible in the whole country. I am told that with their population of about 250,000 people they had no less than 61,000 subscribers. Such a response by the whole country would produce 25,000,000 subscribers for a government loan.

Every detail of the last loan has been completed in the Second District with the exception of deliveries of the permanent bonds. I think the same will be true in all Districts. Naturally,

those who may decide to convert bonds of the first issue into bonds of the second issue will prefer not to require of us the expense and labor of two deliveries. The permanent bonds are rapidly being prepared and I know that I am only expressing the wish of the Secretary of the Treasury, as well as the officers of all the reserve banks in asking that the bankers through whom these subscriptions were originally made, cooperate with us in conducting this complicated operation of making deliveries.

Such complaint as has arisen regarding deliveries of bonds fails to take into account the enormous physical labor involved The requisitions for bonds by the reserve banks called for a total of 8,782,000 pieces, which would require 20,000,000 sheets of paper weighing 237½ tons. In the Second District we have handled 4,005,657 pieces in issuing interim certificates alone.

To indicate the amount of labor involved in placing these government bonds, the clerical force of our bank has increased from 100 to about 600 people in a few months. The Publicity Division of the Liberty Loan Committee employs about 100 people in addition and the Committee Organization of the Second Federal Reserve District now embraces about 15,000 individuals and will greatly exceed that number when all appointments are made.

The actual machinery for selling the government's bonds, keeping proper records of their issue and making deliveries is not, however, the most important part of the government's financial operations. Of much greater importance, is the problem of so arranging this huge financial operation that it may be conducted

without disturbance to money markets, and consequently, causing a dis-organization of business. Of this, I should like to speak particularly from the standpoint of the Federal Reserve Bank of New York and of the New York money market.

New York is the country's central money market. From it radiate the principal currents of credit, so that an accurate view of the New York position is illuminating as to the whole country.

Were I asked to state in the fewest words the functions of the Reserve System in relation to government financing, I would say that the reserve banks keep the books of bank reserves and of government credits for the entire country. In a banking sense they run the general ledger. Present conditions afford the first opportunity for you to judge whether they do it well or not, and it is desirable that you should have the facts so that you may judge in this matter, because the confidence that is based upon understanding of, and belief in, our banking system at this time is essential to success - without it we shall fail - with it, we must succeed.

The amount of banking accomodation required in any well-organized country may be said roughly to correspond to the volume of the country's business. As business increases, bank loans and deposits increase in somewhat like proportion. As business declines, liquidation takes place. bank loans and deposits go down and the proportion of reserve to deposits increases. As an illustration of this formula, take our own experience in the past few years. When the war broke out, after a short period of disturbed business, we

were flooded with war orders, and at the same time flooded with gold. Business became increasingly active. Bank deposits and loans increased along with a rapid increase in our gold reserves. The production of our mills had to be speeded up to meet these increasing demands, so at the same time, the circulation of credit had to be speeded up to finance and increased trade. Now our government has entered the war, and is making further demands upon our productive capacity. The volume of these demands may be gauged - roughly, it is true but still with a fundamental accuracy - by the amount of the borrowings and increased tax collections of the government, and we must again speed up the machine of credit to keep pace with the machinery of production. The reserve banks form the center of hub of this credit machine, and I will briefly describe how the conduct of their operations is actually accelerated when the pressure is applied.

When the government makes an offering of securities, whether of long term bonds or short term notes, the banks of the country immediately realize that their customers or clients will subscribe to the offering, and that they, (the banks), will be called upon to make the payment on the subscriptions in their respective localities. Banks located outside of New York City, practically all of which have money on deposit there, prepare for this by drawing on their New York balance or calling in their New York loans, and withdrawing these credit balances to the interior. As a rule they do not take cash but take credit on the books of the reserve bank of their district or of their local reserve agent. This is

the first spin of the wheel. The Federal Reserve Bank of New York receives from the other eleven reserve banks a vast sum of New York exchange for collection and remittance in advance of each loan being placed. It must settle with the other reserve banks every Thursday through the Gold Settlement Fund maintained in Washington. This results in a pull on the reserves of all the banks in New York City. The checks we collect from them reduce their reserve balance at the Federal Reserve Bank of New York and cause the wide fluctuation in excess reserves shown by the New York Clearing House statement. To meet this drain the member banks in New York come to the Federal Reserve Bank and borrow money in one form or another. Sometimes other means can also be employed re-coup their reserves. For example, at the time of the last loan, the Federal Reserve Bank of New York purchased from the British Government $120,000,000 of gold in a period of two weeks, and in addition received payment in gold of certain international obligations amounting to over $50,000,000 which matured on June 20th. All of this gold came to the Federal Reserve Bank of New York but was for the credit of a large number of New York banking institutions. Their reserves were immediately built up and, to that extent, the drain was offset.

A further means of relieving the loss is to offset it by transfers of government deposits from these sections of the country which have drawn so heavily on New York that their own reserves have been increased to an amount unnecessarily large. These transfers are accomplished by telegraph through the Gold Settlement Fund, and start currents flowing in the opposite direction, so that the move-

ments between New York and each of the other Federal reserve districts largely offset each other, leaving only net amounts to be transferred.

Still another method has been provided for achieving the desired result with a minimum of delay: Every Federal Reserve Bank has adopted a resolution authorizing its officers to rediscount its portfolio with any other Federal reserve bank. This procedure is authorized by Section 11 of the Reserve Act which gives the Federal Reserve Board, upon the affirmative vote of five members, the power to require such rediscounts, and authorizes the Reserve Board to fix the rates. At first this appears to be in the nature of a borrowing operation, but in point of fact it is really not so at all. The Federal reserve bank, in this case, New York, which loses its reserves through the Gold Settlement Fund, is usually simply paying out to the other reserve banks the reserve money which has been deposited with it by its own member banks whose accounts are depleted by these drafts from the interior. The reserve accounts of the members in New York are restored by the New York bank rediscounting their paper. If any considerable amount of reserves is moved to the other reserve banks and the amount of these discounts becomes sufficient to impair the reserve position of the Federal Reserve Bank of New York, then it can simply turn over its portfolio in part to those reserve banks which are correspondingly strengthened. Expressed differently instead of settling balances through the Gold Settlement Fund with gold, we would in that case settle our debit balances by the use of paper out of our portfolio, apportioning it with due

regard to the reserve position of each of the other reserve banks. This plan for speedy and almost automatic transfers of credit has not yet been put into operation, though in the future it may become a resource of vast strength.

This explanation seems necessary to make clear that the normal function of the Reserve System expressly authorized by the statute and very wisely provided with regard to just such a situation is simply being exercised for the benefit of the member banks as a whole. The statute provides for the cooperative use of reserves and credit facilities of the twelve reserve banks in time of emergency so that their combined strength may be as effective as though they were one bank instead of twelve.

To return to our chronology; the next step in these financial operations, after the subscriptions are closed is their actual payment into the reserve banks by the banking institutions of the country. The preliminary readjustment of credit to enable them to do so, you will observe, has already taken place. The payments as made are credited to the government on the books of the reserve banks, in some cases actually, in other cases only constructively. Where actual payments are made, the reserve banks, acting as fiscal agents of the government, at once redeposit these payments with the national and state banks where they originate. Where the payment is constructive, it simply means that the bank originally subscribing (either for itself or its customers) for the government securities, instead of making a remittance to its reserve bank, merely credits the government on its books with the

amount to be remitted, having previously furnished the government with collateral. At this stage the government has hundreds, and possibly thousands, of accounts on the books or banks throughout the country. It is now in position to make disbursements either from its own purchases or for loans to the allied nations. But as these payments must principally be made in New York at the present time, it becomes necessary for the reserve banks gradually to withdraw these deposits and shift them through the Gold Settlement Fund to New York. Then a new set of entries must be made in what we may call the general ledger. The deposits in other districts are drawn down and remitted to New York through the Gold Settlement Fund. As this may reduce the reserves of the banks that held the government deposits throughout the country, the reserve banks of those districts must stand prepared to discount the paper for them to the extent necessary to make good the reduced reserves. This was done in a small way when the last loan was placed, and is being done to some extent, although very moderately, to-day as a result of withdrawals of deposits now arising from sales of certificates of indebtedness. As these funds are withdrawn to New York from the interior reserve banks they are immediately disbursed by the government in New York and increase the deposits and reserves of the New York banks generally. The New York banks can then repay the advances which they have received from the Federal Reserve Bank of New York which builds up its reserve. It can then in turn repay to other reserve banks any paper which it previously might have delivered to them if rediscount transactions had taken place between Reserve

Banks. Gradually the whole set of entries arising from the preliminary withdrawals from New York will have been reversed and cancelled as a result of the ultimate disbursements of the Government. The reserve banks have stepped into the breach simply to make some temporary advances. They have provided the machinery to move a great mass of credits rapidly from one part of the country to another and back again. In a sense the placing of these huge government loans is like moving a crop. When we have a large crop, the credit machinery must move faster. These large government borrowings make it necessary to speed up the credit machine, and that is exactly what the Reserve System is doing.

The figures of the Gold Settlement Fund illustrate what is being done:

Gross Clearings, 3 months, ending June 30, 1916	$ 832,299,000
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June	28,723,000	217,648,000
Total	$ 93,473,000	$ 512,430,000

But I think I am correct in assuming that you are more interested in a still later stage of this operation. It appears as though at this point the ultimate effect of subscriptions to government loans, the withdrawal of their proceeds to New York and their disbursement in New York by the government, has resulted in a perma-

nent loss of deposits, and consequently of reserves by the banks of the interior. The fears many bankers have expressed to me on this score would in some sections appear superficially to be well grounded but the effect will not be permanent. If it were so, that section of the country which suffered a permanent loss of deposits would suffer permanently a corresponding contraction of savings realized from its productive capacity whether it was in manufactured goods, food stuffs, the products of mines or of forests, or what not. This great credit fund being expended by the government, with the exception of the pay of soldiers abroad and of negligible purchases abroad, is being expended in this country in the purchase of materials of great variety, and the amounts loaned to our allies are almost entirely being spent here as well. It means that in all sections of the country these credits must inevitably move back to their points of origin, directly or indirectly through government purchases New ships, oil and coal, and products of mills, mines and forests in every part of the country now go to the government and each pulls back a share of this great fund. Even these sections which do not directly receive government contracts indirectly receive the benefit. Purchases of materials of various kinds in one part of the country either develop demands for raw materials or create a vacuum of goods which must be supplied or replaced from other sections. The intricate commerce of the country is so interwoven that it is difficult to exactly trace these movements, but the result is inevitable, and in those sections where this movement does not reach, it means that production and saving have been arrested, since the amount

subscribed in any locality for loans to the government is measured by the amount which that locality saves out of the profits on what it produces.

It must be admitted that our agricultural products, which are one of the chief instrumentalities for bringing about this readjustment, are in the main marketed at one short season of the year. In the interval, withdrawals of bank credit from those sections of the country will leave vacuum somewhat longer than in manufacturing sections where production and marketing are continuous the year around. But when crops are moved and paid for this credit will move back inevitably to the agricultural sections so long as profitable crops are produced there.

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AT THE AMERICAN BANKERS' ASSOCIATION

ATLANTIC CITY, SEPTEMBER 28, 1917.

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The invitation which your officers were good enough to extend to me to address this Convention was accompanied by the suggestion that I should say something about the relations of the Federal Reserve System to government financing. But those who have sent sons to France, find it difficult to discuss the war in terms of dollars. Some of us have just said good-bye to boys who are leaving their homes to make the supreme sacrifice for their country. They are our real investment in the war. Our return on that investment will not be valued in rates of interest, but in the consciousness that it has again been shown that our form of government and our institutions develop in our citizens that generous altruism which is our proudest national tradition.

We look to these armies of the best the nation has to offer for the victories which can only be won by individual heroism. They look to us for the support which must be accorded through personal self-denial.

The great military organization now being created is only one part of the fighting machine with which we must equip ourselves if the sacrifice of sons and husbands is not to be in vain. The first army to be mobilized is the army which must shape and control the economic activities of the American people, so as to produce material for conducting warfare. Our battles can be won only by turning over to our government as rapidly as needed billions of dollars of credit, which must be drawn from the earnings and economie

of the people of the country.

The general character of the financial organization needed for the work had been determined by statutes already enacted before our entrance into the war. Congress had for many years provided by law that government bonds should be sold by popular subscription without deduction of bankers commissions, and in December 1913, when the Federal Reserve Act became law the Secretary of the Treasury was authorized to appoint the Federal Reserve Banks to act as the Government's Fiscal Agents. These two brief paragraphs in our statutes, supplemented by the patriotism and energy of American bankers and their aids, are all that was required to lay the foundation for an organization which I believe can be relied upon to furnish credit at a minimum cost just as rapidly as the government can raise armies and the country can produce supplies.

Secretary McAdoo foresaw that upon this foundation he could build up a machine for war finance which would bring into co-operation in one great army, the bankers, the press and a multitude of other organizations not ordinarily related to the financial operations of the government, but so co-ordinated that their services would supplement those of the Treasury Department and of its fiscal agencies.

Each reserve bank was advised of its appointment as fiscal agent and directed to proceed with the development of the machinery needed to place the first Liberty Loan on May 3rd. 1917. While the organizations were different in each district, the main characteristics were the same. Committees were appointed to co-operate with

the reserve banks and upon these committees - largely composed of bankers - there developed the duty of sub-dividing each Federal reserve district into sub-districts and even smaller divisions so that ultimately in the Federal Reserve District of New York (and I believe practically all the others), we had committees or representatives actively at work in every city and town within a few weeks of the day we were told to start. In conjunction with the committees appointed to actually sell bonds, publicity organizations were created in all parts of the country, which had particular charge of news, publicity, advertising, public speaking, distributing posters and managing a great variety of other activities aimed to educate the people of the country to the importance of saving and of buying the bonds of the government.

Most of you are familiar with the way in which this matter was handled. Notice was necessarily so short that it was an almost superhuman task to cover the ground adequately between the first of May and the middle of June. Plans made so hastily cannot be expected always to work smoothly, nor did they when the first loan was placed. But much of the difficulty was due to a general lack of appreciation on all hands of the magnitude of the task. Many bankers expected the bonds to be delivered immediately upon payment; others failed to realize what a magnificent response would result from this offering and were inadequately equipped with clerks to handle the subscriptions; still others failed to take into account that the placing of a loan for the government must be handled by most precise methods requiring accurate reports which

must be filed on time. We have learned how to do it better hereafter. Whatever friction nothing can really mar the magnificence of the response. During the last few days before the subscriptions closed, when we were handling in the Federal Reserve Bank of New York alone some thousands of telegrams and telephone calls each day, we could feel the impending rush of subscriptions as one would sense the approach of a storm. Nor need we be ashamed to admit that at the close, the flood of subscriptions was completely beyond the handling capacity of even some of the largest and best organized banking institutions in the district.

It is stated that there were four million subscribers to the loan. I believe this underestimates the actual number of subscribers by at least 25%. In the Second Federal Reserve District, we have delivered 1,931,666 full paid interim certificates which in number equals about 14% of the population of the district. If less than one-half of this proportion prevails throughout the country, it would indicate at least five million subscribers, - a response which makes this first war loan an achievement of the first rank in government finance. The record in the City of Rochester indicates what is possible in the whole country. I am told that with their population of about 250,000 people they had no less than 61,000 subscribers. Such a response by the whole country would produce 25,000,000 subscribers for a government loan.

Every detail of the last loan has been completed in the Second District with the exception of deliveries of the permanent bonds. I think the same will be true in all Districts. Naturally,

those who may decide to convert bonds of the first issue into bonds of the second issue will prefer not to require of us the expense and labor of two deliveries. The permanent bonds are rapidly being prepared and I know that I am only expressing the wish of the Secretary of the Treasury, as well as the officers of all the reserve banks in asking that the bankers through whom these subscriptions were originally made, cooperate with us in conducting this complicated operation of making deliveries.

Such complaint as has arisen regarding deliveries of bonds fails to take into account the enormous physical labor involved The requisitions for bonds by the reserve banks called for a total of 8,782,000 pieces, which would require 20,000,000 sheets of paper weighing 237½ tons. In the Second District we have handled 4,005,657 pieces in issuing interim certificates alone.

To indicate the amount of labor involved in placing these government bonds, the clerical force of our bank has increased from 100 to about 600 people in a few months. The Publicity Division of the Liberty Loan Committee employs about 100 people in addition and the Committee Organization of the Second Federal Reserve District now embraces about 15,000 individuals and will greatly exceed that number when all appointments are made.

The actual machinery for selling the government's bonds, keeping proper records of their issue and making deliveries is not, however, the most important part of the government's financial operations. Of much greater importance, is the problem of so arranging this huge financial operation that it may be conducted

without disturbance to money markets, and consequently, causing a dis-organization of business. Of this, I should like to speak particularly from the standpoint of the Federal Reserve Bank of New York and of the New York money market.

New York is the country's central money market. From it radiate the principal currents of credit, so that an accurate view of the New York position is illuminating as to the whole country.

Were I asked to state in the fewest words the functions of the Reserve System in relation to government financing, I would say that the reserve banks keep the books of bank reserves and of government credits for the entire country. In a banking sense they run the general ledger. Present conditions afford the first opportunity for you to judge whether they do it well or not, and it is desirable that you should have the facts so that you may judge in this matter, because the confidence that is based upon understanding of, and belief in, our banking system at this time is essential to success - without it we shall fail - with it, we must succeed.

The amount of banking accomodation required in any well-organized country may be said roughly to correspond to the volume of the country's business. As business increases, bank loans and deposits increase in somewhat like proportion. As business declines, liquidation takes place. bank loans and deposits go down and the proportion of reserve to deposits increases. As an illustration of this formula, take our own experience in the past few years. When the war broke out, after a short period of disturbed business, we

were flooded with war orders, and at the same time flooded with gold. Business became increasingly active. Bank deposits and loans increased along with a rapid increase in our gold reserves. The production of our mills had to be speeded up to meet these increasing demands, so at the same time, the circulation of credit had to be speeded up to finance and increased trade. Now our government has entered the war, and is making further demands upon our productive capacity. The volume of these demands may be gauged - roughly, it is true but still with a fundamental accuracy - by the amount of the borrowings and increased tax collections of the government, and we must again speed up the machine of credit to keep pace with the machinery of production. The reserve banks form the center of hub of this credit machine, and I will briefly describe how the conduct of their operations is actually accelerated when the pressure is applied.

When the government makes an offering of securities, whether of long term bonds or short term notes, the banks of the country immediately realize that their customers or clients will subscribe to the offering, and that they, (the banks), will be called upon to make the payment on the subscriptions in their respective localities. Banks located outside of New York City, practically all of which have money on deposit there, prepare for this by drawing on their New York balance or calling in their New York loans and withdrawing these credit balances to the interior. As a rule they do not take cash but take credit on the books of the reserve bank of their district or of their local reserve agent. This is

the first spin of the wheel. The Federal Reserve Bank of New York receives from the other eleven reserve banks a vast sum of New York exchange for collection and remittance in advance of each loan being placed. It must settle with the other reserve banks every Thursday through the Gold Settlement Fund maintained in Washington. This results in a pull on the reserves of all the banks in New York City. The checks we collect from them reduce their reserve balance at the Federal Reserve Bank of New York and cause the wide fluctuation in excess reserves shown by the New York Clearing House statement. To meet this drain the member banks in New York come to the Federal Reserve Bank and borrow money in one form or another. Sometimes other means can also be employed re-coup their reserves. For example, at the time of the last loan, the Federal Reserve Bank of New York purchased from the British Government $120,000,000 of gold in a period of two weeks, and in addition received payment in gold of certain international obligations amounting to over $50,000,000 which matured on June 20th. All of this gold came to the Federal Reserve Bank of New York but was for the credit of a large number of New York banking institutions. Their reserves were immediately built up and, to that extent, the drain was offset.

A further means of relieving the loss is to offset it by transfers of government deposits from these sections of the country which have drawn so heavily on New York that their own reserves have been increased to an amount unnecessarily large. These transfers are accomplished by telegraph through the Gold Settlement Fund, and start currents flowing in the opposite direction, so that the move-

ments between New York and each of the other Federal reserve districts largely offset each other, leaving only net amounts to be transferred.

Still another method has been provided for achieving the desired result with a minimum of delay: Every Federal Reserve Bank has adopted a resolution authorizing its officers to rediscount its portfolio with any other Federal reserve bank. This procedure is authorized by Section 11 of the Reserve Act which gives the Federal Reserve Board, upon the affirmative vote of five members, the power to require such rediscounts, and authorizes the Reserve Board to fix the rates. At first this appears to be in the nature of a borrowing operation, but in point of fact it is really not so at all. The Federal reserve bank, in this case, New York, which loses its reserves through the Gold Settlement Fund, is usually simply paying out to the other reserve banks the reserve money which has been deposited with it by its own member banks whose accounts are depleted by these drafts from the interior. The reserve accounts of the members in New York are restored by the New York bank rediscounting their paper. If any considerable amount of reserves is moved to the other reserve banks and the amount of these discounts becomes sufficient to impair the reserve position of the Federal Reserve Bank of New York, then it can simply turn over its portfolio in part to those reserve banks which are correspondingly strengthened. Expressed differently instead of settling balances through the Gold Settlement Fund with gold, we would in that case settle our debit balances by the use of paper out of our portfolio, apportioning it with due

regard to the reserve position of each of the other reserve banks. This plan for speedy and almost automatic transfers of credit has not yet been put into operation, though in the future it may become a resource of vast strength.

This explanation seems necessary to make clear that the normal function of the Reserve System expressly authorized by the statute and very wisely provided with regard to just such a situation is simply being exercised for the benefit of the member banks as a whole. The statute provides for the cooperative use of reserves and credit facilities of the twelve reserve banks in time of emergency so that their combined strength may be as effective as though they were one bank instead of twelve.

To return to our chronology; the next step in these financial operations, after the subscriptions are closed is their actual payment into the reserve banks by the banking institutions of the country. The preliminary readjustment of credit to enable them to do so, you will observe, has already taken place. The payments as made are credited to the government on the books of the reserve banks, in some cases actually, in other cases only constructively. Where actual payments are made, the reserve banks, acting as fiscal agents of the government, at once redeposit these payments with the national and state banks where they originate. Where the payment is constructive, it simply means that the bank originally subscribing (either for itself or its customers) for the government securities, instead of making a remittance to its reserve bank, merely credits the government on its books with the

amount to be remitted, having previously furnished the government with collateral. At this stage the government has hundreds, and possibly thousands, of accounts on the books or banks throughout the country. It is now in position to make disbursements either from its own purchases or for loans to the allied nations. But as these payments must principally be made in New York at the present time, it becomes necessary for the reserve banks gradually to withdraw these deposits and shift them through the Gold Settlement Fund to New York. Then a new set of entries must be made in what we may call the general ledger. The deposits in other districts are drawn down and remitted to New York through the Gold Settlement Fund. As this may reduce the reserves of the banks that held the government deposits throughout the country, the reserve banks of those districts must stand prepared to discount the paper for them to the extent necessary to make good the reduced reserves. This was done in a small way when the last loan was placed, and is being done to some extent, although very moderately, to-day as a result of withdrawals of deposits now arising from sales of certificates of indebtedness. As these funds are withdrawn to New York from the interior reserve banks they are immediately disbursed by the government in New York and increase the deposits and reserves of the New York banks generally. The New York banks can then repay the advances which they have received from the Federal Reserve Bank of New York which builds up its reserve. It can then in turn repay to other reserve banks any paper which it previously might have delivered to them if rediscount transactions had taken place between Reserve

Banks. Gradually the whole set of entries arising from the preliminary withdrawals from New York will have been reversed and cancelled as a result of the ultimate disbursements of the Government. The reserve banks have stepped into the breach simply to make some temporary advances. They have provided the machinery to move a great mass of credits rapidly from one part of the country to another and back again. In a sense the placing of these huge government loans is like moving a crop. When we have a large crop, the credit machinery must move faster. These large government borrowings make it necessary to speed up the credit machine, and that is exactly what the Reserve System is doing.

The figures of the Gold Settlement Fund illustrate what is being done:

Gross Clearings, 3 months, ending June 30, 1916	$ 832,299,000
" " 3 " " June 30, 1917	$5,101,317,000

Balances Paid:	1916	1917.
April	$ 21,756,000	$ 75,519,000
May	42,994,000	219,263,000
June	28,723,000	217,648,000
Total	$ 93,473,000	$ 512,430,000

But I think I am correct in assuming that you are more interested in a still later stage of this operation. It appears as though at this point the ultimate effect of subscriptions to government loans, the withdrawal of their proceeds to New York and their disbursement in New York by the government, has resulted in a perma-

nent loss of deposits, and consequently of reserves by the banks of the interior. The fears many bankers have expressed to me on this score would in some sections appear superficially to be well grounded but the effect will not be permanent. If it were so, that section of the country which suffered a permanent loss of deposits would suffer permanently a corresponding contraction of savings realized from its productive capacity whether it was in manufactured goods, food stuffs, the products of mines or of forests, or what not. This great credit fund being expended by the government, with the exception of the pay of soldiers abroad and of negligible purchases abroad, is being expended in this country in the purchase of materials of great variety, and the amounts loaned to our allies are almost entirely being spent here as well. It means that in all sections of the country these credits must inevitably move back to their points of origin, directly or indirectly through government purchases New ships, oil and coal, and products of mills, mines and forests in every part of the country now go to the government and each pulls back a share of this great fund. Even these sections which do not directly receive government contracts indirectly receive the benefit. Purchases of materials of various kinds in one part of the country either develop demands for raw materials or create a vacuum of goods which must be supplied or replaced from other sections. The intricate commerce of the country is so interwoven that it is difficult to exactly trace these movements, but the result is inevitable, and in those sections where this movement does not reach, it means that production and saving have been arrested, since the amount

subscribed in any locality for loans to the government is measured by the amount which that locality saves out of the profits on what it produces.

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ATLANTIC CITY, SEPTEMBER 28, 1917.

ADDRESS DELIVERED BY BENJAMIN STRONG AT THE AMERICAN BANKERS' ASSOCIATION, ATLANTIC CITY, SEPTEMBER 28, 1917.

The invitation which your officers were good enough to extend to me to address this Convention was accompanied by the suggestion that I should say something about the relations of the Federal Reserve System to government financing. But those who have sent sons to France, find it difficult to discuss the war in terms of dollars. Some of us have just said good-bye to boys who are leaving their homes to make the supreme sacrifice for their country. They are our real investment in the war. Our return on that investment will not be valued in rates of interest, but in the consciousness that it has again been shown that our form of government and our institutions develop in our citizens that generous altruism which is our proudest national tradition.

We look to these armies of the best the nation has to offer for the victories which can only be won by individual heroism. They look to us for the support which must be accorded through personal self-denial.

The great military organization now being created is only one part of the fighting machine with which we must equip ourselves if the sacrifice of sons and husbands is not to be in vain. The first army to be mobilized is the army which must shape and control the economic activities of the American people, so as to produce material for conducting warfare. Our battles can be won only by turning over to our government as rapidly as needed billions of dollars of credit, which must be drawn from the earnings and economie-

of the people of the country.

The general character of the financial organization needed for the work had been determined by statutes already enacted before our entrance into the war. Congress had for many years provided by law that government bonds should be sold by popular subscription without deduction of bankers commissions, and in December 1913, when the Federal Reserve Act became law the Secretary of the Treasury was authorized to appoint the Federal Reserve Banks to act as the Government's Fiscal Agents. These two brief paragraphs in our statutes, supplemented by the patriotism and energy of American bankers and their aids, are all that was required to lay the foundation for an organization which I believe can be relied upon to furnish credit at a minimum cost just as rapidly as the government can raise armies and the country can produce supplies.

Secretary McAdoo foresaw that upon this foundation he could build up a machine for war finance which would bring into co-operation in one great army, the bankers, the press and a multitude of other organizations not ordinarily related to the financial operations of the government, but so co-ordinated that their services would supplement those of the Treasury Department and of its fiscal agencies.

Each reserve bank was advised of its appointment as fiscal agent and directed to proceed with the development of the machinery needed to place the first Liberty Loan on May 3rd. 1917. While the organizations were different in each district, the main characteristics were the same. Committees were appointed to co-operate with

the reserve banks and upon these committees - largely composed of bankers - there developed the duty of sub-dividing each Federal reserve district into sub-districts and even smaller divisions so that ultimately in the Federal Reserve District of New York (and I believe practically all the others), we had committees or representatives actively at work in every city and town within a few weeks of the day we were told to start. In conjunction with the committees appointed to actually sell bonds, publicity organizations were created in all parts of the country, which had particular charge of news, publicity, advertising, public speaking, distributing posters and managing a great variety of other activities aimed to educate the people of the country to the importance of saving and of buying the bonds of the government.

Most of you are familiar with the way in which this matter was handled. Notice was necessarily so short that it was an almost superhuman task to cover the ground adequately between the first of May and the middle of June. Plans made so hastily cannot be expected always to work smoothly, nor did they when the first loan was placed. But much of the difficulty was due to a general lack of appreciation on all hands of the magnitude of the task. Many bankers expected the bonds to be delivered immediately upon payment; others failed to realize what a magnificent response would result from this offering and were inadequately equipped with clerks to handle the subscriptions; still others failed to take into account that the placing of a loan for the government must be handled by most precise methods requiring accurate reports which

must be filed on time. We have learned how to do it better hereafter. Whatever friction nothing can really mar the magnificence of the response. During the last few days before the subscriptions closed, when we were handling in the Federal Reserve Bank of New York alone some thousands of telegrams and telephone calls each day, we could feel the impending rush of subscriptions as one would sense the approach of a storm. Nor need we be ashamed to admit that at the close, the flood of subscriptions was completely beyond the handling capacity of even some of the largest and best organized banking institutions in the district.

It is stated that there were four million subscribers to the loan. I believe this underestimates the actual number of subscribers by at least 25%. In the Second Federal Reserve District, we have delivered 1,931,666 full paid interim certificates which in number equals about 14% of the population of the district. If less than one-half of this proportion prevails throughout the country, it would indicate at least five million subscribers, - a response which makes this first war loan an achievement of the first rank in government finance. The record in the City of Rochester indicates what is possible in the whole country. I am told that with their population of about 250,000 people they had no less than 61,000 subscribers. Such a response by the whole country would produce 25,000,000 subscribers for a government loan.

Every detail of the last loan has been completed in the Second District with the exception of deliveries of the permanent bonds. I think the same will be true in all Districts. Naturally,

those who may decide to convert bonds of the first issue into bonds of the second issue will prefer not to require of us the expense and labor of two deliveries. The permanent bonds are rapidly being prepared and I know that I am only expressing the wish of the Secretary of the Treasury, as well as the officers of all the reserve banks in asking that the bankers through whom these subscriptions were originally made, cooperate with us in conducting this complicated operation of making deliveries.

Such complaint as has arisen regarding deliveries of bonds fails to take into account the enormous physical labor involved The requisitions for bonds by the reserve banks called for a total of 8,782,000 pieces, which would require 20,000,000 sheets of paper weighing 237½ tons. In the Second District we have handled 4,005,657 pieces in issuing interim certificates alone.

To indicate the amount of labor involved in placing these government bonds, the clerical force of our bank has increased from 100 to about 600 people in a few months. The Publicity Division of the Liberty Loan Committee employs about 100 people in addition and the Committee Organization of the Second Federal Reserve District now embraces about 15,000 individuals and will greatly exceed that number when all appointments are made.

The actual machinery for selling the government's bonds, keeping proper records of their issue and making deliveries is not, however, the most important part of the government's financial operations. Of much greater importance, is the problem of so arranging this huge financial operation that it may be conducted

without disturbance to money markets, and consequently, causing a dis-organization of business. Of this, I should like to speak particularly from the standpoint of the Federal Reserve Bank of New York and of the New York money market.

New York is the country's central money market. From it radiate the principal currents of credit, so that an accurate view of the New York position is illuminating as to the whole country.

Were I asked to state in the fewest words the functions of the Reserve System in relation to government financing, I would say that the reserve banks keep the books of bank reserves and of government credits for the entire country. In a banking sense they run the general ledger. Present conditions afford the first opportunity for you to judge whether they do it well or not, and it is desirable that you should have the facts so that you may judge in this matter, because the confidence that is based upon understanding of, and belief in, our banking system at this time is essential to success - without it we shall fail - with it, we must succeed.

The amount of banking accomodation required in any well-organized country may be said roughly to correspond to the volume of the country's business. As business increases, bank loans and deposits increase in somewhat like proportion. As business declines, liquidation takes place. bank loans and deposits go down and the proportion of reserve to deposits increases. As an illustration of this formula, take our own experience in the past few years. When the war broke out, after a short period of disturbed business, we

were flooded with war orders, and at the same time flooded with gold. Business became increasingly active. Bank deposits and loans increased along with a rapid increase in our gold reserves. The production of our mills had to be speeded up to meet these increasing demands, so at the same time, the circulation of credit had to be speeded up to finance and increased trade. Now our government has entered the war, and is making further demands upon our productive capacity. The volume of these demands may be gauged - roughly, it is true but still with a fundamental accuracy - by the amount of the borrowings and increased tax collections of the government, and we must again speed up the machine of credit to keep pace with the machinery of production. The reserve banks form the center of hub of this credit machine, and I will briefly describe how the conduct of their operations is actually accelerated when the pressure is applied.

When the government makes an offering of securities, whether of long term bonds or short term notes, the banks of the country immediately realize that their customers or clients will subscribe to the offering, and that they, (the banks), will be called upon to make the payment on the subscriptions in their respective localities. Banks located outside of New York City, practically all of which have money on deposit there, prepare for this by drawing on their New York balance or calling in their New York loans and withdrawing these credit balances to the interior. As a rule they do not take cash but take credit on the books of the reserve bank of their district or of their local reserve agent. This is

the first spin of the wheel. The Federal Reserve Bank of New York receives from the other eleven reserve banks a vast sum of New York exchange for collection and remittance in advance of each loan being placed. It must settle with the other reserve banks every Thursday through the Gold Settlement Fund maintained in Washington. This results in a pull on the reserves of all the banks in New York City. The checks we collect from them reduce their reserve balance at the Federal Reserve Bank of New York and cause the wide fluctuation in excess reserves shown by the New York Clearing House statement. To meet this drain the member banks in New York come to the Federal Reserve Bank and borrow money in one form or another. Sometimes other means can also be employed re-coup their reserves. For example, at the time of the last loan, the Federal Reserve Bank of New York purchased from the British Government $120,000,000 of gold in a period of two weeks, and in addition received payment in gold of certain international obligations amounting to over $50,000,000 which matured on June 20th. All of this gold came to the Federal Reserve Bank of New York but was for the credit of a large number of New York banking institutions. Their reserves were immediately built up and, to that extent, the drain was offset.

A further means of relieving the loss is to offset it by transfers of government deposits from these sections of the country which have drawn so heavily on New York that their own reserves have been increased to an amount unnecessarily large. These transfers are accomplished by telegraph through the Gold Settlement Fund, and start currents flowing in the opposite direction, so that the move-

ments between New York and each of the other Federal reserve districts largely offset each other, leaving only net amounts to be transferred.

Still another method has been provided for achieving the desired result with a minimum of delay: Every Federal Reserve Bank has adopted a resolution authorizing its officers to rediscount its portfolio with any other Federal reserve bank. This procedure is authorized by Section 11 of the Reserve Act which gives the Federal Reserve Board, upon the affirmative vote of five members, the power to require such rediscounts, and authorizes the Reserve Board to fix the rates. At first this appears to be in the nature of a borrowing operation, but in point of fact it is really not so at all. The Federal reserve bank, in this case, New York, which loses its reserves through the Gold Settlement Fund, is usually simply paying out to the other reserve banks the reserve money which has been deposited with it by its own member banks whose accounts are depleted by these drafts from the interior. The reserve accounts of the members in New York are restored by the New York bank rediscounting their paper. If any considerable amount of reserves is moved to the other reserve banks and the amount of these discounts becomes sufficient to impair the reserve position of the Federal Reserve Bank of New York, then it can simply turn over its portfolio in part to those reserve banks which are correspondingly strengthened. Expressed differently instead of settling balances through the Gold Settlement Fund with gold, we would in that case settle our debit balances by the use of paper out of our portfolio, apportioning it with due

regard to the reserve position of each of the other reserve banks. This plan for speedy and almost automatic transfers of credit has not yet been put into operation, though in the future it may become a resource of vast strength.

This explanation seems necessary to make clear that the normal function of the Reserve System expressly authorized by the statute and very wisely provided with regard to just such a situation is simply being exercised for the benefit of the member banks as a whole. The statute provides for the cooperative use of reserves and credit facilities of the twelve reserve banks in time of emergency so that their combined strength may be as effective as though they were one bank instead of twelve.

To return to our chronology; the next step in these financial operations, after the subscriptions are closed is their actual payment into the reserve banks by the banking institutions of the country. The preliminary readjustment of credit to enable them to do so, you will observe, has already taken place. The payments as made are credited to the government on the books of the reserve banks, in some cases actually, in other cases only constructively. Where actual payments are made, the reserve banks, acting as fiscal agents of the government, at once redeposit these payments with the national and state banks where they originate. Where the payment is constructive, it simply means that the bank originally subscribing (either for itself or its customers) for the government securities, instead of making a remittance to its reserve bank, merely credits the government on its books with the

amount to be remitted, having previously furnished the government with collateral. At this stage the government has hundreds, and possibly thousands, of accounts on the books or banks throughout the country. It is now in position to make disbursements either from its own purchases or for loans to the allied nations. But as these payments must principally be made in New York at the present time, it becomes necessary for the reserve banks gradually to withdraw these deposits and shift them through the Gold Settlement Fund to New York. Then a new set of entries must be made in what we may call the general ledger. The deposits in other districts are drawn down and remitted to New York through the Gold Settlement Fund. As this may reduce the reserves of the banks that held the government deposits throughout the country, the reserve banks of those districts must stand prepared to discount the paper for them to the extent necessary to make good the reduced reserves. This was done in a small way when the last loan was placed, and is being done to some extent, although very moderately, to-day as a result of withdrawals of deposits now arising from sales of certificates of indebtedness. As these funds are withdrawn to New York from the interior reserve banks they are immediately disbursed by the government in New York and increase the deposits and reserves of the New York banks generally. The New York banks can then repay the advances which they have received from the Federal Reserve Bank of New York which builds up its reserve. It can then in turn repay to other reserve banks any paper which it previously might have delivered to them if rediscount transactions had taken place between Reserve

Banks. Gradually the whole set of entries arising from the preliminary withdrawals from New York will have been reversed and cancelled as a result of the ultimate disbursements of the Government. The reserve banks have stepped into the breach simply to make some temporary advances. They have provided the machinery to move a great mass of credits rapidly from one part of the country to another and back again. In a sense the placing of these huge government loans is like moving a crop. When we have a large crop, the credit machinery must move faster. These large government borrowings make it necessary to speed up the credit machine, and that is exactly what the Reserve System is doing.

The figures of the Gold Settlement Fund illustrate what is being done:

Gross Clearings, 3 months, ending June 30, 1916 $ 832,299,000
" " 3 " " June 30, 1917 $5,101,317,000

Balances Paid:	1916	1917.
April	$ 21,756,000	$ 75,519,000
May	42,994,000	219,263,000
June	28,723,000	217,648,000
Total	$ 93,473,000	$ 512,430,000

But I think I am correct in assuming that you are more interested in a still later stage of this operation. It appears as though at this point the ultimate effect of subscriptions to government loans, the withdrawal of their proceeds to New York and their disbursement in New York by the government, has resulted in a perma-

nent loss of deposits, and consequently of reserves by the banks of the interior. The fears many bankers have expressed to me on this score would in some sections appear superficially to be well grounded but the effect will not be permanent. If it were so, that section of the country which suffered a permanent loss of deposits would suffer permanently a corresponding contraction of savings realized from its productive capacity whether it was in manufactured goods, food stuffs, the products of mines or of forests, or what not. This great credit fund being expended by the government, with the exception of the pay of soldiers abroad and of negligible purchases abroad, is being expended in this country in the purchase of materials of great variety, and the amounts loaned to our allies are almost entirely being spent here as well. It means that in all sections of the country these credits must inevitably move back to their points of origin, directly or indirectly through government purchases New ships, oil and coal, and products of mills, mines and forests in every part of the country now go to the government and each pulls back a share of this great fund. Even these sections which do not directly receive government contracts indirectly receive the benefit. Purchases of materials of various kinds in one part of the country either develop demands for raw materials or create a vacuum of goods which must be supplied or replaced from other sections. The intricate commerce of the country is so interwoven that it is difficult to exactly trace these movements, but the result is inevitable, and in those sections where this movement does not reach, it means that production and saving have been arrested, since the amount

subscribed in any locality for loans to the government is measured by the amount which that locality saves out of the profits on what it produces.

It must be admitted that our agricultural products, which are one of the chief instrumentalities for bringing about this readjustment, are in the main marketed at one short season of the year. In the interval, withdrawals of bank credit from those sections of the country will leave vacuum somewhat longer than in manufacturing sections where production and marketing are continuous the year around. But when crops are moved and paid for this credit will move back inevitably to the agricultural sections so long as profitable crops are produced there.

I refer to this particularly and emphatically because of the fears which some bankers entertain which might induce them to withhold their best efforts from assisting the government in placing the next loan. The last work of assurance on that point, very properly must come from the reserve banks, for during the interval between the marketing of one harvest and the next, when banks in the agricultural sections must both finance the farmers and assist in financing the government, reserves must be bridged by reasonable accomodation at the reserve banks. That is what the reserve banks are for. They expect to be used, and no time like the present will ever arise in our history when this use of our new banking system will be so important to every citizen.

Speaking of these matters from the standpoint of the reserve banks themselves, I fear you may have heard careless dis-

cussion of their possible intention to attempt arbitrary control of these money matters. Only one kind of control is required, and that is self-control. The reserve banks should not be expected to tie up their reserves in permanent financing for the government or anybody else. Their function is to make these temporary loans during periods of strain, whether occasioned by war and government financing, by domestic difficulties, or by any other cause. The exercise of self-control in these matters means that the reserve banks will see to it that the expansion which they afford to our banking system is that temporary expansion which is represented by a portfolio containing self-liquidating bills and loans which mature within a reasonably short time and which Congress has wisely fixed at ninety days and no longer.

I think I may use the experience of the Federal Reserve Bank of New York to illustrate this point. On the first of June, the discounts and loans of that bank, all maturing within ninety days, amounted to $37,000,000 and its investments, which included $20,000,000 of short term certificates of the government amounted to $29,000,000. At about that time the interior drafts which I have mentioned began to come in, and during the month of June we were obliged to settle debit balances to the interior reserve banks aggregating about $550,000,000. During that short period our discounts rose from $37,000,000 on June 1st to $252,000,000 on June 19th. Of this $252,000,000 of discounts.

$173,000,000 matured within fifteen days.

$ 19,000,000 matured within thirty days.

$ 29,000,000 matured within sixty days and

$ 31,000,000 matured within ninety days.

By August 15th, our discounts had been reduced to $62,000,000 without any increase in rates being employed to force the reduction. In other words, in two months we liquidated $190,000,000 of paper taken from member banks with practically no disturbance to the money market. On September 19th, our total discounts amounted to $87,000,000 of which

$29,000,000	matured	within	15	days.
$17,000,000	"	"	30	"
$20,000,000	"	"	60	"
$21,000,000	"	"	90	"

Our investments totaled $8,900,000 of which only $1,300,000 consisted of long time bonds of the government, purchased under statutory provision of the Act and $2,600,000 short term U. S. Treasury certificates of indebtedness.

With this liquidation automatically accomplished it leaves us on September 19th with $658,000,000 of reserve, practically all gold, being 89% of our net deposit and note liabilities. The whole Reserve System on September 14th held $1,415,000,000 of cash, practically all gold, as reserve against the liabilities of the whole system. With this magnificent foundation upon which to rest our government's banking transactions, how can things go wrong? There is no occasion for timidity on the part of our bankers in putting the full weight of their influences, their energies and their resources behind the government in the conduct of the war.

In conclusion, I wish to say a few words in regard to the Administration's financial policy. On this subject history speaks in no uncertain voice. I wish you would read, as I have, the record of the last one hundred and fifty years of financial operations in war time of certain European governments. You will then realize that any finance minister who has the courage to impose taxes at the outbreak of a war heavy enough to pay bond interest, to rapidly amortize bond issues when peace comes, and to pay a share of war expenses, will have a minimum of difficulty in borrowing money. The records of the British Government in the Napoleonic Wars, the Crimean War and even so recently as the Boer War, demonstrate, by the mistakes disclosed, this fundamental principle of war finance. But we do not need to turn to Europe for examples on this subject. The history of the financial operations of our own government in the Civil War is entirely adequate to justify the policy being pursued. Within little more than six months of the outbreak of our Civil War our banks suspended specie payment. Our government was borrowing money from the banks in 1861 at ruinous rates of interest, and only too soon was driven to the disastrous expedient of issuing flat money. In 1862, the government placed its loans at rates, which on a gold basis produced a value of about 96% of par value for bonds bearing high rates of interest. The funds realized from loans placed by the government in 1863 produced on a gold basis as low as 64½% of par value, and in 1864, as low as 41½%.

On the other hand the clear war revenues from taxes in 1862 were but $52,000,000; in 1863, $113,000,000, whereas, in 1866,

after the close of the war, the revenue legislation then in force produced the enormous total for those days of $558,000,000. It is obvious that the failure to support the government's credit early in the war by adequate tax revenues undoubtedly was one reason for the unfortunate later indulgence in every variety of unsound financial expedient, the effects of some of which have dogged our steps for nearly fifty years.

Now, let us compare the present tax program with these past experiences. Their dissimilarity is so striking as to be almost startling; and is one of the most hopeful auguries for the success of our whole financial undertaking. Personally, I rejoice that the officers of our government have the courage to face the criticism on the one hand of those who believe the program of taxation is too heavy; on the other hand of those radicals who think it is not heavy enough. Not enough taxes means declining credit, too much taxes means declining industries. The only danger in exacting heavy taxes on profits and incomes is the danger of not allowing sufficient profit inducement to the industries of the country to stimulate production. I confidently believe that our country can pay all the taxes required to maintain its credit and to support all the borrowings needed for the period of the war, without crippling its vital industries, and that those who now cry calamity simply because they don't want to pay heavy taxes will some day see and acknowledge their error. But our Congress must be careful not to destroy the income sources which produce taxes. Industries which must expand to meet war conditions, need earnings for plants and

inventories which may be useless when war ceases, and yet they must be built. To take all their income will retard new construction.

These of us who have sent our boys to France are beginning to realize what the war is. Our part in it and the motive behind it will be an imperishable glory for this great nation. But we must not lose our boys and lose the war for lack of money, nor must we fail in providing the money simply because our financial army is inadequately equipped. I am convinced that the only important weakness in our financial organization is the lack of State bank membership in the Federal Reserve System. One half of our financial army is equipped with modern machinery by membership in the system. The other half, equally patriotic, is ineffectively armed. You will recall the disastrous results to the Russian Armies in the early days of the war when large numbers were sent to the front without arms and ammunition. Don't let us fail our duty for lack of the strength we can only enjoy if we are united. It may indeed rest with you state bank men to determine what shall happen to our boys and they must come home victorious.

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ADDRESS DELIVERED BY BENJAMIN STRONG

AT THE AMERICAN BANKING ASSOCIATION

ATLANTIC CITY, SEPTEMBER 28, 1917.

Not to be released for publication

until 12:30 p. m., September 28, 1917.

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The amount of banking accommodation required in any well organized country may be said roughly to correspond to the volume of the country's business. As business increases, bank loans and deposits increase in somewhat like proportion. As business declines, liquidation takes place, bank loans and deposits go down and the proportion of reserve to deposits increases. As an illustration of this formula, take our own experience in the past few years. When the war broke out, after a short period of disturbed business, we were flooded with war orders, and at the same time flooded with gold. Business became increasingly active. Bank deposits and loans increased along with a rapid increase in our gold reserves. The production of our mills had to be speeded up to meet these increasing demands, so at the same time, the circulation of credit had to be speeded up to finance the increased trade. Now our government has entered the war, and is making further demands upon our productive capacity. The volume of these demands may be guaged - roughly, it is true but still with a fundamental accuracy - by the amount of the borrowings and increased tax collections of the government, and we must again speed up the machine of credit to keep pace with the machinery of production. The reserve banks form the center or hub of this credit machine, and I will briefly describe how the conduct of their operations is actually accelerated when the pressure is applied.

When the government makes an offering of securities, whether of long term bonds or short term notes, the banks of the country immediately realize that their ass tomers or clients will subscribe to the offering, and that they, (the banks), will be called upon to make the payment on the subscriptions in their respective localities. Banks located outside of New York City, practically all of which have money on deposit there, prepare for this by drawing on their New York balances or calling in their New York loans, and withdrawing these credit balances to the interior. As a rule they do not take cash but take credit on the books of the reserve bank of their district or of their local reserve agent. This is the first spin of the wheel. The Federal Reserve Bank of New York receives from the other eleven reserve banks a vast sum of New York exchange for collection and remittance in advance of each loan being placed. It must settle with the other reserve banks every Thursday through the Gold Settlement Fund maintained in Washington. This results in a pull on the reserves of all the banks in New York City. The checks we collect from them reduce their reserve balances at the Federal Reserve Bank of New York and cause the wide fluctuation in excess reserves shown by the New York Clearing House statement. To meet this drain the member banks in New York come to the Federal Reserve Bank and borrow money in one form or another. Sometimes other means can also be employed to recoup their reserves. For example, at the time of the last loan, the Federal Reserve Bank of New York purchased from the British Government $120,000,000 of gold in a period of two weeks, and in addition received payment in gold of certain international obligations amounting to over $50,000,000 which matured on June 20th. All of this gold came to the Federal Reserve Bank of New York but was for the credit of a large number of New York banking institutions. Their reserves were immediately built up and, to that extent, the drain was offset.

A further means of relieving the loss is to offset it by transfers of government deposits from these sections of the country which have drawn so heavily on New York that their own reserves have been increased to an amount unnecessarily large. These transfers are accomplished by telegraph through the Gold Settlement Fund, and start currents flowing in the opposite direction, so that the movements between New York and each of the other Federal reserve districts largely offset each other, leaving only net amounts to be transferred.

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To return to our chronology: The next step in these financial operations, after the subscriptions are closed is their actual payment into the reserve banks by the banking institutions of the country. The preliminary readjustment of credit to enable them to do so, you will observe, has already taken place. The payments as made are credited to the government on the books of the reserve banks, in some cases actually, in other cases only constructively. Where actual payments are made, the reserve banks, acting as fiscal agents of the government, at once redeposit these payments with the national and state banks where they originate. Where the payment is constructive, it simply means that the bank originally subscribing (either for itself or its customers) for the government securities, instead of making a remittance to its reserve bank, merely credits the government on its books with the amount to be remitted, having previously furnished the government with collateral. At this stage the government has hundreds, and possibly thousands, of accounts on the books of banks throughout the country. It is now in position to make disbursements either for its own purchases or for loans to the allied nations. But as these payments must principally be made in New York at the present time, it becomes necessary for the reserve banks gradually to withdraw these deposits and shift them through the Gold Settlement Fund to New York. Then a new set of entries must be made in what we may call the general ledger. The deposits in other districts are drawn down and remitted to New York through the Gold Settlement Fund. As this may reduce the reserves of the banks that held the government deposits throughout the country, the reserve banks of those districts must stand prepared to discount paper for them to the extent necessary to make good the reduced reserves. This was done in a small way when the last loan was placed, and is being done to some extent, although very moderately, to-day as a result of withdrawals or deposits now arising from sales of certificates of indebtedness. As these funds are withdrawn to New York from the interior reserve banks they are immediately disbursed by the government in New York and increase the deposits and reserves of the New York banks generally. The New York banks can then repay the advances which they have received from the Federal Reserve Bank of New York which builds up its reserve. It can then in turn repay to other reserve banks any paper which it previously might have delivered to them if rediscount transactions had taken place between Reserve Banks. Gradually the whole set of entries arising from the preliminary withdrawals from New York will have been reversed and cancelled as a result of the ultimate disbursements of the Government. The reserve banks have stepped into the breach simply to make some temporary advances. They have provided the machinery to move a great mass of credits rapidly from one part of the country to another and back again. In a sense the placing of these huge government loans is like moving a crop. When we have a large crop, the credit machinery must move faster. These large government borrowings make it necessary to speed up the credit machine, and that is exactly what the Reserve System is doing.

The figures of the Gold Settlement Fund illustrate what is being done:

Gross Clearings, 3 months, ending June 30, 1916	$832,299,000.
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But I think I am correct in assuming that you are more interested in a still later stage of this operation. It appears as though at this point the ultimate effect of subscriptions to government loans, the withdrawal of their proceeds to New York and their disbursement in New York by the government, has resulted in a permanent loss of deposits and consequently of reserves by the banks of the interior. The fears many bankers have expressed to me on this score would in some sections appear superficially to be well grounded, but the effect will not be permanent. If it were so, that section of of the country which suffered a permanent loss of deposits would suffer permanently a corresponding contraction of savings realized from its productive capacity whether it was in manufactured goods, food stuffs, the products of mines or of forests, or what not. This great credit fund being expended by the government, with the exception of the pay of soldiers abroad and of negligible purchases abroad, is being expended in this country in the purchase of materials of great variety, and the amounts loaned to our allies are almost entirely being spent here as well. It means that in all sections of the country these credits must inevitably move back to their points of origin, directly or indirectly through government purchases. New ships, oil and coal, and products of mills, mines and forests in every part of the country now go to the government and each pulls back a share of this great fund. Even those sections which do not directly receive government contracts indirectly receive the benefit. Purchases of materials of various kinds in one part of the country either develop demands for raw materials or create a vacuum of goods which must be supplied or replaced from other sections. The intricate commerce of the country is so interwoven that it is difficult to exactly trace these movements, but the result is inevitable, and in those sections where this movement does not reach, it means that production and saving have been arrested, since the amount subscribed in any locality for loans to the government is measured by the amount which that locality saves out of the profits on what it produces.

It must be admitted that our agricultural products, which are one of the chief instrumentalities for bringing about this readjustment, are in the main marketed at one short season of the year. In the interval, withdrawals of bank credit from those sections of the country will leave a vacuum somewhat longer than in manufacturing sections where production and marketing are continuous the year around. But when crops are moved and paid for this credit will move back inevitably to the agricultural sections so long as profitable crops are produced there.

I refer to this particularly and emphatically because of the fears which some bankers entertain which might induce them to withhold their best efforts from assisting the government in placing the next loan. The last word of assurance on that point, very properly must come from the reserve banks, for during the interval between the marketing of one harvest and the next, when banks in the agricultural sections must both finance the farmers and assist in financing the government, reserves must be bridged by reasonable accommodation at the reserve banks. That is what the reserve banks are for. They expect to be used, and no time like the present will ever arise in our history when this use of our new banking system will be so important to every citizen.

Speaking of these matters from the standpoint of the reserve banks themselves, I fear you may have heard careless discussion of their possible intention to attempt arbitrary control of these money matters. Only one kind of control is required, and that is self-control. The reserve banks should not be expected to tie up their reserves in permanent financing for the government or anybody else. Their function is to make these temporary loans during period of strain, whether occasioned by war and government financing, by domestic difficulties, or by any other cause. The exercise of self-control in these matters means that the reserve banks will see to it that the expansion which they afford to our banking system is that temporary expansion which is represented by a portfolio containing self-liquidating bills and loans which mature within a reasonably short time and which Congress has wisely fixed at ninety days and no longer.

I think I may use the experience of the Federal Reserve Bank of New York to illustrate this point. On the first of June, the discounts and loans of that bank, all maturing within ninety days, amounted to $37,000,000 and its investments, which included $20,000,000 of short term certificates of the government amounted to $29,000,000. At about that time the interior drafts which I have mentioned began to come in, and during the month of June we were obliged to settle debit balances to the interior reserve banks aggregating about $550,000,000. During that short period our discounts rose from $37,000,000 on June 1st to $252,000,000 on June 19th. Of this $252,000,000 of discounts

$173,000,000 matured within fifteen days,

$ 19,000,000 matured within thirty days,

$ 29,000,000 matured within sixty days, and

$ 31,000,000 matured within ninety days.

By August 15th, our discounts had been reduced to $62,000,000 without any increase in rates being employeed to force the reduction. In other words, in two months we liquidated $190,000,000 of paper taken from member banks with practically no disturbance to the money market. On September 19th, our total discounts amounted to $87,000,000 of which

$29,000,000 matured within 15 days,

$17,000,000 matured within 30 days,

$20,000,000 matured within 60 days,

$21,000,000 matured within 90 days, and

Our investments totaled $8,900,000 of which only $1,300,000 consisted of long time bonds of the government, purchased under statutory provisions of the Act, and $2,600,000 short term U. S. Treasury certificates of indebtedness.

With this liquidation automatically accomplished it leaves us on September 19th with $658,000,000 of reserve, practically all gold, being 89% of our new deposit and note liabilities. The whole Reserve System on September 14th held $1,415,000,000 of cash, practically all gold, as reserve against the liabilities of the whole system. With this magnificent foundation upon which to rest our government's banking transactions, how can things go wrong? There is no occasion for timidity on the part of our bankers in putting the full weight of their influence, their energies and their resources behind the government in the conduct of the war.

In conclusion, I wish to say a few words in regard to the Administration's financial policy. On this subject history speaks in no uncertain voice. I wish you would read, as I have, the record of the last one hundred and fifty years of financial operations in war time of the certain European governments. You will then realize that any finance minister who has the courage to impose taxes at the outbreak of a war heavy enough to pay bond interest, to rapidly amortize bond issued when peace comes, and to pay a share of war expenses, will have a minimum of difficulty in borrowing money. The records of the British Government in the Napoleonic Wars, the Crimean War and even so recently as the Boer War, demonstrate, by the mistakes disclosed, this fundamental principle of war finance. But we do not need to turn to Europe for examples on this subject. The history of the financial operations of our own government in the Civil War is entirely adequate to justify the policy being pursued. Within little more than six months of the outbreak of our Civil War our banks suspended specie payment. Our government was borrowing money from the banks in 1861 at ruinous rates of interest, and only too soon was driven to the disastrous expedient of issuing fiat money. In 1862, the government placed its loan at rates, which on a gold basis produced a value of about 96% of par value for bonds bearing high rates of interest. The funds realized from loans placed by the government in 1863 produced on a gold basis as low as 64½% of par value, and in 1864, as low as 41½%.

On the other hand the clear war revenues from taxes in 1862 were but $52,000,000; in 1863, $113,000,000, whereas, in 1866, after the close of the war, the revenue legislation then in force produced the enormous total for those days of $558,000,000. It is obvious that the failure to support the government's credit early in the war by adequate tax revenues undoubtedly was one reason for the unfortunate later indulgence in every variety of unsound financial expedient, the effects of some of which have dogged our steps for nearly fifty years.

Now, let us compare the present tax program with these past experiences. Their dissimilarity is so striking as to be almost startling, and is one of the most hopeful auguries for the success of our whole financial undertaking. Personally, I rejoice that the officers of our government have the courage to face the critism on the one hand of those who believe the program of taxation is too heavy; on the other hand of those radicals who think it is not heavy enough. Not enough taxes means declining credit, too much taxes-means declining industries. The only danger in exacting heavy taxes on profits and incomes is the danger of not allowing sufficient profit inducement to the industries of the country to stimulate production. I confidently believe that our country can pay all the taxes required to maintain its credit and to support all the borrowings needed for the period of the war, without crippling its vital industries, and that those who now cry calamity simply because they don't want to pay heavy taxes will some day see and acknowledge their error. But our Congress must be careful not to destroy the income sources which produce taxes. Industries which must expand to meet war conditions, need earnings for plants and inventories which may be useless when war ceases, and yet they must be built. To take all their income will retard new constructions.

Those of us who have sent our boys to France are beginning to realize what the war is. Our part in it and the motive behind it will be an imperishable glory for this great nation. But we must not lose our boys and lose the war for lack of money, nor must we fail in providing the money simply because our financial army is inadequately equipped. I am convinced that the only important weakness in our financial organization is the lack of State bank membership in the Federal Reserve System. One half of our financial army is equipped with modern machinery by membership in the system. The other half, equally patriotic, is ineffectively armed. You will recall the disastrous results to the Russian Armies in the early days of the war when large numbers were sent to the front without arms and ammunition. Don't let us fail of our duty for lack of the strength we can only enjoy if we are united. It may indeed rest with you state bank men to determine what shall happen to our boys - and they <u>must</u> come home victorious.

ADDRESS DELIVERED BY BENJAMIN STRONG
AT THE AMERICAN BANKERS' ASSOCIATION
ATLANTIC CITY, SEPTEMBER 28, 1917.

The invitation which your officers were good enough to extend to me to address this Convention was accompanied by the suggestion that I should say something about the relations of the Federal Reserve System to government financing. But those who have sent sons to France, find it difficult to discuss the war in terms of dollars. Some of us have just said good-bye to boys who are leaving their homes to make the supreme sacrifice for their country. They are our real investment in the war. Our return on that investment will not be valued in rates of interest, but in the consciousness that it has again been shown that our form of government and our institutions develop in our citizens that generous altruism which is our proudest national tradition.

We look to these armies of the best the nation has to offer for the victories which can only be won by individual heroism. They look to us for the support which must be accorded through personal self-denial.

The great military organization now being created is only one part of the fighting machine with which we must equip ourselves if the sacrifice of sons and husbands is not to be in vain. The first army to be mobilized is the army which must shape and control the economic activities of the American people, so as to produce material for conducting warfare. Our battles can be won only by turning over to our government as rapidly as needed billions of dollars of credit, which must be drawn from the earnings and economies of the people of the country.

The general character of the financial organization needed for the work had been determined by statutes already enacted before our entrance into the war. Congress had for many years provided by law that government bonds should be sold by popular subscription without deduction of bankers commissions, and in December 1913, when the Federal Reserve Act became law the Secretary of the Treasury was authorized to appoint the Federal Reserve Banks to act as the Government's Fiscal Agents. These two brief paragraphs in our statutes, supplemented by the patriotism and energy of American bankers and their aids, are all that was required to lay the foundation for an organization which I believe can be relied upon to furnish credit at a minimum cost just as rapidly as the Government can raise armies and the country can produce supplies.

Secretary McAdoo foresaw that upon this foundation he could build up a machine for war finance which would bring into cooperation in one great army, the bankers, the press and a multitude of other organizations not ordinarily related to the financial operations of the government, but so coordinated that their services would supplement those of the Treasury Department and of its fiscal agencies.

Each reserve bank was advised of its appointment as fiscal agent and directed to proceed with the development of the machinery needed to place the first Liberty Loan on May 3, 1917. While the organizations were different in each district, the main characteristics were the same. Committees were appointed to cooperate with the reserve banks and upon these committees - largely composed of bankers - there developed the duty of sub-dividing each Federal reserve district into sub-districts and even smaller divisions so that ultimately in the Federal Reserve District of New York (and I believe practically all the others), we had committees or representatives actively at work in every city and town within a few weeks of the day we were told to start. In conjunction with the committees appointed to actually sell bonds, publicity organizations were created in all parts of the country, which had particular charge of news, publicity, advertising, public speaking, distributing posters and managing a great variety of other activities aimed to educate the people of the country to the importance of saving and of buying the bonds of the Government.

Most of you are familiar with the way in which this matter was handled. Notice was necessarily so short that it was an almost superhuman task tocover the ground adequately between the first of May and the middle of June. Plans made so hastily cannot be expected always to work smoothly, nor did they when the first loan was placed. But much of the difficulty was due to a general lack of appreciation on all hands of the magnitude of the task. Many bankers expected the bonds to be delivered immediately upon payment; others failed to realize what a magnificent response would result from this offering and were inadequately equipped with clerks to handle the subscriptions; still others failed to take into account that the placing of a loan for the government must be handled by most precise methods requiring accurate reports which must be filed on time. We have learned how to do it better hereafter. Whatever friction nothing can really mar the magnificence of the response. During the last few days before the subscriptions closed, when we were handling in the Federal Reserve Bank of New York alone some thousands of telegrams and telephone calls each day, we could feel the impending rush of subscriptions as one would sense the approach of a storm. Nor need we be ashamed to admit that at the close, the flood of subscriptions was completely beyond the handling capacity of even some of the largest and best organized banking institutions in the district.

It is stated that there were four million subscribers to the loan. I believe this underestimates the actual number of subscribers by at least 25%. In the second Federal Reserve District, we have delivered 1,931,666 full paid interim certificates which in number equals about 14% of the population of the district. If less than one half of this proportion prevails throughout the country, it would indicate at least five million subscribers, - a response which makes this first war loan an achievement of the first rank in government finance. The record in the City of Rochester indicates what is possible in the whole country. I am told that with their population of about 250,000 people they had no less than 61,000 subscribers. Such a response by the whole country would produce 25,000,000 subscribers for a government loan.

Every detail of the last loan has been completed in the Second District with the exception of deliveries of the permanent bonds. I think the same will be true in all Districts. Naturally, those who may decide to convert bonds of the first issue into bonds of the second issue will prefer not to require of us the expense and labor of two deliveries. The permanent bonds are rapidly being prepared and I know that I am only expressing the wish of the Secretary of the Treasury as well as the officers of all the reserve banks in asking that the bankers through whom these subscriptions were originally made, cooperate with us in conducting this complicated operation of making deliveries.

Such complaint as has arisen regarding deliveries of bonds fails to take into account the enormous physical labor involved. The requisitions for bonds by the reserve banks called for a total of 8,782,000 pieces, which would require 20,000,000 sheets of paper weighing 237 1/2 tons. In the second district we have handled 4,065,657 pieces in issuing interim certificates alone.

To indicate the amount of labor involved in placing these government bonds, the clerical force of our bank has increased from 100 to about 600 people in a few months. The Publicity Division of the Liberty Loan Committee employs about 100 people in addition and the Committee Organization of the Second Federal Reserve District now embraces about 15,000 individuals and will greatly exceed that number when all appointments are made.

The actual machinery for selling the government's bonds, keeping proper records of their issue and making deliveries is not, however, the most important part of the government's financial operations. Of much greater importance, is the problem of so arranging this huge financial operation that it may be conducted without disturbance to money markets, and consequently, causing a disorganization of business. Of this, I should like to speak particulafly from the standpoint of the Federal Reserve Bank of New York and of the New York money market.

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April	$ 21,756,000	$ 75,519,000
May	42,994,000	219,263,000
June	28,723,000	217,648,000
Total	$ 93,473,000	$512,430,000

But I think I am correct in assuming that you are more interested in a still later stage of this operation. It appears as though at this point the ultimate effect of subscriptions to government loans, the withdrawal of their proceeds to New York and their disbursement in New York by the government, has resulted in a permanent loss of deposits, and consequently of reserves by the banks of the interior. The fears many bankers have expressed to me on this score would in some sections appear superficially to be well grounded but the effect will not be permanent. If it were so, that section of the country which suffered a permanent loss of deposits would suffer permanently a corresponding contraction of savings realized from its productive capacity whether it was in manufactured goods, food stuffs, the products of mines or of forests, or what not. This great credit fund being expended by the government, with the exception of the pay of soldiers abroad and of negligible purchases abroad,is being expended in this country in the purchase of materials of great variety, and the amounts loaned to our allies are almost entirely being spent here as well. It means that in all sections of the country these credits must inevitably move back to their points of origin, directly or indirectly through government purchases. New ships, oil and coal, and products of mills, mines and forests in every part of the country now go to the government and each pulls back a share of this great fund. Even these sections which do not directly receive government contracts indirectly receive the benefit. Purchases of materials of various kinds in one part of the country either develop demands for raw materials or create a vacuum of goods which must be supplied or replaced from other sections. The intricate commerce of the country is so interwoven that it is difficult to exactly trace these movements, but the result is inevitable, and in those sections where this movement does not reach, it means that production and saving have been arrested, since the amount subscribed in any locality for loans to the government is measured by the amount which that locality saves out of the profits on what it produces.

It must be admitted that our agricultural products, which are one of the chief instrumentalities for bringing about this readjustment, are in the main marketed at one short season of the year. In the interval, withdrawals of bank credit from those sections of the country will leave vacuum somewhat longer than in manufacturing sections where production and marketing are continuous the year around. But when crops are moved and paid for this credit will move back inevitably to the agricultural sections so long as profitable crops are produced there.

I refer to this particularly and emphatically because of the fears which some bankers entertain which might induce them to withhold their best efforts from assisting the government in placing the next loan. The last work of assurance on that point, very properly must come from the reserve banks, for during the interval between the marketing of one harvest and the next, when banks in the agricultural sections must both finance the farmers and assist in financing the government, reserves must be bridged by reasonable accommodation at the reserve banks. That is what the reserve banks are for. They expect to be used, and no time like the present will ever arise in our history when this use of our new banking system will be so important to every citizen.

Speaking of these matters from the standpoint of the reserve banks themselves, I fear you may have heard careless discussion of their possible intention to attempt arbitrary control of these money matters. Only one kind of control is required, and that is self-control. The reserve banks should not be expected to tie up their reserves in permanent financing for the government or anybody else. Their function is to make these temporary loans during periods of strain, whether occasioned by war and government financing, by domestic difficulties, or by any other cause. The exercise of self-control in these matters means that the reserve banks will see to it that the expansion which they afford to our banking system is that temporary expansion which is represented by a portfolio containing self-liquidating bills and loans which mature within a reasonably short time and which Congress has wisely fixed at ninety days and no longer.

I think I may use the experience of the Federal Reserve Bank of New York to illustrate this point. On the first of June, the discounts and loans of that bank, all maturing within ninety days, amounted to $37,000,000 and its investments, which included $20,000,000 of short term certificates of the government amounted to $29,000,000. At about that time the interior drafts which I have mentioned began to come in, and during the month of June we were obliged to settle debit balances to the interior reserve banks aggregating about $550,000,000. During that short period our discounts rose from $37,000,000 on June 1st to $252,000,000 on June 19th. Of this $252,000,000 of discounts

$173,000,000 matured within fifteen days,

$ 19,000,000 matured within thirty days,

$ 29,000,000 matured within sixty days and

$ 31,000,000 matured within ninety days.

By August 15th, our discounts had been reduced to $62,000,000 without any increase in rates being employed to force the reduction. In other words, in two months we liquidated $190,000,000 of paper taken from member banks with practically no disturbance to the money market. On September 19, our total discounts amounted to $87,000,000 of which

$ 29,000,000	matured	within	15 days
$ 17,000,000	"	"	30 days
$ 20,000,000	"	"	60 days
$ 21,000,000	"	"	90 days

Our investments totaled $8,900,000 of which only $1,300,000 consisted of long time bonds of the government, purchased under statutory provision of the Act and $2,600,000 short term U. S. Treasury certificates of indebtedness.

With this liquidation automatically accomplished it leaves us on September 19th with $658,000,000 of réserve, practically all gold, being 89% of our net deposit and note liabilities. The whole Reserve System on September 14th held $1,415,000,000 of cash, practically all gold, as reserve against the liabilities of the whole system. With this magnificent foundation uponwhich to rest our government's banking transactions, how can things go wrong? There is no occasion for timidity on the part of our bankers in putting the full weight of their influences, their energies and their resources behind the government in the conduct of the war.

In conclusion, I wish to say a few words in regard to the Administration's financial policy. On this subject history speaks in no uncertain voice.

I wish youwould read, as I have, the record of the last one hundred and fifty years of financial operations in war time of certain European governments. You will then realize that any finance minister who has the courage to impose taxes at the outbreak of a war heavy enough to pay bond interest, to rapidly amortize bond issues when peace comes, and to pay a share of war expenses, will have a minimum of difficulty in borrowing money. The records of theBritish Government in the Napoleonic Wars, the Crimean War and even so recently as the Boer War, demonstrate, by the mistakes disclosed, this fundamental principle of war finance. But we do not need to turn to Europe for examples on this subject. The history of the financial operations of our own government in the Civil War is entirely adequate to justify the policy being pursued. Within little more than six months of the outbreak of our Civil War our banks suspended specie payment. Our government was borrowing money from the banks in 1861 at ruinous rates of interest, and only too soon was driven to the disastrous expedient of issuing flat money. In 1862, the government placed its loans at rates, which on a gold basis produced a value of about 95% of par value for bonds bearing high rates of interest. The funds realized from loans placed by the government in 1863 produced on a gold basis as low as 64 1/2% of par value, and in 1864, as low as 41 1/2%.

On the other hand the clear war revenues from taxes in 1862 were but \$52,000,000; in 1863, \$113,000,000, whereas, in 1866, after the close of the war, the revenue legislation then in force produced the enormous total for those days of \$558,000,000. It is obvious that the failure to support the government's credit early in the war by adequate tax revenues undoubtedly was one reason for the unfortunate later indulgence in every variety of unsound financial expedient, the effects of some of which have dogged our steps for nearly fifty years.

Now, let us compare the present tax program with these past experiences. Their dissimilarity is so striking as to be almost startling; and is one of the most hopeful auguries for the success of our whole financial undertaking. Personally, I rejoice that the officers of our government have the courage to face the criticism on the one hand of those who believe the program of taxation is too heavy; on the other hand of those radicals who think it is not heavy enough. Not enough taxes means declining credit, too much taxes means declining industries. The only danger in exacting heavy taxes on profits and incomes is the danger of not allowing sufficient profit inducement to the industries of the country to stimulate production. I confidently believe that our country can pay all the taxes required to maintain its credit and to support all the borrowings needed for the period of the war, without crippling its vital industries, and that those who now cry calamity simply because they don't want to pay heavy taxes will some day see and acknowledge their error. But our Congress must be careful not to destroy the income sources which produce taxes. Industries which must expand to meet war conditions, need earnings for plants and inventories which may be useless when war ceases, and yet they must be built. To take all their income will retard new construction.

Those of us who have sent our boys to France are beginning to realize what the war is. Our part in it and the motive behind it will be an imperishable glory for this great nation. But we must not lose our boys and lose the war for lack of money, nor must we fail in providing the money simply because our financial army is inadequately equipped. I am convinced that the only important weakness in our financial organization is the lack of state bank membership in the Federal Reserve System. One half of our financial army is equipped with modern machinery by membership in the system. The other half, equally patriotic, is ineffectively armed. You will recall the disastrous results to the Russian Armies in the early days of the war when large numbers were sent to the front without arms and ammunition. Don't let us fail our duty for lack of the strength we can only enjoy if we are united. It may indeed rest with you state bank men to determine what shall happen to our boys and they <u>must</u> come home victorious.