Copy of Mr. Benjamin Strong's speech
delivered at Williamstown, January, 1915.

You will recall Mr. Taft's statement that the first ideal for which a lawyer must strive, is thorough professional education. If you choose banking as an occupation, the important part of your education will commence the day you enter the bank, and your success will depend upon your mastery, by hard work, and close application, of both the detail of banking machinery, and the principles governing its operation. It is also important that you place a correct value upon the results of the work that you are doing, though at the time they may appear to be of small consequence.

While the measure of commercial success is commonly expressed in dollars, any honest vocation in which the material reward of ability and hard work is making money, can also be made to contribute toward the making of good or bad citizens. If a life of hard work is concluded with the reward of simply a huge estate, the worker may find that he has missed or overlooked the accomplishment of purposes which would have produced infinitely greater satisfaction than will the possession of property. We are now witnessing the growth of convictions regarding standards of citizenship in business affairs which are having a profound effect upon our laws and our business methods. But ignorant abuse of bankers and banking methods must not be allowed to prejudice your decision, nor should it lead you to believe that bankers are wholly selfish, that their business is sordid, or that their point of view is a narrow one.

The technique and clerical detail of any business to be sure, is usually dry and uninteresting, but, with the stimulus of a correct knowledge of its economic value, work in a bank will prove to be of absorbing interest. Banking is, in fact, the binder of commerce and brings the successful banker into contact with every manner of business enterprise. Should you undertake that work

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it will be better done if you realize that it has a purpose of large significance, and that you will assist in the discharge of obligations to the public and services to the Government which bring satisfying rewards, while not interferring in the least with the exercise of your talents to earn dividends for stockholders.

Mr. Paul M. Warburg, in his pamphlet on "The Discount System in Europe", has forcefully stated the great problem of banking in the following language:

> "If banks were to keep, in cash, all the money deposited with them, business would come to a standstill and a crisis would ensue. If banks were to lend to those who apply for loans all the money on deposit with them, a general panic and collapse would follow a short period of overstimulation. Between these two extremes lies the middle course, the finding of which is the problem, and its practice the art of banking."

The purpose of this paper is to illustrate, by a few simple examples, how the banking credit structure grows upon, and is supported by the gold reserves; how these reserves, of necessity, are constantly shifting from one institution to another, from one section to another, and from one country to another, and how important duties and responsibilities in the custody and control of these gold reserves extend with our commerce throughout the world.

The operations I shall mention occur in endless variety in the operation of the banking system with which you are already familiar. They will, therefore, be best suited to bring out the points that I have in mind, and incidentally, they will illustrate some of the defects of the old system and permit me to point out in conclusion the beneficial effect that our new system will have in this respect.

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E X P A N D I N G

			CHANGES			TOTALS		
			Cash	Loans	Deposits	Cash	Loans	Deposits
1st Natl.	Cash	80,000	-60,000			20,000		
	Loans	---		+60,000			60,000	
	Deposits	80,000			----			80,000
2nd Natl.	Cash	60,000	-45,000			15,000		
	Loans	---		+45,000			45,000	
	Deposits	60,000			----			60,000
3rd Natl.	Cash	45,000	-33,750			11,250		
	Loans	---		+33,750			33,750	
	Deposits	45,000			----			45,000
4th Natl.	Cash	33,750	-25,312.50			8,437.50		
	Loans	---		+25,312.50			25,312.50	
	Deposits	33,750			----			33,750
			etc.	etc.		etc.	etc.	etc.
						80,000	240,000	320,000

A bank, (call it the First National), receives a deposit of $80,000 of gold, which the depositor brings to this country from Europe. Bear in mind that this gold does not come out of another American bank in payment of a check drawn by the depositor, but is new money imported from Europe. The bank then shows as an asset the $80,000 of gold, and as a liability the $80,000 owing to its depositor. As it is only required to keep, say 25 % cash in its vault as a reserve against its deposit liability, (as until recently was the case with national banks in the cities of New York, Chicago and St. Louis), it loans $60,000 to a borrower, for which it issues a check. The borrower deposits the check in the Second National Bank, which collects the proceeds from the First National Bank. This leaves the First National Bank with cash, $20,000 (being 25 % of the deposit) and $60,000 of loans. The Second National Bank repeats the operation, lending 75 % of its cash, or $45,000, the check for which is deposited in the Third

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National Bank. This operation is constantly being repeated, so that possibly in a few days, a consolidated statement made by all the banks in the community which participate in the resulting transactions would show: Cash, $80,000; Loans, $240,000; Deposits, $320,000. There has now been erected a pyramid of bank deposits resting upon the original $80,000 of gold, in the rate of 4 to 1. The ratio is, in fact, nearer 8 to 1 in actual practice throughout the whole system of American Banks. Should the original depositor draw a check on the $80,000 deposit, it will likely be deposited in another bank, and the same expansion will occur through the use of the money by similar successive operations in various banks. The same result arises if the check is used to pay an existing loan, the bank which has the loan paid off thereby converts the amount of its loan into gold, that is to say, into reserve money, and may then make a new loan and start anew the same successive operations. Our checking system has, of course, facilitated this expansion, and the use of checks has become such a necessary convenience to the public that in cities containing a number of banks, the bankers have formed associations for clearing, (that is for collecting and paying), the checks they receive on deposit which are drawn upon each other. Every morning they take all these checks to the clearing house, where each bank receives or pays in cash only the difference between the amount of the checks it has received from its depositors for collection and the amount of checks drawn on it which the other banks have received.

By this means, gross daily payments between the banks of New York City, aggregating hundreds of millions, are settled by net payments of a few millions only. The saving in time, clerk hire and risk to effect this clearance of checks has been of vast benefit to the banks and to the public.

You will observe that while the collection and payment of the claims of the banks due to and from each other by this means necessitates only a minimum disturbance or shifting of reserves within the limits of one community, it is in fact, a community method by which the banks discharge their obligations to each other. This will be referred to later.

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Returning to the original depositor, what happens if he draws a check for $40,000 on his $80,000 deposit and sends it to some other part of the country?

If he remits the check to the South to pay for cotton purchased, the check will be deposited in a Southern bank and by that bank will be remitted to New York for collection. The Southern bank, possibly requiring cash to enable the manufacturers and farmers in its community to pay laborers and farm hands will instruct its New York correspondent to ship the gold South. The second chart will illustrate what results:-

C O N T R A C T I N G

			REDUCTIONS			BALANCES		
			Cash	Loans	Deposits	Cash	Loans	Deposits
1st Natl.	Cash	20,000	10,000			10,000		
	Loans	60,000		30,000			30,000	
	Deposits	80,000			40,000			40,000
2nd Natl.	Cash	15,000	7,500			7,500		
	Loans	45,000		22,500			22,500	
	Deposits	60,000			30,000			30,000
3rd Natl.	Cash	11,250	5,625			5,625		
	Loans	33,750		16,875			16,875	
	Deposits	45,000			22,500			22,500
4th Natl.	Cash	8,437.50	4,218.75			4,218.75		
	Loans	25,312.50		12,656.25			12,656.25	
	Deposits	33,750			16,875			16,875
			etc.	etc.	etc.	etc.	etc.	etc.
						40,000	120,000	160,000

The withdrawal of the $40,000 of gold from the First National Bank then necessitates its calling for payment of a loan of $30,000, the proceeds of which, together with $10,000 of its reserves are shipped to the Southern bank. The borrower draws a check for $30,000 on the Second National to pay the loan, which has been called, thus causing that bank to require payment of $22,500 of its loans, the proceeds of which, with $7,500 of its reserves, effects the payment to the First National

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Bank, and so, again, by successive operations, the pyramid of bank deposits and loans, erected as the result of the original deposit of $80,000 has been reduced one-half by the withdrawal of $40,000, leaving, in fact, the consolidated statement of the various banks participating in these transactions: Gold, $40,000; Loans, $120,000 and Deposits, $160,000.

Our National and State banks cannot extend their business,,by a system of branches, throughout every section of the nation, as is done in other countries. So the check sent to the South must be collected, and distance prevents offsetting in the manner possible through a city Clearing House. Merchants in the North sell their goods in the South, farmers, in the South, sell their produce in the North. The buyers and sellers send checks back and forth in payment, and settlement of the balances resulting from the ebb and flow of domestic commerce requires the shipment of vast sums of money from one part of the country to another, at great cost and some risk, and gives rise to sectional contraction and expansion as described in the case of the individual bank. Furthermore, an unusual volume of purchases by one section from another section may result in positive shortage of credit in the buying district which may necessitate the banks of that district borrowing from the banks of other sections. In a country where so large an area is devoted to agriculture, the requirements of the farmer cause a regular seasonal demand for currency and credit between the sections. It may be illustrated by a simple example. The farmer of the South begins in the spring to prepare his land for a crop of cotton. He buys fertilizers and seed, food for his family, laborers and stock, farm implements and other supplies. As his purchases and his payments to his laborers increase, he becomes indebted to a local merchant, frequently giving the merchant a mortgage on his cotton crop before it is picked or even grown. The merchant is likewise buying these supplies from implement and dry goods houses, meat packers and other merchants in the North. He finances his requirements by borrowing from the local bank, which may have so many such borrowing clients, as to

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exhaust its own lending facilities, whereupon it borrows from a larger bank in a section where credit is available, say in New York.

For the production of the cotton crop, the farmer has borrowed from the Southern merchant, the merchant from the Southern bank, the Southern bank from the Northern bank, and the Northern bank has shipped the borrowed gold or currency to the South. The chain of credit has grown with the growing crop, has extended to the Northern reserve reservoir and moved some part of the reserves into the section where the demand has arisen. Finally, in the fall and winter, the crop is harvested and partly sold to Northern spinners. In payment, the spinners remit to the South checks drawn on New York banks, which the banks of the South, receiving on deposit from the sellers of cotton, send to their Northern bank correspondents for collection and receive credit for the proceeds.

Out of the proceeds of the cotton sales, the farmer pays his indebtedness to the merchant, the merchant pays his indebtedness to the Southern bank and the Southern bank pays its loan to the Northern bank; the last of these payments being effected by checks drawn by the Southern bank on its credit with its New York correspondent. At the same time, farmers and laborers have paid their store bills owing the merchant with the currency or gold which had been shipped South earlier in the year and the merchants have deposited the currency in the bank or used it to pay bank loans. The entire chain of loans and credits has been paid off. The cash reserves of the Southern bank may then become excessive, and in order to employ its funds profitably, it ships its surplus reserve,(that is, gold or currency,) back to the North, where it is loaned possibly to the cotton spinner to enable him to manufacture the very cotton for the production of which the gold or currency was originally shipped to the South in the fall.

Now take a case in which the cotton is sold to an English spinner. The Southern seller of the cotton draws a draft or bill of exchange on the English buyer, say in London, payable at 60 or 90 days sight. The draft on London is

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sold to a New York bank, thus producing the same New York credit and resulting in the same liquidation of the chain of indebtedness created for the purpose of producing cotton. The New York bank, however, sells this draft in London. The proceeds are placed to the credit of the New York bank by its London correspondent, and from this transaction an international credit is created in favor of this country. American importers of merchandise from England purchase drafts drawn on the London bank by the New York bank, in order to pay for goods purchased, so that, in this instance, the shipment and sale of the cotton to England, by means of these checks and drafts, has also effected payment for goods which our merchants have purchased from that country. But, should the value of our exports of cotton and other commodities far exceed the value of what we have purchased from England, the New York bank may be unable to sell checks on London at satisfactory rates of exchange and in sufficient quantity to exhaust its balance there. It may be more profitable to loan these funds at home, whereupon it instructs its London bank correspondent to ship gold to this country. If we consider that the shipment of gold thus arranged is the identical gold first referred to as deposited with the First National Bank, it will be seen that the same gold starting from London, has paid London's debt to New York for cotton, has then been loaned to the South; or has paid New York's debt to the South for cotton purchased, and in the South it has served as a reserve for loans created to produce cotton, or furnished currency for labor. Later in the season, when the cotton is sold, the Southern banks, as described, may loan their surplus funds in the north and the gold will move back again to New York. Possibly, the trade balance by that time, will have turned in favor of England, when the gold might again travel across the ocean. The gold has moved between the same points as has the merchandise, but in the <u>opposite</u> direction.

Two other banking operations should be briefly referred to. Our Government receives and pays out every year hundreds of millions of money to conduct the Government's business. Payments to the Government, of duties, taxes and other revenues, are made in the same kind of money that serve as the cash reserves of banks.

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At times, the revenues of the Government have run far ahead of its expenditures, and at other times, unfortunately, the Government's revenues are not sufficient to meet its expenditures. Our Government is distinguished from the governments of other nations in that it has an independent treasury system; that is to say, its revenues are paid directly in cash to government agents and sub-treasuries, and it has largely paid its bills by warrant or check payable at the sub-treasuries. In recent years, this system has been shown to involve decided dangers to our banking system, in that it sometimes forces withdrawals of large sums of cash from the reserves of the banks which are locked up in the Treasury causing contraction of credit, as before illustrated. And when the Government's revenues are insufficient and its working balance as a result is paid out, large sums are forced on the market, that is, are transferred from Sub-Treasury to Bank Reserves, causing possibly an unhealthy expansion. The Government has become keenly alive to the fact that, in handling its revenues and disbursements, it is either under the necessity of alternately withdrawing and returning huge sums of reserve money from and to the banks, and possibly at most inconvenient and dangerous times, or it must conduct its money transactions in greater volume through banks. The Government has, therefore, adopted the policy of depositing its funds in national banks throughout the country, in increasing volume although by a cumbersome method. In this, as in other respects, experience shows the imperative necessity for a close working relationship between the Government and the banks, in the handling of the Governments finances.

The last banking transaction to be mentioned I must sketch only too briefly.

The conduct of business requires the use of two great instruments of exchange. One is a deposit account or credit at a bank which may be used for paying debts, or for making purchases, by drawing checks upon the account, and which account may be created by borrowing from the bank. The other is currency with which to pay mill hands and farm laborers, for retail cash transactions, pocket and till money.

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It is not my purpose to discuss any of the many theories as to the best form of this circulating medium. Let us assume, in this illustration, that it is simply the note of the bank which is secured by some or all of its assets and the prompt redemption of which is assured by an adequate reserve of gold and by the pledge of loans due the bank, the payment of which will result in its accumulating gold.

The use of this currency will be illustrated if we assume that the original depositor with the First National Bank is a large employer of labor and that, once a week or once a month, he will withdraw a large payroll from the bank in gold or currency. If he withdraws $40,000 of gold for that purpose, the contraction first described results. But if the bank has the means of converting its deposit liability into a note liability, the customer's need is served equally well by using the notes and the bank's gold is unaffected, provided, of course, no greater ratio of reserves is required for notes than for deposits. The notes, however, once delivered to the depositor and paid to the mill hands, are used by the mill hands in payment for their purchases and remain in circulation a considerable period of time, whereas a check drawn on the account will be presented for payment the same day or shortly thereafter, and if paid in gold or reserve money, will result in contraction as described. If, therefore, demands for currency with which to make hand to hand payments can be supplied freely by an issue of the notes of the bank without materially disturbing its reserves, a useful purpose will certainly be performed in that a circulating medium is provided which may be issued as business demands its use and redeemed and cancelled when the amount in circulation becomes redundant.

An analysis of the transactions described discloses the following:

First: The accumulation of gold in the banks results in the creation of an inverted pyramid of credit resting upon a comparatively narrow foundation of gold:

Second: The payment and collection of checks in connection with the mak-

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ing of loans and the withdrawal of deposits growing out of the conduct of business in a given community necessitates the constant shifting of gold reserves between the banks of that community and results in expansion and contraction of loans and deposits by the individual banks.

Third: Commerce between the different sections of the country necessitates the shifting of this gold reserve between the different sections of the country, giving rise to expansion and contraction of credits in the different sections;

Fourth: A similar shifting of the reserves of gold between the different nations is necessitated by the exchange of commerce between nations, also, giving rise to expansion and contraction of credits in the countries affected:

Fifth: The Government becomes a factor in this process of expansion and contraction when the collection of its revenues or payment of its expenses results in deposits or withdrawals of gold, the same as in the case of an individual deposit, only on a much larger scale;

Sixth: The daily transactions performed by the use of cash or currency between individuals for which checks cannot be employed may be conducted by the use of notes of the bank which can be substituted as a liability in place of its liability to its depositor, and thereby conserve the bank's gold reserve.

Few successful bankers will claim nowadays that their responsibility for the conduct of the business of the bank is completely fulfilled by the observance of the law and by running their business to the satisfaction of their stockholders and depositors. They recognize their duty to do their share, in good and bad times, to protect, not only their own, but their competitors' credit; for the conduct of the business of the world depends upon the confidence felt by the public in the ability of the bankers as a whole to maintain this structure of credit represented by the deposit and note liabilities of banks at all times and under all conditions.

In the case of the local community, first mentioned, where the banks are associated in a Clearing House, their responsibility to one another is commonly recognized. In times of difficulty, some of the banks in a community may be called

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on to meet needs of their depositors to withdraw deposits or for loans in excess of their cash resources. In such cases, as in 1907, and again in August and September of last year, the Clearing House banks of New York permitted those of their members who needed to do so to settle the net balances of exchanges, not in cash, but by borrowing from the other members. By the use of loan certificates they were enabled to borrow from all the other Clearing House banks for a time instead of immediately paying checks drawn upon them in cash. Surely, this is a recognition of the principle of mutual obligations: And in recent times the banks which are associated in Clearing Houses, recognizing their obligations to each other, have frequently agreed among themselves upon a plan for examination by examiners employed by the Clearing House Association for the purpose of further protecting the community and one another.

In the case of the different sections of the country, the plan recently arranged for providing a large credit for loans to Southern borrowers on the security of cotton affords a striking illustration. By reason of the war, the value of cotton has been reduced this year to one-half of last year's value. Southern farmers, merchants and bankers feared that it would be impossible to market a large part of the crop, and to the extent that it was marketed, that it might not produce sufficient value to enable them to pay their debts. An appeal to the bankers of the country resulted in the pledge of $100,000,000 by the banks of the North and West to be loaned upon the security of cotton in order to relieve the Southern lender of the necessity of forcing the sale of his collateral at a sacrifice. The obligations of bankers in one section to the bankers and business men of another section could not be better illustrated.

The international brotherhood of mankind in matters of credit, forces its recognition upon the banker as soon as his gold is required to meet a foreign debt. He becomes the medium through whom the great international credit transactions growing out of commerce are adjusted, and upon him the country depends for the

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settlement of the balances in gold.

A situation arose, as a result of the war, in respect of our country's indebtedness to Europe which brought home to the people of our country the extent of its dependence upon the banks and their managers in these matters. The city of New York had borrowed $80,000,000 abroad. Merchants and bankers were also largely indebted to merchants and bankers of Europe. The outbreak of the war necessitated an unexpectedly prompt payment of a large part of this debt. Nearly 1,500 banks of the United States entered into an agreement to furnish a total of $180,000,000 of gold for shipment to Europe, if required, in order that the city of New York and other American debtors might promptly meet their engagements. The possible drain upon the reserves of the banks as a result of this engagement and of other demands growing out of the war justified the Secretary of the Treasury in depositing large sums of gold held in the Treasury with various banks throughout the country, and the gold resources of the government, as well as of the banks were brought to the relief of a situation which might have caused serious embarrassment to both the creditor and the debtor.

The shock of the war likewise caused some panicky feeling throughout the country in the minds of the people who feared that they would not be able to get money (that is to say, gold or currency) from the banks with which to conduct their business. In 1907 similar fears became so exaggerated as to result in the hoarding of large sums of money for which a premium of 3 or 4 % was paid, and a similar occurrence last year, coming at a time when our debts abroad had to be paid might have resulted in such huge withdrawals of reserve cash from the banks as to cause a most dangerous contraction. This demand was met, not by paying gold out of bank reserves to those who demanded currency, but by the issue of nearly $400,000,000 of bank notes which were secured by the pledge of a portion of the assets of the banks.

Had the withdrawal been gold, the contraction of loans resulting therefrom might have brought disaster to our country's business. In effect the banks

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substituted note liabilities for deposit liabilities and conserved their gold reserves.

Dealings in credit as vast and complicated as are required for the conduct of industry and commerce result in a constant increase and decrease in the deposit and loan accounts of the banks, and constant changes in the ratio of reserves to deposits and loans. But a safe ratio must always be maintained, and it is well to consider what causes may put the reserves in jeopardy and the situation beyond the bankers' control.

A general or widespread loss of gold by the banks is frequently caused by increased activity in business which, for its conduct, requires the use of an increased supply of currency for pay-rolls and hand to hand payments, or by a demand for credit from one section of the country upon another section, which may draw reserves from one section to another; or by an adverse foreign trade balance resulting in shipments of gold to foreign countries; or by high rates of interest in foreign countries which induce loans to those countries, or by the locking up of gold in the Treasury through accumulation of the Government revenues, or by hoarding.

A sound banking system, coupled with a recognition by bankers of their mutual dependence upon each other, generally provides the means of meeting withdrawals of reserves arising from all of the causes mentioned, except from hoarding. No danger causes the banker such a chill as that caused by the stupid, uncontrollable effort of foolish people to withdraw gold from the bank in times of distrust. Unfortunately, our banking system formerly contributed to the possibility of this danger arising. In such times, not only individuals, but the banks themselves, accumulate and lock up gold. With over 25,000 banks in the country, some of them will at times insist upon building up their reserves beyond what is regularly required. Individuals also put gold in safe deposit boxes and other places of safety. No remedy for this ever-present danger is so effective as that of meeting the demand. Fortunately, our new banking system has provided means for

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the issue, when such demand arises, of a note based upon the assets of the new Federal reserve banks, which greatly minimizes the danger of this occurrence, usually brought about by the actions of selfish, unthinking people.

It is not difficult to realize that the custody of the gold upon which credit rests, held as it is in this country by these 25,000 banks, and supporting, as it does, credits of nearly twenty thousand million dollars, places a responsibility upon the banker, both to the Government and to the people, of wide significance indeed. It cannot honestly be claimed that his responsibility is limited to compliance with the law, earning dividends for stockholders and meeting the demands of his depositors. His larger obligations must frequently be discharged for the benefit of or in co-operation with his own competitors. It extends throughout the country as well as to the people of his own immediate community.

And now, within the past five months, a great military conflict has started, one of the consequences of which is to impose upon our bankers increased burdens and responsibilities of international importance. We must prepare ourselves, by a better understanding of our duties and of how they should be performed to help ameliorate the distress and hardship which is certain to result from the war and to disturb the world of commerce and credit.

Already the effect of the war has been to direct commerce through new channels, and, as banking credit is the hand-maiden of commerce, we must now prepare to undertake those banking obligations which are imposed by the enlargement of our commerce. We must not subject ourselves to the criticism which would justly arise were we to seek to reap the profits without assuming our share of the responsibilities growing out of our increased participation in the world's commerce. We cannot be camp-followers profiting from the plunder of the battle field and capitalizing the misfortunes of our sister nations. If we are to enlarge our usefulness by furnishing a larger supply of food and clothing to the rest of the world, we must likewise enlarge our usefulness by enabling our banks and merchants to extend credit facilities to our new customers.

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The occurrences of 1907 (a year of serious panic and distress) emphasized the urgent need for immediate study and revision of our banking laws. Our note issues were inelastic, and their volume had no relation to the demands of the people for currency to effect hand to hand exchanges nor could they expand and contract with fluctuating demands. No check could be interposed to the exportation of gold resulting from adverse trade balances or higher rates of interest in foreign markets, and no machinery existed to enable the banks to readily convert their resources so as to satisfy enlarged demands by their customers for both credit and currency. Nor could the Government's revenues be deposited in banks with the freedom required.

Congress has now created twelve institutions, (the Federal reserve banks) into which have been paid over $260,000,000 of the reserves of the national banks and subsequent payments, by both the Government and the banks, it is hoped, will increase this accumulation of gold in the one common reservoir to more than $500,000,000. The reserve banks are authorized to perform five principal functions that relate directly to the occurrences which I have described and for the control of which this country has heretofore been inadequately equipped.

They furnish the means whereby the banks of the country may convert their assets into credits, and thereby increase their credits to their customers, without the use of emergency measures, such as the clearing house loan certificate first mentioned.

They will in time furnish facilities for a more prompt and economical settlement of domestic exchanges, and the balances resulting therefrom, without the risk and expense of actual transfers of such large amounts of reserves, and with a minimum sectional expansion and contraction.

They provide for the prompt issue of currency as business demands its use, and the liquid character of the assets of the banks, with their large gold reserves, insure prompt redemption of this currency when its use is no longer required.

They will serve as the depositaries of the revenues of the Government,

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thereby avoiding the contraction and expansion caused by the independent operations of the Treasury.

Of even greater importance in such times as during the past few months, they may become the instruments, through a judicious influence upon interest rates, and a wise use of credit, for exercising a certain measure of control over the importation and exportation of gold. By that means they may protect our banking system as a whole against the dangers of too violent expansion or contraction, too suddenly imposed, as a result of an uncontrolled international movement of gold reserves.

The conduct of business by competitive methods is an economic contest no less than is the war now raging in Europe a military contest. Credit (that is, the facilities of the banking system) has become the most necessary instrument in the successful conduct of business. In a national sense, the machinery of credit, in order to be safely and successfully employed in the interest of the country's industry and commerce, must be mobilized under the leadership of a general staff and by a comprehensive plan upon much the same principles as those upon which an army is mobilized.

We are now putting into practical operation a better conception of the functions of banks based upon a recognition of the principle that a co-ordination of banking interests and a centralized control of banking reserves afford a greater protection to the banker and results in a better service to the public.

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