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THE ABC
OF THE FEDERAL
RESERVE SYSTEM

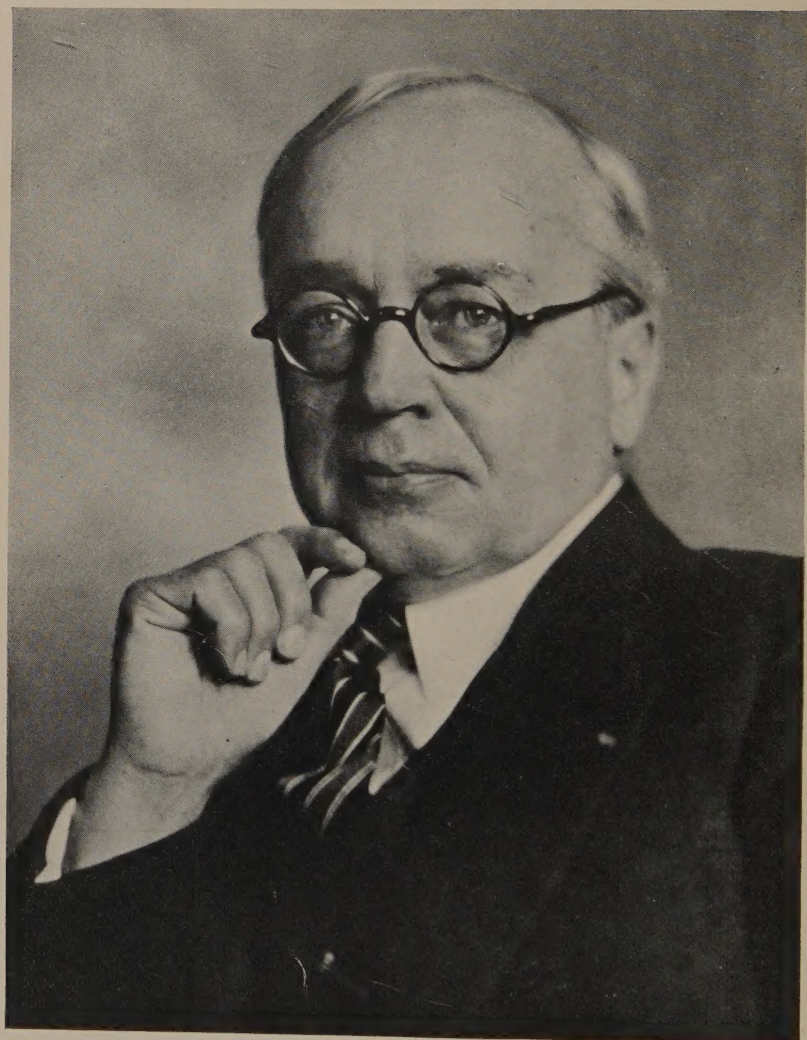


Photo Orren Jack Turner

Edwin Walter Kemmerer (1875-1945).

THE ABC OF THE FEDERAL RESERVE SYSTEM

T W E L F T H E D I T I O N

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HARPER & BROTHERS PUBLISHERS
NEW YORK

19313

THE ABC OF THE FEDERAL RESERVE SYSTEM, TWELFTH EDITION

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Edwin Walter Kemmerer

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Σ PREFACE Σ

With this volume *The ABC of the Federal Reserve System* appears in its twelfth edition. The eleventh edition appeared in 1938. In the meantime American banking and the Federal Reserve System have altered considerably under the financial stresses and strains of World War II. The original author, Professor Edwin Walter Kemmerer of Princeton University, died in 1945, and the present revision is entirely by his son, Professor Donald L. Kemmerer of the University of Illinois.¹ Harper & Brothers have taken over the publication of the book from the Princeton University Press.

The book was first published in 1918, when the Federal Reserve System was less than four years old. It was written in response to a suggestion made to Professor E. W. Kemmerer by Henry B. Thompson, a director of the Federal Reserve Bank of Philadelphia, "to write a brief ABC of the newly established federal reserve system that would enable the ordinary American citizen not having technical economic training to understand why the federal reserve banks were established and what services they were performing." Mr. Thompson said that in a democracy at all times it was exceedingly important that the electorate should have at least an elementary understanding of the nation's currency and banking system.

During the third of a century of its history the Federal Reserve System has undergone at the hands of Congress several fundamental changes and numerous minor changes. On this statutory foundation there has been built up an enormous superstructure of legal interpretations and administrative regulations and practices. From the beginning the system has been a growing organism, adapting itself to an

¹ It is regrettable that my father had done no work on a twelfth edition before he died, and also that, for reasons which seemed good at the time, I had never sought the opportunity to assist him in preparing earlier editions. Both of us would have enjoyed it, and I am sure this revision would have been the better for it. Admirers of his who find in this revision any errors or viewpoints of which they believe he would not have been guilty should put the blame on me.

environment that has been undergoing frequent changes, both economic and political. Under such conditions any description of the Federal Reserve System quickly becomes outdated. This explains why the text of this edition is several times longer than that of the first edition. On the other hand, a strenuous effort has been made to strip the discussion of nonessential details in order that the fundamental purposes, framework, virtues, and faults may stand out the more clearly. In doing this, I ask the tolerance of my scholarly colleagues and of specialized bankers if I have differed with them on what is an essential and what is a nonessential detail.

In preparing the twelfth edition, I have held closely to the original plan of the book through the first eight chapters. That is to show why the Federal Reserve System was founded and what important improvements in banking it brought. The material in these chapters has, of course, been brought up to date. The four defects of the National Banking System, formerly handled in separate chapters, have been somewhat condensed and combined into one chapter. The most significant addition is an introductory chapter discussing some basic functions of commercial and central banks.

The last half of the book is largely new. The chapters deal with important events in the Federal Reserve System's history and evolutionary changes in its character. For example, there is a chapter on the postwar period following World War I. Considerable changes have been made in the chapter dealing with the prosperous 1920's, and some also in the chapter dealing with the depression. The chapter on the banking reforms of 1933-1935 is virtually new. Incidentally, most of the material in the last edition on the devaluation of the dollar has been omitted. After 1935 the Federal Reserve Banks had to adjust themselves to a new economic philosophy, and therefore a summary of that is included to help the reader understand the behavior of the Federal Reserve authorities. There are, of course, chapters on World War II and on postwar problems. The conclusion shows the direction banking has been taking in the past century and serves both as a summary and as an aid to the layman who wants to keep up with current developments in banking. To help him carry out this good intention, there is a final chapter on some of the commoner

bank publications. In this he will learn where to find the most up-to-date discussion of banking problems, what statistics to watch and why, and similar information. Finally there is a selected bibliography at the end of the book. We hope that as a result of reading the book and of these aids he will be in a better position to speak and vote intelligently on issues involving banking.

DONALD L. KEMMERER

Champaign, Illinois
January, 1950

THE ABC
OF THE FEDERAL
RESERVE SYSTEM

Σ CHAPTER I Σ

The Purpose and Plan of the Book

THIS book is an attempt to tell in nontechnical language what the Federal Reserve System is—why it was called into being, the main features of its organization, how it has worked, and how it has changed. Although the Federal Reserve Act of 1913 is one of the most important pieces of financial legislation enacted in modern times, and although it has been in operation for a third of a century, many of our people are still unfamiliar with its fundamental principles. It is looked upon by the majority of people as too technical and complicated to be understood except by bankers and economists. As a consequence, there has been a lack of public interest in the workings of the system and in the important legislative and administrative modifications which the system has undergone since its establishment. This is not surprising when one considers the complex character of much of the Federal Reserve machinery and the technical language in which it is usually described. In a democracy, however, widespread ignorance, on the part of the voters, of the country's financial system is fraught with danger. The truth of this statement has rarely been more apparent than at the present time.

In order for the layman to understand the nation's banking system, he must first of all know what the basic functions of a bank are and what problems the banker encounters in performing them. For many years after the founding of the first American bank in 1781, American bankers learned about banking by trial-and-error methods. To a certain extent this method of learning by experience is still going on and unquestionably always will. In the past the errors have been many. They have been costly both to the bankers and to the public, whose patience has been sorely tried more than once. As both bankers and public have learned valuable lessons about banking, their hard-won

knowledge has been written into our banking laws. Thus the lessons of the period preceding the Civil War were written into the National Currency Act of 1863 and its subsequent amendments. This law represented a great improvement over the uncoördinated and often haphazard banking laws of the various states. But the National Banking System soon developed faults of its own. What they were is set forth in Chapter III. The Federal Reserve Act of 1913 was designed to remedy them and did so in large part, as Chapters IV–VIII reveal. During the prosperous 1920's the Federal Reserve authorities made several changes and experiments. A few of these proved valuable when put to the test in the depressed 1930's, whereas others proved to be mistakes. The third set of reforms, the banking laws of 1933–1935, were designed not only to correct the Federal Reserve System's shortcomings and restore the prestige of banks in general, but also to increase the power of the government over the banking system. What the new aims and functions of the Federal Reserve Banks were under the New Deal is revealed in Chapter XIII. The financing of World War II at very low interest rates further loaded the banks with government bonds and put the Board of Governors of the Federal Reserve System in a serious and unenviable dilemma. That dilemma is the principal problem discussed in Chapter XV.

Σ CHAPTER II Σ

Commercial Banks and Central Banks

THE business of banking, as it is practiced today, is fairly new, although the origins of banking may be traced back via goldsmiths, pawnbrokers, and charitable and religious institutions for many hundreds of years. In Europe the Bank of Amsterdam, founded in 1609, is often recognized as the first bank in the modern sense of the term. The Bank of England began in 1694. The colonies had no banks: the first American bank was the Bank of North America, founded in 1781 by Robert Morris to help finance the closing years of the Revolutionary War. It is true that institutions called themselves banks in colonial times, but they lacked essential characteristics of the true bank.

THE NATURE OF BANKING

What is a bank? First of all, a bank lends money; second, it accepts money on deposit; and third, it creates and lends its own credit. An institution must do all three of these to be a bank. Banks, of course, have many other functions, but they are all secondary to the above three. Let us look more closely at each of these basic functions.

Banks lend money in three ways. One is called a loan, another a discount. Although the difference is rather technical, you should know it. The distinction lies in the time at which the bank charges the customer interest. It is a loan if the bank takes a customer's promissory note for, say, \$100 due in three months and bearing 4 percent interest, and collects \$101 when the loan falls due. It is a discount if the bank gives the customer \$99 and collects \$100 when the loan comes due. Most banks prefer to discount customers' notes, if for no other reason than that it is a trifle more profitable. The bank has to loan only \$99 to get its \$1 interest in the case of the discount.

The third way in which banks make loans is by investing, particu-

larly in government bonds. This form of loan has grown steadily in importance in recent decades. In 1914 loans and discounts were three times as important as investments, but today the relationship is reversed. Investments took the lead in 1934 and grew very rapidly during World War II.

Banks accept deposits for safekeeping for customers. There are two basic kinds of deposits also. They are demand deposits and time deposits. If the money is deposited in a checking account, it is called a demand deposit. When the customer demands payment, the bank must pay him promptly. The bank is in debt to him, and immediate payment on demand is a condition of his loan to the bank. Demand deposits formerly paid interest, but they do not any more. On the contrary, the customer now pays the bank for the convenience of drawing checks against his account.

Time deposits draw interest. There are actually three classes of time deposits. One involves the use of a certificate of deposit with a definite maturity date. A second is a thrift or savings account, and is favored by small depositors. A third is an open-account time deposit and is preferred by business houses.¹ None of them currently pays more than 1.5 or 2 percent interest, and sometimes that is only on the first \$1000. Banks may also require the customer to give thirty days' notice before withdrawing a time deposit, although in practice they rarely insist on this. Demand deposits are more important than time deposits today, but that has not always been the case.

A bank's credit-creating function is the most important of all. It is the hardest for a layman to understand. Frequently he will not believe the explanation the first time he hears it because it seems too good to be true from the bankers' viewpoint. Banks have two ways of creating credit. First of all, banks have issued their own demand promissory notes and loaned them out as money. These are bank notes. Second, banks have loaned customers credit on their ledgers. The effect is the same as if the customer had made a deposit of that amount. He can then draw more checks against his account. Each of these two methods of creating credit deserves further explanation. The note-issuing func-

¹ A. S. Pratt, *Federal Banking Law Service*, Vol. I (1940), p. 894; *Federal Reserve Bulletin*, 1942, pp. 748 ff.

tion came first, is easiest to follow, and so will be discussed first, even though commercial banks no longer have the note-issuing privilege.

BANK NOTES

A bank had to redeem its bank notes in government money on demand. Although they looked like other money to most people, they were nothing more than the I.O.U.'s of the bank. As long as the bank enjoyed a good reputation in the community, its notes were gladly accepted as money. Let us see how a bank loan might have been made a century ago in a small bank. Such an illustration should make this basic banking function stand out in all its stark reality.

The owner of a neighborhood general store needs a loan of \$1000 to buy supplies for the winter trade. He does not think for a moment of trying to use his I.O.U.'s as money. People would probably refuse them and laugh at him. Instead, he asks a banker for a loan. The banker accepts his promissory note for three months at 6 percent, and hands over \$1000 in crisp bills with the bank's name on them. He has just received them from a bank note company. What is back of these bank notes that have suddenly become money? There are the prestige of the bank, some gold and silver in its vaults, but principally the promissory note of the storekeeper. The banker has merely substituted his superior, or readily acceptable, credit for the customer's inferior, or less well-known, credit. The banker thus transforms a community's debts into its money. As long as he does this wisely, he deserves good payment for a valuable service. When the debt comes due three months later, the storekeeper redeems his I.O.U. (the promissory note) with the banker's I.O.U.'s (the bank notes) or at least with other money which the banker can use to buy up his I.O.U.'s. This reduces the supply of money in circulation.

Another name for credit expansion is debt expansion. If such a system of making money out of debts is not to lead to financial panic, bankers must take care to make sound loans, not to make so many loans that they cannot redeem the notes likely to be presented, and to collect their debts on time. For many years the banking system rested on the public's faith that the banks would meet these responsibilities. But frequently bankers loaned too much and too unwisely, so that

many bank notes were worthless or passed at a heavy discount. Having to cope with unreliable money introduced an unnecessary risk into people's business transactions. To eliminate that, the privilege of issuing bank notes was limited after 1866 to banks with a national charter. Such banks had to meet strict requirements. In 1935, for other reasons, even the national banks lost the note-issuing privilege, which was given exclusively to the Federal Reserve Banks.

CREATING DEMAND DEPOSITS

Almost from the beginning of banking in America, banks have used another system of lending their credit, namely, lending the customer a demand deposit instead of bank notes. Equipped with a checkbook, the customer then wrote his own money (checks). Because he had to establish his trustworthiness before a check would be accepted, and because the checks came to the bank for redemption sooner than notes did, this system did not become popular quite so rapidly. It was accepted in eastern cities first and in sparsely settled areas last. Then, in 1866, state banks lost their note-issuing privilege; and national banks found that their note-issuing privilege was hedged with restrictions that limited profit, whereas the deposit-lending method was not. Both state and national banks resorted more to the deposit method of lending. After the Civil War more and more loans were made this way until finally most of the nation's business was done through checking accounts. In July, 1948, 77 percent of what we use for money was demand deposits, 21 percent was bank notes, and only 2 percent was government-issued currency such as silver certificates, greenbacks, and small change.² Because people would rather "charge it" and write checks than pay cash,³ checking accounts are more active than hand-

² The term "money" is used throughout this book to include both *demand* deposits and hand-to-hand currency. This is obviously more in keeping with the realities of our economy. The term "currency" is reserved for Federal Reserve notes, Federal Reserve Bank notes, national bank notes, United States notes (greenbacks), silver certificates of all kinds, silver coin and other coins, and gold and gold certificates (before 1933). "Deposit currency," however, means demand deposits. Thus money is currency plus deposit currency. Money does not include time deposits or government bonds.

³ A canceled check serves as a customer's receipt; using checks eliminates the danger of carrying cash; and payment by check at a later date enables the customer to return goods he decides not to keep.

to-hand currency. Thus it is safe to say that well over 90 percent of all business is handled by checks. Demand deposits have been the country's chief money for decades. The public is only beginning to wake up to this fact.

If a bank is defined as an institution that makes loans, accepts deposits, and creates its own credit, then some organizations called banks are not banks, and at least one institution not called a bank is one. For example, an investment bank does not lend money, accept deposits, or create its own credit: it is in no sense a bank. A savings bank lends money and accepts deposits, but it does not create credit: it is not completely a bank. On the other hand, a trust company frequently performs all three functions.

A chief reason for making this distinction is to point out that Federal Reserve Banks have most of their dealings with the banking institutions that perform all three functions. But do the Federal Reserve Banks themselves perform all three functions? They do.

THE NATURE OF A CENTRAL BANK

The Federal Reserve Banks are a central banking system. They are superimposed on our commercial banking system, and they serve those banks as bankers' banks. They deal almost exclusively with commercial banks, not with individuals. The relationship of a Federal Reserve Bank to a commercial bank in its district is similar to that of the commercial bank to a customer. Keep that relationship always in mind, and much of the mystery of Federal Reserve banking disappears. Let us see how the Federal Reserve Banks perform the three banking functions. They are willing to make loans to commercial banks if these banks have adequate security. But they are not obliged to lend to a weak bank any more than a bank is obliged to lend to a failing company.⁴ They accept money on deposit from banks: such money is the banks' legal reserves, which the Federal Reserve Banks keep for them. They create their own credit, in the form either of Federal Reserve notes or of increased deposits, i.e., ledger increases of the commercial

⁴ They are more likely to help a weak bank today than they were in the Great Depression because the banking legislation of 1935 permits them to make advances on paper that once would not have been allowable. *Infra*, p. 133.

banks' legal reserves. Federal Reserve Banks are, in fact, the only banks left in this country that may create their credit both ways. The Federal Reserve Banks, of course, must keep reserves of their own against these notes and deposits. A central banking system has other functions besides these banking ones.⁵ It assists the Treasury. And it is expected to encourage or discourage credit expansion at appropriate times and thus smooth out or prevent cyclical disturbances. How it attempts to do this will be discussed in Chapter V. But first you should know why it was felt necessary to have central banks at all.

PROBLEMS BANKS HAVE HAD TO MEET

For a long time banking was a hazardous business. To offset this and obtain the public's confidence, bankers have instinctively sought to give an impression of financial strength and integrity by their impressive buildings and reputedly severe demeanor. Bank failures have been numerous almost from the beginning; hundreds of banks failed every year even in the prosperous 1920's; between 1915 and 1933 about half the banks in existence disappeared because of failure. Only in recent years has the plague of bank failures been brought under control.

What made banking so hazardous? There were several basic reasons. (1) In the early days, banks made too many loans or kept too small reserves, or both. After all, the more of their credit that was earning interest, the more profit bankers made. (2) Banks failed because they made loans that were too risky or that took too long to produce the means of repayment. Walter Bagehot, the English economist, once remarked that the first thing a banker must learn is the difference between a promissory note and a mortgage, for he should confine his business to the former. An institution that must redeem its liabilities on demand should hesitate to have most of its assets tied up in mortgages or long-term bonds that will take years to pay off unless it has

⁵ A significant way in which a purely central bank differs from a commercial bank is that it is not operated primarily to make profit. This was not true of the First and Second Banks of the United States, which were partly commercial banks, but it is true of the Federal Reserve System. Thus a Federal Reserve Bank expands its credit, not necessarily when its reserves are large, but when the good of the community requires such expansion. The same principle applies to its contraction of credit. Federal Reserve Banks generally have made good profits, however. *Infra*, p. 27.

some way of making these assets liquid on short notice. Early banks did not have a way.⁶ (3) Banks failed because they sometimes loaned too much to one customer or to one kind of producer. For example, if the cotton crop or the market for cotton was bad, many customers of a small Alabama bank might be unable to pay their loans, and the bank would fail. This kind of failure was frequent in the 1920's. (4) Banks failed because they had too little capital to be able to stand a sizable loss. That was the inevitable price bankers paid for keeping their independence instead of combining into branch systems. In short, banking is a new profession, relatively speaking, and bankers themselves have had to learn, too often by bitter experience, how to avoid some of banking's worst pitfalls. Apparently the same principle applied in banking that is found in the army's grim saying that "it takes the lives of 10,000 men to make a good major general." The public could hardly be expected to accept such a situation calmly. After serious panics like those of 1837 and 1857, some of the state legislatures passed laws to insure that the bankers' lessons would stay learned. The banks provided most of the money that people used, and it was to everybody's interest that this money be dependable.

AN ARGUMENT FOR FEDERAL BANKING LEGISLATION

American banking history shows that, in general, banks have been more reliable when they were subject to a central bank or to federal banking law. Over a century ago, the federal government's fiscal agent was the First Bank of the United States (1791-1811) and then the Second Bank of the United States (1816-1836). Both these banks were hybrids, part central bank and part commercial bank. As fiscal agents these banks received government taxes, most of which were paid in bank notes. Likewise as agent for the government, it was the duty of the First or Second Bank to present these notes for redemption to the commercial banks which issued them. That forced the commercial banks to keep a sizable reserve on hand at all times. It made the First and Second Banks unpopular with the commercial banks, for

⁶ Modern banks do. They can sell their government securities for cash on a supported market, and they can get advances from Federal Reserve banks on "sound" assets. *Infra*, pp. 133, 173, 187.

it held down the amount the latter might hope to loan. But it had the good result of making bank notes more reliable during most of the life of the First and Second Banks. The periods of loosest banking were between the liquidation of the First Bank and the start of the Second Bank, and after the Jackson administration repudiated the Second Bank (1833).

The success of the First and Second Banks rested largely on their almost unconscious tendency while serving as government agents to prevent undue credit expansion. Many persons disliked the First and Second Banks because they were big and powerful. In the popular mind of their day they epitomized "big business."⁷ People believed that the benefits of these banks could be had by an independent treasury system and stricter banking laws. The First and Second Banks were not thought of as economic planners. There is little, if any, evidence to show that these two banks consciously attempted to increase or to decrease the credit supply in order to pull the country out of a depression or to prevent a boom from developing.⁸ People were not yet thinking in terms of business cycles. Thus it is understandable that after a generation of loose banking, 1833-1863, a federal law was imposed only to improve the banking practices of individual banks. This law, generally called the National Banking Act, provided for no central bank. Although it brought an improvement over the banking situation that had existed previously, it too proved inadequate in at least four respects. These will be discussed in the next chapter. Because of them the country turned again to a central banking system. Notice, however, that the framers of the Federal Reserve System were still thinking chiefly of patching the National Banking System and alleviating any panics that might occur. They were not yet thinking of preventing panics. Not until later were hopes set that high.

⁷ They were corporations with special government-granted privileges and capitalizations of \$10 and \$35 million operating in an era when corporations were new and suspect, when privileges were undemocratic, and when most business had a capitalization of a few thousands or at most a few hundreds of thousands of dollars. It is no wonder that they seemed big and dangerous.

⁸ President Biddle of the Second Bank was accused of contracting credit unduly in 1833 to create an economic condition that would be politically painful to his arch enemy, President Andrew Jackson. R. C. Catterall, *The Second Bank of the United States* (1903) Chap. XIII.

Σ CHAPTER III Σ

Four Major Defects of the National Banking System

BY the turn of the twentieth century it was becoming obvious that the banking system was again in need of reform. It had not stood up well in the depressions of 1873-1877 and 1893-1896. After still another sorry performance in the panic of 1907, Congress took steps to improve matters. The Aldrich-Vreeland Act of 1908 provided machinery to handle any new panic that might develop; but, more important, it provided for the appointment of the National Monetary Commission to study the question of banking reform and to make recommendations. The commission was headed by Senator Nelson Aldrich of Rhode Island and consisted of various members of Congress. It hired numerous college professors to study American banking history and methods and also those of other nations. Over forty such studies were made, and they still constitute some of the finest financial histories in existence. From these studies it was apparent that there were four major defects which needed correction. These were decentralization of banking, inelasticity of bank credit, a defective exchange-and-transfer system, and a defective banking machinery for the federal government. Let us look at each of these four more closely.

Λ DECENTRALIZATION OF AMERICAN BANKING

In 1912 the United States had many more commercial banks than any other country in the world, and they were much smaller, on the average, than those of any other important country. Official figures placed the number of our independent banking establishments of all kinds at approximately 30,000, and of these about 28,000 were banks whose business was wholly or partly of a commercial character. These commercial banks were owned for the most part by the residents of

the communities in which they were situated, and the business of most of them was chiefly local. The great majority of "national banks" were national in name only. Except for the rather loose association of the banks in the clearing houses of our principal cities, and except for a growing community of interest, most of these banks were independent units, each working for itself. There was little teamwork. When panic threatened, the different parts of the system worked at cross-purposes. They were without effective leadership at times when prompt coöperation under national leadership was urgently needed.

The most serious feature of this decentralization was the wide scattering of legal reserves. Thirty thousand different banks meant 30,000 cash reserves. These reserves should be distinguished from mere till money with which to cash customers' checks. They were substantial amounts in addition to till money. The banks relied heavily on them in times of emergency. It is true that most banks had so-called "deposited reserves," namely, funds on deposit in other banks, which they were allowed to count as part of their legal reserves; and they had so-called "secondary reserves," namely, funds invested in securities and call loans, which were supposed to be quick assets that could be liquidated at once in time of need. Strictly speaking, however, neither of these "reserves" was a reserve at all. The deposited reserve was, after all, merely a deposit in a second bank, which the depositary bank loaned out—frequently at twenty-four hours' call on the stock exchange—and against which it held its own reserve, a reserve which in turn was often further attenuated by being placed on deposit in a third bank, there likewise to be loaned out at call. In times of emergency, therefore, the "deposited reserve" could be realized only to the extent that call loans could successfully be called, and this meant to the extent that stock exchange securities could be sold. In times of threatened panic, however, stocks and bonds cannot be sold on any extensive scale except at great sacrifices and at the risk of financial collapse. Experience had shown that securities were not extensively sold by banks at such times.

In times of serious danger, then, the banks of the country were forced to rely chiefly upon their own cash reserves, which, as a consequence, had to be maintained at a high level—higher than in most other advanced countries. This situation gave the vault reserve in

American commercial banks an importance not found in the commercial banks of Europe. European joint-stock banks normally carried little cash in their vaults; they placed their reliance for emergency funds directly or indirectly upon the central banks. In America, bank reserves were so scattered and so jealously guarded that in times of threatened panic they were comparatively ineffective in staying the storm. The situation was analogous to what would happen today if, after drilling our American army to a high point of fighting efficiency, we should scatter the men in small units all over the United States to protect the country from a threatened invasion. Each community would jealously retain its own squad of soldiers, but if the invader should come, the efficiency of our well-drilled soldiers would be practically nil. This is just the sort of thing that happened in a financial sense at the time of the panic of 1907. There was a mad scramble for reserve money on the part of banks throughout the country. Yet despite the fact that the supply of reserve money was large—the United States had then the largest supply of monetary gold in the world—it was ineffective because it was so widely scattered. Obviously, a country's reserve money must be concentrated mainly in one reserve or, at most, in a few large reserves, if it is to be effective. It must be marshaled in armies, not scattered in small squads.

Reserves, like armies, must also be mobile so that they can be quickly moved, singly or in combinations, to places of threatened attack. An army's mobility is a big factor in its efficiency—a truth which the great mobility of General Patton's army in World War II emphasized. Our American bank reserves were not only scattered; they were also immobile. There was no effective way of quickly gathering them together and massing them at the points of financial danger.

There were, then, three serious phases of our banking decentralization: (1) absence of a responsible national conservator of the money market, like the Bank of France or the Bank of England; (2) scattered bank reserves; (3) immobile bank reserves.

INELASTICITY OF AMERICAN BANK CREDIT

The second group of defects of the old banking system—defects closely related to those of decentralization—were those of credit inelasticity. As has already been explained, a large part of the country's

current business in normal times is carried on by means of funds borrowed from commercial banks. These borrowed funds are left on deposit with the banks, and the deposits are circulated by means of checks, the debits and credits of individual accounts being offset in such a way that the total volume of commercial deposits in the country does not normally vary greatly in short periods of time.

The amount of money (currency and deposit currency) which a country needs to carry on its business, at a price level in equilibrium with the price levels of other countries, depends primarily upon the amount of business or of money work to be done.¹ In years of active business a larger supply of money is needed than in years of business depression.² Furthermore, in a country like the United States, in which agriculture is a particularly important industry, there are pronounced seasonal fluctuations in the amount of business to be done, and consequently in the demand for cash and for deposit currency. A good banking system should be capable of adjusting the supply of deposit currency and of bank notes to variations in trade demands, increasing it, for example, at the time of the heavy crop-moving demands in the fall, and reducing it at the time of inactive business, which normally sets in shortly after the opening of the year. Capacity to contract the money supply when business demands decline is as important as capacity to expand it when these demands increase.

Under the old regime our American bank credit, both note and deposit, was peculiarly inelastic. This was especially unfortunate in the United States, for the seasonal character of much of the country's business made credit elasticity unusually desirable.

Our national bank notes, which should have furnished the elastic element in the country's hand-to-hand money, were notoriously inelastic. National banks were authorized to issue these notes by depositing, with the government, United States bonds equal in par value to the notes issued. The banks were supposed to realize a "double profit" on the bank notes, namely, interest on the bonds, and interest on the notes when they were loaned out as money. After 1900 the bonds used, how-

¹ *Infra*, pp. 17, 51.

² Occasionally more currency is needed in depression than in prosperity. *Infra*, p. 113.

ever, were mostly 2 percent bonds of 1930. The issuance of bank notes involved a number of incidental expenses, including a semiannual tax of 0.25 percent upon the amount of notes issued, and the maintenance with the government of a 5 percent redemption fund. Furthermore, not more than \$100 in notes could be issued against \$100 par value of bonds, regardless of how high a premium the bonds bore in the market. Since these issues of bonds sold substantially above par during the greater part of their life, the banks usually realized considerably less than 1.5 percent net interest on them.

Obviously, the higher the premium paid on the bonds, other things being equal, the lower the net interest yield; and the lower the premium, the higher the yield. The result was a tendency for the banks to buy bonds and increase their bank note circulation when the price of bonds declined, and to decrease their circulation when the price rose. Thus, bank note circulation expanded and contracted in response to the variations in the price of the government debt, and not, as it should have done, in response to variations in trade demands. This gave an inverse elasticity, since the price of government bonds often declined at times when business was slack and the currency was already redundant, and often rose at times when business was active and an increase in the bank note circulation was desirable. In other words, the bank note circulation frequently declined at just the time when business needs demanded an increase, and increased when the business situation called for a decline. The character of these fluctuations will be seen from Chart I.³

From season to season the bank note circulation was unresponsive to varying trade demands. There was considerable delay and red tape involved in obtaining the necessary bonds, depositing them at Washington, and obtaining bank notes for circulation; and these obstacles, together with the expenses involved and the restrictions upon the subsequent retirement of notes once issued,⁴ made it impracticable for banks to meet temporary needs for additional currency, like those of

³ Figures plotted on the chart do not include the issues of Aldrich-Vreeland emergency notes.

⁴ Down to May 30, 1908, the law limited the amount of national bank notes that could be withdrawn in any one calendar month to \$3 million. On that date the law raised the limit to \$9 million.

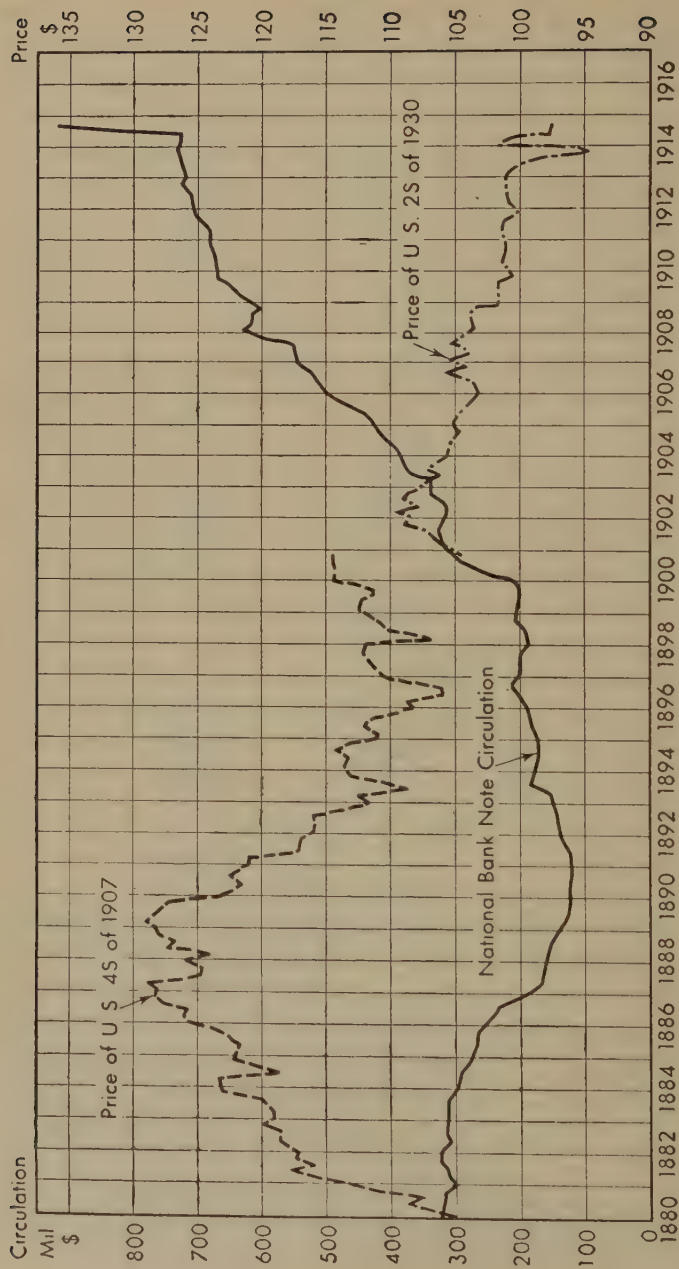


CHART I. National Bank Note Circulation and Prices of United States Bonds, Dates of Comptroller's Calls, 1880-1914.

the crop-moving period, by issuing additional notes.⁵ Our national bank note circulation showed up very unfavorably in comparison with the bank note circulation of Canada, which, under the system of branch banks and an asset bank note currency, was highly responsive to seasonal variations in currency needs. The contrast will be made clear by Chart II, showing the variations in the monthly bank note circulation

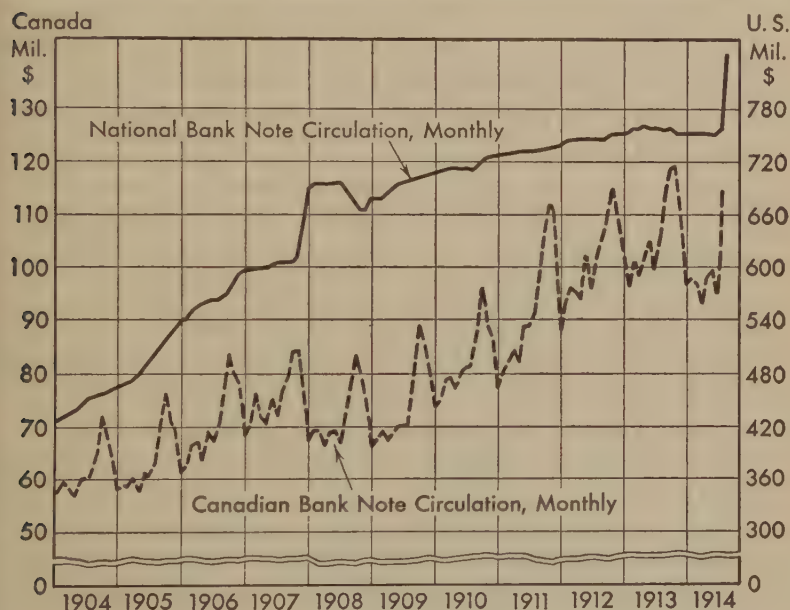


CHART II. Elasticity of National Bank Notes and Canadian Bank Notes.

of the two countries prior to November 1914, the month when the Federal Reserve Banks were opened.⁶

In times of crisis national bank notes could not be depended upon to provide the additional currency needed. Government bonds were usu-

⁵ It is of some significance that the amount of currency in circulation *outside the banks* did fluctuate with seasonal demands. People withdrew their deposits in the form of currency. This, of course, decreased bank reserves and definitely curtailed the amount of deposit currency which the banks could make available.

⁶ The figures plotted on the chart do not include the circulation of the so-called Aldrich-Vreeland emergency notes, which were first issued in August of 1914, reached their maximum in October, and were all retired by the following July.

ally difficult to obtain on favorable terms at such times, and the machinery for taking out new circulation worked too slowly.

Our loan and deposit credit was likewise deficient in the quality of elasticity. Rigid legal minima for bank reserves set up an obstacle to loan and deposit expansion at times of increasing business activity. Banks which were "loaned up" and could not make further advances to regular customers of good standing were prevented from loaning their credit to these customers by accepting bills which the customers might draw upon them, as is the common custom in Europe, because our courts had ruled that bank acceptances were illegal. The rediscount business among our banks was almost negligible, and most of that which existed was done on the quiet. Rediscounting was frowned upon by bankers and businessmen, and there was no central institution, like the central banks of continental Europe, whose business it was to rediscount the paper of other banks in times of need. Our American business paper was largely local in character, and we had comparatively little that could be sold in distant markets, either at home or abroad. In other words, rigidity rather than elasticity was a characteristic feature of our American deposit credit.

To this defect of credit inelasticity, coupled with that of decentralization of bank reserves, were to be attributed largely the frequent and wide fluctuations in the interest rates on call and short-time loans, for which American money markets were notorious, and the alternation of periods of excessive speculation stimulated by redundancy of money with periods of stringency and liquidation brought on by scarcity. For this rigidity of our credit system the businessmen and the farmers paid the price of higher interest rates. The farmer suffered through the necessity of selling his staple crops largely in the fall, when a tight money market was depressing prices, and of buying his supplies largely in the early spring, when easy money conditions tended to make prices abnormally high. The banker was compelled to keep large reserves and to tie up an excessive amount of his commercial deposits in capital investments, such as the purchase of bonds and the making of call loans on stock exchange collateral. Upon all classes in the community, therefore, an uncertain and unstable money market, which was wont to collapse in panics, imposed a burden of financial anxiety.

DEFECTIVE EXCHANGE-AND-TRANSFER SYSTEM

A third group of defects in our old banking system consisted in certain cumbersome features—unnecessary wheels and cogs, as it were—in our domestic and foreign exchange mechanism. These features greatly interfered with the efficient operation of the machine and at the same time added to the expense. This subject is a large and complicated one and can only be touched upon here. It may be divided into two parts, that relating to domestic exchange, and that relating to foreign exchange. Let us look at the domestic exchange situation first.

Of the hundreds of billions of dollars in checks drawn every year in the United States, a very large proportion are for local payments. They are settled promptly through local clearing houses or directly between the banks concerned and offer no difficulties. Our American clearing house machinery has long been a marvel of perfection for the settlement of local checks. In addition to the checks drawn for purely local payments, checks whose span of life is but one day and which are born, live, and die within the narrow limits of one town, there are, however, millions of checks drawn daily for out-of-town payments, checks whose span of life often covers many days and which in the range and speed of their movements excel the proverbial American tourist party in Europe. The supply of these checks that was continually in transit, running into the hundreds of millions of dollars, was known among bankers as the "float." The problem of efficiently and cheaply handling this float and of equitably apportioning the expenses involved had been for years a perplexing one. Some clearing houses, as for example that of New York, imposed specified charges for the collection of checks on points beyond a certain radius from New York City. Other clearing houses imposed no charges. The Boston clearing house developed a system for the collection of checks at par throughout New England, thereby eliminating all collection charges on items drawn on banks entering the system. Similar devices were adopted in a number of other sections of the country, notably in the Middle West. Some cities—Albany, for example—became known as "free cities," and others were notorious for their high collection charges. Many banks imposed ex-

change charges—some high and some low—for the collection of out-of-town checks received over their counters, and some made a charge for the collection of checks drawn upon themselves when presented from out-of-town sources. These practices led, among other evils, to the practice of “routing checks,” which meant that checks in the process of collection would often be sent by roundabout and devious routes in order to avoid or reduce collection charges. In this way the length of time checks were in transit was increased, and the economic cost to the community for the collection of checks was made greater.

A serious aspect of the practice of routing checks was the manner in which it padded legal reserves. Competition among large-city banks for the accounts of country banks led the city banks to give an immediate credit to the country banks for out-of-town checks. These checks frequently took the city bank several days, sometimes a week or more, to collect. The country bank counted as legal reserve out-of-town checks sent to the reserve city bank for collection as soon as they were mailed. The reserve city bank in turn would send some of these same checks to the central reserve city bank and count them as reserve money as soon as they were put in the mail. In this way one check *in transit* frequently counted as legal reserve for both a country bank and a reserve city bank. Occasionally such a check, after performing a yeoman service as legal-reserve money for two banks for several days, would be marked “no funds” and be returned as worthless.

Another defect of the domestic exchange system was the expense and trouble of heavy shipments of currency back and forth over the country. Much of this was not necessary. As previously noted, American money markets are subject to pronounced seasonal swings. At one season of the year the demand for bank funds is particularly heavy in the cotton belt of the South, at another time in the great cereal-producing sections of the West and Middle West, and at other seasons in the industrial and financial centers of the East. The area of relatively heavy demand often shifts from one section to another within a very brief period of time. Under our old banking system these shifts resulted in large shipments of currency, shipments amounting in the course of a year to hundreds of millions of dollars; and frequently a shipment would hardly be received and unpacked before a shift in the

monetary demand would require the money to be sent to another section or perhaps to be returned to the place whence it came. All this involved expense, including packing, shipping, insurance, and interest items.

A second phase of the exchange difficulties under the old banking system was that relating to the foreign exchanges.

Our foreign trade was financed largely through London, even those parts of the trade which were with the Orient and South America. London was the world's financial center, and it was natural that we should use her unrivaled facilities for financing overseas trade. The trouble was not that we utilized them, but that we utilized them too much and were unduly dependent upon them. This created several difficulties, only two of which need be mentioned here. In the first place, payments through London gave rise to an additional foreign exchange operation, which normally added to both the expense and the risk of financing a shipment of goods. In the second place, the fact that invoices, bills of lading, and other documents passed through the hands of foreign banks gave to our foreign competitors "inside" information concerning our foreign business—information that was sometimes used to their advantage in competition with our own citizens.

DEFECTIVE BANKING MACHINERY FOR THE FEDERAL GOVERNMENT

We now come to the fourth and last of the old banking system's defects, which were outlined at the beginning of this chapter. That was a defect growing out of the relation of our banking system to the federal Treasury. The general funds of the Treasury were kept in part in the country's nine subtreasuries, which existed at that time, and in part in those national banks which qualified as depositaries of government funds. There were 1584 such national bank depositaries at the end of 1914. The apportionment of the funds between the subtreasuries and the banks on the one hand, and the apportionment among the various depositary banks on the other hand, were entrusted to the Secretary of the Treasury. The amount of Treasury funds to be thus apportioned varied widely from year to year and from season to season. In a number of respects this system worked badly. Three basic difficulties will be mentioned.

(1) It led to the continual hoarding in Treasury vaults of large sums of money, involving substantial administrative expenses and a heavy loss of interest.

(2) At certain seasons of the year, the government's receipts greatly exceeded its disbursements, as, for example, at the times when tax payments were heaviest; while at other seasons, as, for example, when pension money or interest on the public debt was being paid, the disbursements exceeded the receipts. In the former case, the money market was disturbed by the government's suddenly withdrawing large sums from circulation and thereby contracting the currency. In the latter case it was disturbed by the sudden pumping into circulation of large sums of money. These operations, when on any substantial scale, tended to affect the interest rates on call loans and the prices of speculative securities.⁷ The task imposed upon the Secretary of the Treasury, therefore, of apportioning these large government balances among the banks and the subtreasuries, was a difficult one; moreover, it was one which placed too great power over the money market and too much responsibility for that market in the hands of one government official. It also led to criticism and jealousy among depositary banks.

(3) The system caused depositary banks to rely unduly upon the Secretary of the Treasury for aid in the form of increased government deposits in times of financial pressure, instead of depending upon themselves and keeping "their houses in order" so as to be ready for emergencies. "The grandfatherly attitude of the Secretary of the Treasury toward the banks" in the matter of government deposits was an expression frequently heard.

SUMMARY

The four chief defects of our American banking system, as it existed prior to the enactment of the Federal Reserve Act, have now been briefly described. They were decentralization, inelasticity of credit, a cumbersome transfer system, and a defective government depositary system. To remedy these defects, the Federal Reserve System was cre-

⁷ *Infra*, pp. 35, 92.

ated by the Federal Reserve Act of December 23, 1913; and the Federal Reserve Banks opened their doors for business November 16, 1914. What was the nature of the new banking system? How did it remedy the four defects of the old banking system? These are the topics which will be discussed next.

Σ CHAPTER IV Σ

Establishment of the Federal Reserve System

THE Federal Reserve System did not take the place of the National Banking System; it was superimposed on it. The American system of many thousands of independent banks was continued. The new system was designed to federate them into a unified system, democratic in its organization and nation-wide in its field of operation. This was done by providing a system of regional bankers' banks. Unlike most nations, the United States had twelve central banks instead of one. A policy-making board in Washington coördinated the activities of these twelve banks.

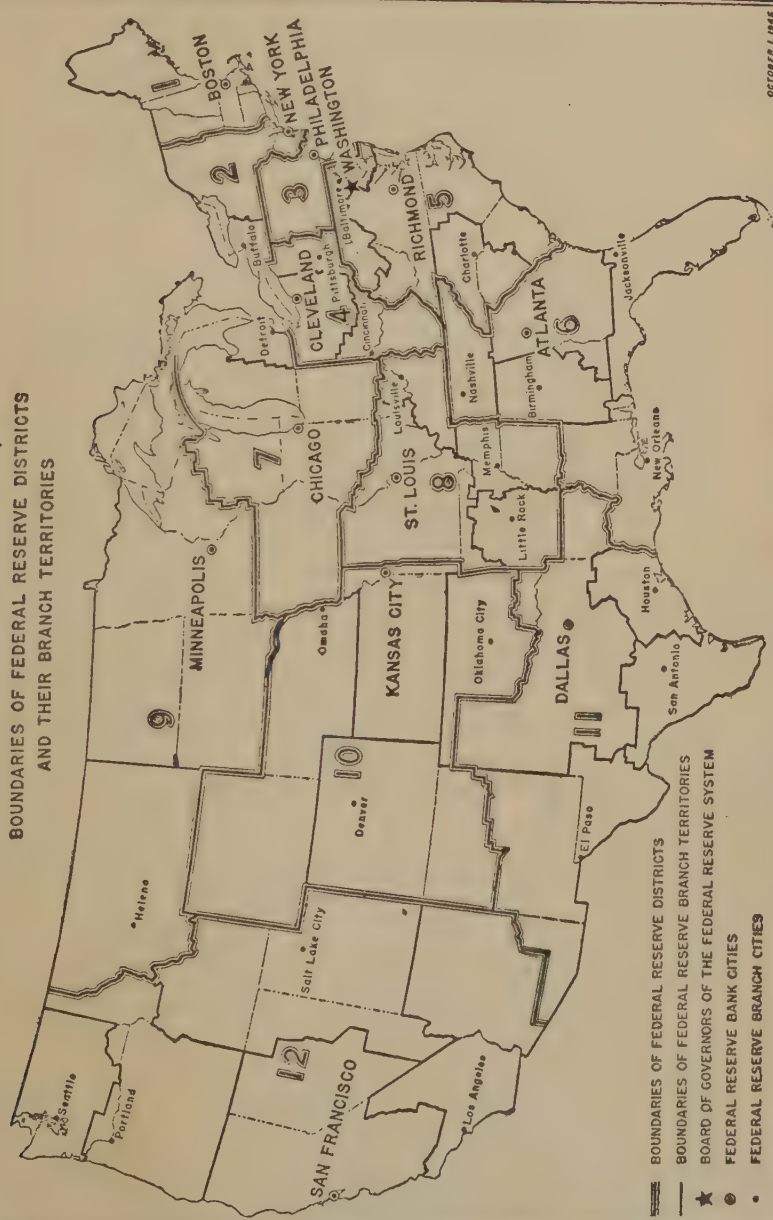
FEDERAL RESERVE DISTRICTS

The nation was divided into twelve Federal Reserve Districts, each presided over by its own Federal Reserve Bank. In determining the boundaries of these districts the authorities were required to have "regard to the convenience and customary course of business" and to make each district large enough to provide the minimum capital of \$4 million required by law. A map showing the boundaries of the twelve Federal Reserve Districts, and the location in each district of the Federal Reserve City (namely, the city in which the main office of the Federal Reserve Bank is situated) and of each Federal Reserve Branch Bank City, is given as Chart III.

The fact that the number of banks and the amount of banking capital in different sections of the country vary so widely explains the great disparities in the geographic sizes of the Federal Reserve Districts and similar disparities in assets of the Federal Reserve Banks. The New York Federal Reserve Bank has about eleven times the assets that the Minneapolis Federal Reserve Bank has, and it has over one-quarter of the Federal Reserve System's total assets. That, to-

FEDERAL RESERVE SYSTEM

BOUNDARIES OF FEDERAL RESERVE DISTRICTS
AND THEIR BRANCH TERRITORIES



- BOUNDARIES OF FEDERAL RESERVE DISTRICTS
- BOUNDARIES OF FEDERAL RESERVE BRANCH TERRITORIES
- ★ BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM
- FEDERAL RESERVE BANK CITIES
- FEDERAL RESERVE BRANCH CITIES

OCTOBER 1, 1946
BOARD OF GOVERNORS OF THE FEDERAL RESERVE SYSTEM

CHART III. The Twelve Federal Reserve Districts.

gether with its location in the principal domestic and international money market, explains its dominating influence in Federal Reserve councils. To enable some of the extensive districts, especially in the West, to serve their regions better, Federal Reserve Branch Banks were established in cities remote from the district head office. In 1948 there were twenty-four such branches. The San Francisco and Atlanta districts had the most, four each, whereas the Boston and Philadelphia districts had the least, none at all.

MEMBERSHIP IN THE FEDERAL RESERVE SYSTEM

All national banks are required to be members of the system, and state banks and trust companies (which conform to certain standards as to size and character of business) are encouraged to join.¹ Comparatively few state institutions joined during the first two years the

TABLE I. Number and Percentage of Banks Belonging to the Federal Reserve System and Their Deposits

Date (June)	National Banks	State Banks	Total Members	Total U. S. Banks	% Banks Members	All Banks' % Deposits (in millions)	% Deposits Held by Members
1915	7,598	17	7,615	26,511	29	\$ 21,894	41
1919	7,780	1,042	8,822	28,489	31	37,473	61
1921	8,150	1,595	9,745	30,419	32	38,505	61
1929	7,530	1,177	8,707	25,113	35	57,941	62
1933	4,897	709	5,606	14,523	39	41,532	83
1939	5,203	1,127	6,330	15,083	42	64,222	71
1945	5,015	1,825	6,840	14,542	47	151,033	78
1948	4,998	1,927	6,925	14,719	47	156,353	75

Source: Board of Governors of Federal Reserve System, *Banking and Monetary Statistics*; and *Federal Reserve Bulletins*.

system was in operation, but the liberal policies of the Federal Reserve authorities, together with later amendments to the law and a feeling of patriotism during World War I, led more of them to join the system. By the end of June, 1919, about one thousand state institutions were members.² Today the number has about doubled. Throughout, a minor-

¹ The Banking Act of 1933 provided for the admission of mutual savings banks to the Federal Reserve System. It also permitted Morris Plan banks and other incorporated banking institutions engaged in similar business to join. *Infra*, pp. 131-132.

² On the general subject of membership of state banks in the Federal Reserve System, consult Charles S. Tippetts, *State Banks and the Federal Reserve System*.

ity of all banks have belonged to the Federal Reserve System, but the proportion has steadily increased until almost half do today. Most of the big banks have always belonged, however, so that almost from the beginning the member banks of the Federal Reserve System have held well over half of the nation's bank deposits. The accompanying table shows the chief changes in membership at key periods in the system's development.

CAPITAL, SURPLUS, AND PROFITS

Member banks may be required to subscribe to the capital stock of the Federal Reserve Bank in their district to an amount equal to 6 percent of the member bank's capital and surplus.³ Only one-half of this subscription has so far been called, giving the Federal Reserve Banks a paid-in capital of \$200 million near the end of 1948, but the other half may be called at any time by the Federal Reserve authorities.

Although the Federal Reserve Banks were not intended to be profit-making institutions, most of them have made a handsome profit over the years. Arrangements for the distribution of this profit have changed in detail from time to time. Until 1947 the basic pattern was to pay member banks 6 percent on their stock and to devote most of the balance above that to building the Federal Reserve Bank's surplus.⁴ By 1947 the accumulated surplus of these banks was from two to three times as large as their paid-in capital. Because of that the Board de-

³ In the case of mutual savings banks, the basis of subscription is 0.6 percent of total deposit liabilities.

⁴ Under the 1913 law half of the excess went to surplus until it was 40 percent of subscribed capital, and half to the government as a franchise tax.

By the act of March 3, 1919, all went to surplus until surplus was equal to subscribed capital, and then 10 percent continued to go to surplus and 90 percent went to the government as a franchise tax. Up to 1933 the Federal Reserve Banks had paid a total of nearly \$150 million to the federal government as a franchise tax out of their excess profits. They had an accumulated surplus of \$280 million. The Banking Act of 1933 required them to turn over about \$140 million of this to the newly founded Federal Deposit Insurance Corporation. This reduced their surplus to \$140 million. *Infra*, p. 126; also *Federal Reserve Bulletin*, 1940, p. 1258.

By the Banking Act of 1933 all the excess profits went to surplus. The surplus account grew rapidly, especially during World War II.

By a ruling of the Board on April 24, 1947, a tax was imposed on Federal Reserve notes under Section 16, paragraph 4, of the Federal Reserve Act. The effect was to transmit to the Treasury about 90 percent of net earnings after dividends. In other words, a virtual return had been made to the method in force between 1919 and 1933. *Federal Reserve Bulletin*, 1947, pp. 518 ff.

cided to invoke its power to tax Federal Reserve Notes and turn the proceeds over to the Treasury. Consequently, most of the Federal Reserve earnings now go to the federal government. From the beginning the law has provided, "Should a federal reserve bank be dissolved or go into liquidation, any surplus remaining, after the payment of all debts, dividend requirements and the par value of the stock, shall be paid to, and become the property of the United States."

DEMOCRACY OF THE FEDERAL RESERVE BANKS' PLAN OF ORGANIZATION

There are two noteworthy features of a Federal Reserve Bank's ✓ plan of organization. They are, first, its democracy, and second, its recognition of the quasi-public nature of the banking business by its grant to the public of participation in the bank's management. •

The administrative control of a Federal Reserve Bank is democratic. "One bank, one vote" is the rule. Furthermore, in order to prevent the large banks from dominating the small ones by reason of their greater prestige, and to assure the small banks of representation on the board of directors, there is a device by which all the member banks are divided according to their capital into three groups, which, reminiscent of the three bears in the Goldilocks story, may be called big banks, middle-sized banks, and little banks. Each of the groups was originally required to contain approximately the same number of banks, but this requirement was later discontinued. At present the Board of Governors has authority to determine the number of banks which shall constitute each group, being merely subject to the requirement: "Each group shall consist as nearly as may be of banks of similar capitalization." The largest bank in the group of little banks is therefore usually smaller than the smallest bank in the group of middle-sized banks, and the largest one in the group of middle-sized banks is usually smaller than the smallest in the group of big banks.

On the basis of the one-bank-one-vote principle, each group elects two directors, one of whom, called a Class A director, is a banker and represents the stock-holding banks, while the other, called a Class B director, is a businessman or farmer and represents the business community. To the six directors so elected are added three others known as Class C directors, who are appointed by the central Federal Reserve

authorities at Washington to represent the interests of the federal government and of the general public. One of these Class C directors, who is required to be a person of "tested banking experience," is designated by the central authorities as chairman of the board and as Federal Reserve agent. A second Class C director is designated as deputy chairman. The board thus consists of nine directors, who hold office for three years (the term of office of one director of each class terminating each year), and who are representative of different interests among the American public.⁵ Broadly speaking, "Class A directors represent lenders of funds, Class B directors represent borrowers, and Class C directors represent the interests of the general public."⁶

The board of directors appoints the officers and employees of a Federal Reserve Bank. Prior to March 1, 1936, the chief executive officer was known as the governor and was elected by the board, although there was no specific provision in the law for the office of governor. He was frequently the most powerful person in the bank.⁷ The Banking Act of 1935 made definite provision for a president and a first vice-president to be appointed by the board of directors, with the approval of the Board of Governors of the Federal Reserve System, for a term of five years. The president is the chief executive officer of the bank, and all employees of the bank are made directly responsible to him. In the absence or disability of the president, or during a vacancy in the office of the president, the first vice-president acts as president.

COÖRDINATION OF THE FEDERAL RESERVE SYSTEM BY WELL-BALANCED ORGANIZATION

⁵ Crowning the arch, of which the twelve Federal Reserve Banks constitute the structural stones, and forming its keystone, is the central board at Washington, known as the Board of Governors of the Fed-

⁵ In 1936 the new Board announced that directors should serve no more than two terms, or six years.

⁶ *The Federal Reserve System Today*, published by the Federal Reserve Bank of New York, 1936, p. 12.

⁷ The A and B directors generally joined to elect a vigorous person of their own choice as governor. He sat with the board although he had no vote, and he was made chairman of the executive committee. The prestige of the Federal Reserve Board's appointee, the chairman-agent, gradually declined. The Board did not always deal through him themselves. After 1936 he was put on an honorary basis. R. Westerfield, *Money, Credit and Banking* (1938), p. 395; *Federal Reserve Bulletin*, 1936, p. 145

eral Reserve System.⁸ This Board consists of seven members, appointed by the President of the United States with the advice and consent of the Senate, who hold office for a period of fourteen years. The law requires that the President in the selection of the members "shall have due regard to a fair representation of the financial, agricultural, industrial, and commercial interests, and geographical divisions of the country." Not more than one member shall be selected from any one Federal Reserve District. The President designates one member as chairman and one as vice-chairman, each to serve a term of four years. The chairman is the Board's active executive officer. Members are not eligible for reappointment after they have served a full term of fourteen years.

The Board of Governors has very large supervisory powers over the Federal Reserve System, as will appear in the discussion which follows concerning the manner in which the system has functioned since its establishment in 1914.⁹

⁸ The Banking Act of 1935 changed the name of the Federal Reserve Board to the Board of Governors of the Federal Reserve System. For the period after 1935 we shall use the new name or else refer to that body simply as the Board. *Infra*, p. 138.

⁹ "In connection with its supervision of member banks, the Board is authorized, among other things, (1) to pass on the admission of State banks and trust companies to membership in the federal reserve system and on the termination of membership of such banks; (2) to examine member banks and receive condition reports from State member banks and their affiliates; (3) to limit by regulation the rate of interest which may be paid by member banks on time and savings deposits; (4) to issue permits to holding company affiliates of member banks entitling them to vote the stock of such banks at any or all meetings of shareholders of the member banks; (5) to regulate interlocking relationships between member banks and organizations dealing in securities or, under the Clayton Antitrust Act, between member banks and other banks; (6) to remove officers and directors of a member bank for continued violations of law or unsafe or unsound practices in conducting the business of such bank; (7) to suspend member banks from the use of the credit facilities of the federal reserve system for making undue use of bank credit for speculative purposes or for any other purpose inconsistent with the maintenance of sound credit conditions; (8) to pass on applications of State member banks to establish out-of-town branches; (9) to pass on applications of national banks for authority to exercise trust powers or to act in fiduciary capacities; (10) to grant authority to national banks to establish branches in foreign countries or dependencies or insular possessions of the United States, or to invest in the stock of banks or corporations engaged in international or foreign banking. In exercising its supervisory functions over the Federal Reserve Banks and member banks, the Board of Governors promulgates regulations governing certain of the activities of Federal Reserve Banks and member banks." *The Federal Reserve System Today*, pp. 7-8.

The Board of Governors is assisted by a Federal Advisory Council, consisting of twelve members appointed respectively by the boards of directors of the twelve Federal Reserve Banks. The Advisory Council meets with the Board of Governors at least four times each year, and oftener if requested by the Board.

The appointment by the Board of three of the nine directors (including the chairman) of each of the Federal Reserve Banks, the requirement that the selection of the president and first vice-president of each Reserve Bank shall be approved by the Board of Governors, and the appointment by each Federal Reserve Bank of a member of the Federal Advisory Council are intended to federate the twelve Federal Reserve Banks under the Board of Governors and to give a common knowledge and a unity of purpose. Conferences from time to time of the presidents of the twelve Federal Reserve Banks with the Board of Governors add much to the smooth and unified working of the system. In matters of general policy the Board of Governors is given large powers and is the directing head of the system.¹⁰

Here, then, is the centralizing machinery created to bring order into our banking system and to make possible the development of broad financial policies which can be carried out with promptness and continuity.

HISTORIC REASONS FOR THE FRAMEWORK OF THE FEDERAL RESERVE SYSTEM

It may be asked why the United States had to have twelve central banks when other nations were content with one; why their boards of directors consisted of three groups representing bankers, borrowers, and public; why the President of the United States should appoint the Board of Governors that rule the Federal Reserve System when, after

¹⁰ The Board's control is strengthened by its statutory powers: (1) "To examine at its discretion the accounts, books and affairs of each federal reserve bank and of each member bank, to require such statements and reports as it may deem necessary." (2) "To suspend or remove any officer or director of any federal reserve bank. . . ." (3) "To suspend, for the violation of any of the provisions of this Act, the operations of any federal reserve bank, to take possession thereof, administer the same during the period of suspension, and, when deemed advisable, to liquidate or reorganize such bank." (4) "To exercise general supervision over said federal reserve banks." Federal Reserve Act, Section 11.

all, the member banks had put up the capital; and why there needed to be a Federal Advisory Council.

The reasons for these provisions are to be found in the financial history of the nation during the generation before the Federal Reserve System was established. There was no central bank to provide financial leadership, and the independent treasury system offered none. In time, therefore, it was assumed by the most powerful investment banker in the country, John Pierpont Morgan, the elder. For example, when the Treasury was in distress for lack of gold in 1895, he arranged a loan and secured the gold from abroad, making an estimated profit of \$12 million on the transaction. And when our whole financial system seemed to be toppling during the panic of 1907, financiers large and small turned to Morgan to save the situation. Even President Theodore Roosevelt, who had recently been denouncing the "malefactors of great wealth," granted Morgan a free hand. Friends and rivals entrusted Morgan with their surplus funds to halt the panic. He, sitting in solitary splendor in a tapestried room, made the final decision as to which banks, brokerage houses, insurance companies, and other institutions should get a loan and be saved and which should have to go without help.¹¹ In the parlance of a later day, Morgan was a one-man Federal Reserve System and Reconstruction Finance Corporation. That was a stupendous amount of power to be wielded by one man, largely at his own discretion. That Morgan acted with considerable wisdom and contributed greatly to stopping the panic does not change the fact that the vast power he held over the welfare of his fellow men was not compatible with the principles of a democratic society.

All this took place in the heyday of "trust-busting." Morgan's financial power gave rise to the statement that he headed a "money trust." Cartoons appeared attacking Morgan: one showed him astride a pile of money and banks worth nearly \$25 billion. In 1912 the House of Representatives directed its Committee on Banking and Currency to investigate whether there existed sufficient concentration of financial and banking power to constitute a "money trust." Representative Arsène Pujo of Louisiana headed the subcommittee which held hearings at which Morgan and others testified. The financial leaders denied

¹¹ Lewis Corey, *The House of Morgan* (1930), p. 343.

that a trust could be got in money. Nevertheless, the majority report of the subcommittee declared that existing banking and credit practices resulted in a "vast and growing concentration of money and credit in the hands of a comparatively few men."¹²

This was all happening while a new central banking system was being devised. The head of the commission drawing up the banking system was a Republican senator from Rhode Island, Nelson Aldrich. Without question he was one of the ablest public men of his day, but he was also the traction magnate of his state and the son-in-law of one of the most-hated men in America at that time, John D. Rockefeller. Aldrich submitted a bill to Congress for the establishment of a single central bank, to be known as the National Reserve Association. Because of its sponsor and because of the proposed method of organizing it, many persons feared it might be run by the big New York bankers. Aldrich contended that his plan guarded against such an eventuality, and there is reason to believe he was sincere, but his political opponents had no faith in it. They wanted to take no chances that the "money trust" would seize control of the country's central bank.

Soon after this the election of 1912 was held; a Democrat, Woodrow Wilson, became President of the United States, and the Democrats had control of the lower house. William Jennings Bryan had helped nominate and elect Wilson and was a strong influence in the Cabinet in Wilson's first term. Bryan had, of course, protested for years against the moneyed power of the Eastern capitalists. The Democrats took over the framing of the new central banking system, Carter Glass of Virginia assuming the leadership in the Senate. While they kept many of Aldrich's suggestions, they made drastic changes in others. The country was divided into twelve regions, supposedly of equal sovereignty in financial matters—this was to curb the financial power of the East. The nine directorships in each Federal Reserve Bank were divided equally between bankers, borrowers, and public, with no one group holding a majority. These are the A, B, and C directors previously described. This was to keep big bankers from controlling the Federal Reserve Banks. The head board of the system, the Federal Reserve Board, was to be appointed by the President of the United

¹² *Report of the Committee* (Feb. 28, 1913), p. 129.

States, who was presumed to be above control by a "money trust." This was in contrast to Aldrich's plan, in which that board consisted of bankers elected by banks from all over the nation. To appease the bankers, there was established the Federal Advisory Council of twelve, appointed by the Federal Reserve Board, which was to meet with that Board when requested to do so.

✓In short, our banking system was being taken from the control of bankers, especially the big bankers. The people were not satisfied with the way they had exercised their authority and were transferring more of the control to the government. It remained to be seen whether control from this quarter would work any better.

The original author of this book believed strongly that a nation's central banking system should not be dominated either by bankers or by government. He contended that experience showed that either would tend to use power selfishly. He pointed to our own banking history to illustrate the evils of banker control and to European and South American banking history to illustrate the evils of government control. In the course of his career he was financial adviser, or "money doctor," to fourteen nations. When proposing reforms for their central banking systems, he repeatedly advised using the Federal Reserve Bank device of three groups of directors representing bankers, borrowers, and public, each acting as a check on the others, and none holding a majority.¹³ It may be well to keep in mind whether a Board of Governors constituted like the Federal Reserve Bank boards might not have served the nation better on a number of occasions.

¹³ *Infra*, Chapter XV.

Σ CHAPTER V Σ

Reserves Centralized and Made More Mobile

7-1-11

IN the preceding chapter we described the framework of the Federal Reserve System and showed the manner in which the old evil of administrative decentralization was remedied. Let us now examine the methods by which the corollary evils of scattered and immobile reserves were eliminated.

DISTRICT CENTRALIZATION OF BANK RESERVES

The Federal Reserve Act, as originally passed, provided for the gradual withdrawal of legal-reserve money from deposit in the banks of reserve and central reserve cities by the end of a three-year period beginning with the date of the establishment of the Federal Reserve System. The percentage of the legal reserves of member banks kept on deposit in the banks of reserve and central reserve cities began to decline immediately. On June 21, 1917, an amendment was passed to the Federal Reserve Act, requiring every bank, banking association, or trust company belonging to the Federal Reserve System to maintain its entire legal reserve in the form of a deposit at the Federal Reserve Bank of its district. Thereafter member banks no longer deposited their legal reserves in the banks of our money market centers. This divorcing of the legal reserves of our commercial banks from the speculative and capital loans of the stock market was one of the outstanding achievements of the Federal Reserve System.

The Federal Reserve law, as amended, recognizes only one form of legal reserve, and that is a member bank's deposit in its Federal Reserve Bank. Member banks may keep as much or as little cash on hand for till money as they wish to. They may keep balances in other banks

if it suits their convenience to do so—all that is their own affair,¹ for which their responsibility is to their stockholders and their customers; but their legal reserve, the reserve which the government looks upon as the minimum below which the public interest demands that banks should not go, except in time of great emergency, must all be kept on deposit in Federal Reserve Banks, the nation's principal reservoirs of reserve money.

If a member bank permits its reserve at the Federal Reserve Bank to fall below the legal minimum, the Board of Governors impose as a basic penalty a charge on the amount of the deficiency at the rate of 2 percent *per annum* above the ninety-day discount rate of the Federal Reserve Bank of the district. Progressively heavier penalties may be imposed for subsequent deficiencies.²

For reasons that will soon be made clear, the concentration of the country's reserve money in a few large reservoirs makes possible a much more efficient use of each dollar of reserve money than under the old system of scattered reserves. As a result, legal reserve requirements were greatly reduced after the inauguration of the Federal Reserve System. Many authorities believed that they were reduced too much. The minimum statutory reserves required then and later, until the fall of 1948, against demand and time deposits were as shown in Table 2.³

¹ A member bank is prohibited by law from keeping on deposit with any state bank or trust company which is not a member bank a sum in excess of 10 percent of its own paid-up capital and surplus.

² Deficiencies "shall be computed on the basis of average daily net deposit balances" covering semiweekly periods for banks in Federal Reserve Bank or Branch Bank cities, covering weekly periods for banks in reserve cities, and covering semimonthly periods for all other member banks. The penalty rate is 2 percent above the first-of-the-month rediscount rate in the month of the deficiency. Continued deficiencies may result in loss of charter for a national bank or of membership for a state bank. Banks with deficiencies for even a day or more are forbidden to make further loans or to pay out any dividends until the reserves are restored to the proper level. Pratt's *Digest*, I (1940), pp. 891-893.

³ Under the provisions of the National Banking Act, national banks are classified into three groups according to the business importance of the city of their location. These three groups are central reserve city banks, reserve city banks, and country banks.

On December 19, 1947, the Board of Governors established a new standard for classifying reserve cities. Reserve cities would include: (1) Washington, D. C., and all cities where there is a Federal Reserve Bank or Branch Bank

Following a critical banking situation that reached its climax in the "bank holiday" of early March, 1933—a situation which will be discussed later⁴—there was a rapid growth in the amount of reserves held by member banks in excess of legal requirements.⁵ Because these growing excess reserves indicated an increasing danger of inflationary

TABLE 2. Member Bank Reserve Requirements, 1914-1948

Class of Bank and Deposit	Minimum, 1914-1948	Maximum, 1935-1948
Central reserve city banks' demand deposits	13 percent	26 percent
Reserve city banks' demand deposits	10 "	20 "
Country banks' demand deposits	7 "	14 "
All member banks' time deposits	3 "	6 "

credit expansion, Congress in 1935 gave the Board authority to increase reserve requirements up to a doubling of the old figures if necessary. The Board might lower or raise them at their discretion between the old and new limits when they thought that was desirable "in order to prevent injurious credit expansion or contraction."⁶

The Board shortly made use of this new authority, and by May of

except New York or Chicago, which are, of course, central reserve cities; (2) cities where the official call reports of conditions for the two years ending June 30, 1947, showed member banks "held an aggregate amount of demand deposits owing to all banks equal to $\frac{1}{3}$ of 1 percent or more of the aggregate amount of demand deposits owing to banks by all member banks of the Federal Reserve System"; (3) cities where the same amount was 0.25 percent or more but in addition was one-third or more of the aggregate amount of all demand deposits held by member banks in such cities; (4) former reserve cities whose banks petitioned by March 1, 1948, to be continued as such. Under 1 thirty-five cities qualified as reserve cities. Under 2 and 3 twelve more cities qualified. And under 4 nine more petitioned to be continued. That made a total of fifty-six. Three former reserve cities accepted country status. *Federal Reserve Bulletins*, Jan. and March, 1948.

⁴ *Infra*, pp. 115-123.

⁵ *Federal Reserve Bulletin*, August, 1936, p. 615.

⁶ The Agricultural Adjustment Act of May 12, 1933, had contained a provision authorizing the Federal Reserve Board "... upon the affirmative vote of not less than five of its members and with the approval of the President . . . [to] declare that an emergency exists by reason of credit expansion, and . . . by regulation during such emergency [to] increase or decrease from time to time, in its discretion, the reserve balances required to be maintained against either demand or time deposits."

1937 all legal reserves had been doubled. With some exceptions⁷ they remained doubled until September, 1948. During most of this time World War II was being waged, which necessitated a great expansion in bank credit. That ended the threat of excess reserves in its old form but introduced it in a new form; namely, large bank holdings of government securities which the banks could convert to reserves any time they desired to expand their credit. The war produced some inflation, and the postwar period threatened to produce more. In the summer of 1948 Congress gave the Board temporary authority to increase legal-reserve requirements still further. The Board promptly made use of most of this authority, as Table 3 shows.⁸

The effect of the war and of the higher reserve requirements has been to increase total reserves of all member banks from \$6 billion at the end of 1935 to \$20 billion as of January 26, 1949.

These large reserves can be used very efficiently. Since they are collected in a few large reservoirs, they are available either for domestic needs or for the purpose of providing gold for export.⁹ The

7 Member Bank Reserve Requirements (%)				
Period in Effect	Central Reserve City Banks	Reserve City Banks	Country Banks	Time Deposits—All Member Banks
June 21, 1917 — Aug. 15, 1936	13	10	7	3
Aug. 16, 1936 — Feb. 28, 1937	19.5	15	10.5	4.5
March 1, 1937 — Apr. 30, 1937	22.75	17.5	12.25	5.25
May 1, 1937 — Apr. 15, 1938	26	20	14	6
Apr. 16, 1938 — Oct. 31, 1941	22.75	17.5	12	5
Nov. 1, 1941 — Aug. 19, 1942	26	20	14	6
Aug. 20, 1942 — Sept. 13, 1942	24	20	14	6
Sept. 14, 1942 — Oct. 2, 1942	22	20	14	6
Oct. 3, 1942 — Feb. 26, 1948	20	20	14	6
Feb. 27, 1948 — June 10, 1948	22	20	14	6
June 11, 1948 — Sept. 15, 1948	24	20	14	6
Sept. 16-24, 1948 — Apr. 30 - May 4, 1949	26	22	16	7.5
May 1-5, 1949 — June 29-30, 1949	24	21	15	7
June 30 - July 1, 1949 — Aug. 10-31, 1949	24	20	14	6
Aug. 11 - Sept. 1, 1949, and after	22	18	12	5

Source: *Federal Reserve Bulletin*, August, 1949, pp. 895, 945.

⁸ These reserve requirements were reduced again in mid-1949. *Infra*, p. 196.

⁹ The Federal Reserve Banks not only serve as a reservoir of reserves but, of course, create reserves. However, we are here concerned only with their function as a reservoir. The other function will be discussed in the next chapter.

fact that they are available quickly and in large quantities inspires public confidence and lessens the danger of financial disturbances. The Federal Reserve Banks, of course, do not keep on hand all the reserve money deposited by member banks. Like other banks, they invest part of their deposits. The present law, however, requires them to keep a normal minimum reserve of 25 percent in gold certificates against de-

TABLE 3. Recent Reserve Requirements, 1948-1949

Class of Bank and Deposit	Sept., 1948, Requirements	Maximum Permissible (1948-1949)
Central reserve city bank demand de- posits	26 percent	30 percent
Reserve city bank demand deposits	22 "	24 "
Country bank demand deposits	16 "	18 "
All member banks' <i>time</i> deposits	7.5 "	7.5 "

posits.¹⁰ Until 1945 the minimum reserve was 35 percent. But it is the established policy of the Federal Reserve Banks to maintain reserves much larger than this minimum.

MOBILIZATION OF RESERVES

A corollary to the district centralization of reserves is their mobilization. Reserve money must not only be piped into a few large reservoirs, but these large reservoirs must be piped together, and there must be a pumping engine of sufficient power to force the reserves promptly and in large quantities to any place desired. The Federal Reserve System creates machinery for this purpose. It provides numerous devices by which reserve money can be quickly moved from places of redundancy to places of scarcity. A few of the more important of these devices will be briefly described here, while others will be discussed later in connection with the general topics of currency and credit elasticity and the transfer system. Let us consider, first, the interdistrict mobility of reserve money, namely, the movability of reserves from one Federal Reserve District to another; and,

¹⁰ See Section 16 of the Federal Reserve Act and the amendment of June 12, 1945.

second, the intradistrict mobility of reserves, or the movability of reserves within the boundaries of one district.

INTERDISTRICT MOBILITY. Broadly speaking, there are three ways in which the Federal Reserve law increased the interdistrict mobility of reserve money.¹¹ They are: (1) rediscounting by one Federal Reserve Bank for another; (2) open-market operations of Federal Reserve Banks; and (3) creation of a broader discount market for business paper.

Rediscounting by One Federal Reserve Bank for Another. Under the old banking system, as we have seen, in time of emergency, each bank held tight its own reserves. In the controversy over banking reform which culminated in the Federal Reserve Act, the advocates of a single central bank contended that a system of from eight to twelve banks like that proposed in the Federal Reserve bill would perpetuate the old evil of scrambling for reserves in time of emergency. This time it would be among the different Federal Reserve Banks instead of among the individual banks of the country. To meet this danger, a provision was inserted in the act (Section 11b) empowering the Federal Reserve Board "to permit, or, on the affirmative vote of at least five members of the Reserve Board, to require Federal Reserve Banks to rediscount the discounted paper of other Federal Reserve Banks at rates of interest to be fixed by the Federal Reserve Board." This meant that in case there was an exceptionally heavy demand for reserve money in any section of the country—a demand heavier than the banks of that section could reasonably meet—the Reserve Banks in sections where money was more plentiful would come to the rescue, either voluntarily or under compulsion of the Board, and would rediscount the paper of the Reserve Bank in the section under financial stress. This would cause a flow of cash from the reserves of the former banks to the reserve of the latter, thereby easing the money market in the threatened section.

After the United States entered World War I, compensatory movements of reserves among the Federal Reserve Banks occurred fre-

¹¹ Advances by Federal Reserve Banks to industry might be considered another way, but they have never been large. *Infra*, p. 115.

quently. Reserves of some of the banks frequently fell rapidly while those of others were rapidly rising, often with little or no change in the reserve position of the twelve Federal Reserve Banks as a whole. This compensatory movement was due largely to operations of the government, which often resulted in heavy withdrawals of funds from banks in one section of the country for the making of payments in another. With increased use of open-market operations in the 1920's, this method of handling the problem declined in importance and was not used at all in World War II. The reserves of the twelve Reserve Banks are now so closely piped together that they are like connected tanks in a single reservoir.

Open-market Operations. While the Federal Reserve Banks are essentially bankers' banks, nonetheless Congress has conferred upon them certain limited rights of dealing with the public at large. These rights were necessary for two reasons.

The original reason for open-market operations was to provide the Federal Reserve Banks with a method of profitably employing their funds in times of easy money, when member banks are making few calls upon them for rediscount. In the early days of the Federal Reserve System the Federal Reserve Banks invested substantial sums in municipal warrants and bank acceptances in the open market, and by that means covered a large part of their running expenses. But since the early 1930's most of the earnings, often over 95 percent, of Federal Reserve Banks have come from interest on government securities which were bought mostly in the open market. These were not obtained primarily for the purpose of enabling the Federal Reserve Banks to make their expenses.

A more important reason for open-market operations came later.¹² This was to put the banks in a stronger position to make their rediscount rates effective. If, for example, a Federal Reserve Bank raises its rediscount rate in order to discourage overlending by member banks or to prevent an undue outflow of gold from the country, it may happen that the member banks are not convinced of the need of such precautionary measures. Not being in need of obtaining funds from the Federal Reserve Bank by way of rediscount, they may ignore the

¹² *Infra*, pp. 95 ff.

efforts of the Federal Reserve Bank to protect the money market. The banks may accordingly continue their policy of loan expansion at low discount rates. Under such circumstances the Federal Reserve rate would be ineffective. To force the member banks into line, the Federal Reserve Banks may raise their buying rate for bank acceptances in the open market or may actively go into the market and sell government securities. By withdrawing from the banks the funds received in payment for these, they tend to reduce member banks' legal reserves, tighten the supply of credit in the market, and force up the market discount rate into harmony with the Federal Reserve rediscount rate.¹³

The open-market operations are provided for chiefly in Section 14 of the Federal Reserve Act and under the Board's Regulation B. At times they have assumed great importance, as during World War II, and on several occasions in the 1920's, especially previous to the panic of 1929.¹⁴ During the first part of this period the arrangement was that the New York Federal Reserve Bank would execute the open-market operations and the others would participate on a pro rata basis if they wanted to. Generally all the Federal Reserve Banks participated, but if one had more or less reserve credit than other Federal Reserve Banks, it did not have to. Not doing so sometimes had the effect of restoring the balance. Under authority of Section 14, and with permission of the federal open-market committee, a Federal Reserve Bank in one section of the country may buy and sell eligible paper in any other section of the country. Such dealings tend to cause a flow of reserve money from the district of the buyer to that of the seller. Some use was made of this privilege in the past and might be made of it again in the future, but in recent years Federal Reserve dealings in eligible paper have been negligible.

Creation of a Broader Discount Market for Business Paper. The third method by which the Federal Reserve System rendered our reserve money more mobile was through the creation of a broader discount market for business paper. Under the old banking system the

¹³ The Federal Reserve authorities and their publications speak of their discount rate, not their rediscount rate. For the sake of clarity, however, we shall always refer to it as the rediscount rate.

¹⁴ *Infra*, pp. 98-103.

great bulk of American business paper was local and enjoyed little or no market outside the community in which it was created. The Federal Reserve System provided the machinery by which high-grade business paper can be rediscounted throughout the United States. It encouraged the use of trade acceptances and bank acceptances—credit devices widely used in Europe. Essentially these are bills presented by the seller to the buyer or to his bank which the buyer or his bank has “accepted,” i.e., promised to pay at a definite future date. When the buyer accepts them, they are called trade acceptances; when the buyer’s bank accepts them, they are called banker’s acceptances. With an acceptance the seller can get his money immediately, less a small discount, from a bank or someone who has idle funds to invest for a short time. Whoever takes the acceptance knows that, even if the buyer does not pay, the seller must. Although acceptances have not become as widely used as was expected, that fact should not blind us to what they accomplished, particularly in the 1920’s, when they were most extensively used. Through them credit may be sought in the most advantageous money markets and funds may be more efficiently employed. This will be discussed in more detail in Chapter X, when the money market is described.

Inasmuch as bankers’ acceptances and high-grade trade acceptances have a wide market, their use tends to cause paper to flow away from the banks in sections of the country where the discount rate is relatively high to be discounted in the banks of those sections where the rate is relatively low. Such a flow of business paper from the dear markets to the cheap ones obviously causes a counterflow of bank reserves from the cheap markets to the dear ones and thereby tends toward the maintenance of territorial equilibrium in discount rates. Of course, this flow is not absolutely free, and perfect equilibrium is never obtained. The point is, however, that the widened marketability of business paper makes this flow of reserve money less sluggish than it was formerly. During recent years bank discount rates for different kinds of paper, and rates for the same kinds of paper among the twelve Federal Reserve Banks, have been much nearer uniformity than they were in the early days of the Federal Reserve System. For

example, at the present writing, the rediscount rate for member banks on all classes of paper is 1.5 percent for all twelve Federal Reserve Banks.

INTRADISTRICT MOBILITY OF RESERVES. The forces which act for the increasing mobility of reserve money within the boundaries of a Federal Reserve District are essentially the same as those just explained for that between districts. Obviously, paper of wide acceptability flows from place to place within a district more freely than paper whose merits are less widely recognized. Within a district, as between districts, the widely marketable paper flows from the places where discount rates are high and bank funds are scarce to the places where the rates are low and funds are more plentiful. Furthermore, the bank reserves of the district, which are now in one reservoir, the Federal Reserve Bank, can be readily pumped to the banks of any section of the district where funds are in heavy demand. Let us imagine that the banks in some district are rediscounting in moderate sums with the Federal Reserve Bank when a sudden emergency arises, causing an exceptionally heavy demand for funds in one section of that district. The Federal Reserve Bank can raise its rediscount rate, thereby discouraging the demands of the banks less in need of funds, and then turn larger amounts into the section where the demand is urgent. Additional funds can also be obtained by the Federal Reserve Bank within the district (as well as outside) by the sale of securities in the open market.

In the illustrations so far given we have assumed a fixed amount of banking funds and have shown how these funds can be readily mobilized under the Federal Reserve System and concentrated at the points where they are most needed. The problem of meeting unusual calls for banking funds is, however, an easier one under the Federal Reserve System than the above discussion implies. The reason is that under this system there exist in addition certain elastic elements in our supply of bank funds. These will be considered in the next chapter.

❧ CHAPTER VI ❧

Credit Elasticity Under the Federal Reserve System

BOTH the bank note currency and deposit, or check, currency became more elastic under the new system than they had been before.

BOND-SECURED BANK NOTES

The government was anxious to replace the old, inelastic bank note with an improved type but at the same time wanted to avoid any possible economic disturbance. It wished to prevent the alleged danger of an undue contraction of the currency. And it wanted to protect the banks owning 2 percent bonds from loss. These bonds were largely pledged with the government as security for national bank note circulation and because of their circulation privilege had a value far above their investment value. Consequently, the government decided not to withdraw the old bond-secured bank notes from circulation at once. The Federal Reserve Act of 1913 accordingly continued the circulation of these notes, but contained provisions looking toward their gradual retirement. This was not achieved as early as had been hoped. Table 4 shows how the national bank notes remained a significant part of our monetary circulation for another twenty years. During the depression years, when issue was permitted against any United States government bonds bearing less than 3.5 percent interest, their circulation sharply increased again. Their retirement became obligatory after July, 1935, and \$675 million of the "profit" from the 1933-1934 devaluation was allocated to pay off the bonds which secured them.¹ The \$97 million still outstanding at this writing may be presumed to be lost, in hoards, or in money collections. With the passing of the national bank notes, commercial banks finally lost all right to issue

¹ *Infra*, p. 81.

their own bank notes. That privilege was henceforth reserved for the central banking system.

TABLE 4. Gradual Retirement of the National Bank Notes

Year	Circulation	Percentage of Total Monetary Circulation
1914 (Dec. 31)	\$969 million	32
1919 (June 30)	639 "	14
1929 " "	653 "	14
1934 " "	902 "	17
1941 " "	150 "	2
1948 (Sept. 30)	97 "	.3

Meanwhile, another variety of inelastic bank note had appeared. These were the Federal Reserve *Bank* notes. They should not be confused with Federal Reserve Notes. The *Bank* notes were bond-secured bank notes issued by the Federal Reserve Banks. They were originally secured by a specific deposit, with the United States Treasurer, of bonds or of certain short-term obligations of the United States government. Federal Reserve Bank notes have been issued on four occasions in our monetary history.

At first they were intended to replace the national bank notes. Only a few millions were issued in the early years of the Federal Reserve System, with this purpose in mind.

Second, in 1918-1920, over \$200 million were put into circulation to replace the silver certificates that had to be called in when the United States sold England a large amount of silver under the Pittman Act of April 23, 1918. Most of these were gradually retired when new silver was purchased and the supply of silver certificates was increased again.

The third occasion was the bank holiday of March, 1933. Because of numerous bank failures, people were demanding money from the banks for hoarding, and the banks turned to the Federal Reserve Banks to obtain the needed cash. Under the Emergency Banking Act of 1933 Congress authorized the issuance of Federal Reserve Bank notes backed by commercial paper or any kind of government security.

Over \$200 million of Federal Reserve Bank notes were issued, but most of them were retired in the years immediately following.²

The fourth and last appearance of these notes was in December of 1942, when they circulated under the name of "National Currency." Some \$660 million were issued and improperly counted as assets of the Federal Reserve Banks instead of as liabilities. This action was widely criticized. The authority to issue Federal Reserve Bank notes was repealed on June 12, 1945, and since then about half of them have been retired.³ In general, the Federal Reserve Bank notes have been an inelastic and weak type of currency. Fortunately, they have never been of major importance, as Table 5 shows.

TABLE 5. Circulation of Federal Reserve Bank Notes, 1916-1948

	Date	Circulation	Percentage of Total Monetary Circulation
(1)	1916 (June)	\$ 2 million	—
(2)	1919 (")	155 "	3
	1920 (")	185 "	3.6
	1923 (")	20 "	.4
	1932 (")	3 "	—
(3)	1933 (Dec.)	208 "	3.8
	1936 (June)	52 "	.8
	1941 (")	20 "	.2
(4)	1943 (")	584 "	3.2
	1948 (Sept.)	347 "	1.2

FEDERAL RESERVE NOTES

The notes upon which the Federal Reserve System places its sole reliance for bank note elasticity are the Federal Reserve notes. These have become the most important hand-to-hand currency in circulation. They are issued to the Board of Governors. They are a "first and paramount lien on all the assets" of the Federal Reserve Banks, and they are also obligations of the United States government. The Board issues them to the Federal Reserve Banks only on receipt of collateral

² *Infra*, p. 121.

³ *Infra*, p. 178.

equal to at least the amount of the notes applied for. The collateral is deposited with the Federal Reserve agent, who represents the Board of Governors, and it is limited to certain types of assets specified by law.⁴

Four types of assets are considered suitable collateral. One type is paper endorsed by member banks and drawn for commercial, industrial, or agricultural purposes, or for the purpose of carrying or trading in securities of the United States government. A second is bills of exchange endorsed by a member bank and bankers' acceptances bought by a Federal Reserve Bank in the open market. A third is direct obligations of the United States government. The last is gold certificates. Government obligations and gold certificates have been, in practice, the most important collateral. The other two provide elasticity most automatically.

Except under special circumstances a gold certificate reserve of not less than 25 percent must be kept by each Federal Reserve Bank against its outstanding Federal Reserve notes. This percentage was 40 until June 12, 1945, when it was reduced to 25 because it appeared that the increased number of Federal Reserve notes put into circulation during the war might make it difficult for the Federal Reserve Banks to maintain the customary 40 percent ratio. The actual reserve of gold certificates behind Federal Reserve notes is 55 percent for the system as a whole at this writing.

ELASTICITY OF FEDERAL RESERVE NOTES. Bank notes are said to be elastic if the supply expands and contracts readily in response to the needs of business.

The supply of Federal Reserve notes can be readily expanded. If the member banks in a given section of the country need more currency to meet local demands, they may ask their district Federal Reserve Bank to rediscount eligible paper. The Federal Reserve Bank will generally do this although it is not obliged to if its own reserves are low or if it believes further expansion is undesirable. In recent years this has been an academic matter, for most banks have plenty of government obligations to sell which the Federal Reserve System

⁴ *Infra*, pp. 56, 113, 144, 178.

must buy to support the bond market.⁵ In any event the local bank may take the proceeds of the rediscounts or sales in the form of Federal Reserve notes.

If the Federal Reserve Bank's own supply of these notes is inadequate, it applies to the Federal Reserve agent for additional notes. It must deposit with the agent gold certificates, eligible paper from its portfolio, or direct obligations of the United States government. This process may continue as long as the Federal Reserve Bank has satisfactory collateral available for deposit with the Federal Reserve agent and its gold certificate reserve does not fall below the normal legal minimum of 25 percent. In case of great emergency, however, the Board of Governors may permit a reduction of the note reserve below 25 percent under penalty. This is a tax which increases as the gold certificate reserve declines. It must be added to the rates of interest and discount fixed by the Board of Governors. Clearly the Federal Reserve notes have ample power of expansion in an emergency. There no longer exists a stone-wall limit beyond which expansion cannot go. But after the gold certificate reserve ratio has declined below 25 percent, further expansion of note circulation can be secured only at an increasing expense to those wishing the notes.

The notes issued to the twelve Federal Reserve Banks amounted to \$24,766 million on September 29, 1948, and of these all but about \$900 million were in circulation. Back of these notes there was held the following collateral:

(1) Gold certificates on hand and due from Treasury	\$13,579,000,000
(2) Eligible paper	\$86,000,000
(3) U. S. government securities	<u>\$11,975,000,000</u>
Total collateral	\$25,640,000,000

The supply of Federal Reserve notes can be contracted easily, too, as the business demands for currency decline. When the demand for notes in the pockets of the people and the tills of merchants falls off,

⁵ The Federal Reserve Bank of New York is the system's agent for such purchases. It is sometimes said that that bank is the Treasury's agent. This is not technically true, for there is no legal principal-agent relationship between the Treasury and the New York Federal Reserve Bank. However, the Federal Reserve System is carrying out a working agreement made between the Secretary of the Treasury and the Chairman of the Board.

as it does, say, after the Christmas holiday season, the surplus notes are deposited by the public in the banks. The banks in turn deposit in their Federal Reserve Banks any notes they receive in excess of the amount needed for till money. Banks in debt will be especially likely to do this, for the Federal Reserve notes are borrowed money on which they are paying interest. It is not worth their while to keep this circulating debt alive unless they can reloan it.

Another device calculated to retire Federal Reserve notes from circulation whenever they become redundant is a provision of the law requiring Federal Reserve Banks to pay such a rate of interest as the Board may deem desirable on Federal Reserve notes uncovered by gold certificates. This was first invoked April 24, 1947, and is in force today.⁶ It puts some pressure on the Federal Reserve Banks to encourage member banks to send in surplus Federal Reserve notes.

The Federal Reserve System has thus provided considerable seasonal elasticity in the total amount of currency in circulation, owing principally to the seasonal elasticity of Federal Reserve notes. They constitute over five-sixths of the total circulation today. This elasticity is evident from Chart IV, showing the total amount of currency in circulation by months for the years 1943-1948, compared with the volume of Federal Reserve notes in circulation.⁷ The seasonal variation apparent in the circulation of Federal Reserve notes should be compared with the lack of seasonal variation in national bank notes shown in Chart II (page 17).

EMERGENCY EXPANSIBILITY OF FEDERAL RESERVE NOTES IN A DEPRESSION. The theory underlying the circulation of Federal Reserve notes was that they would automatically increase with growing trade requirements, as reflected in an increasing volume of business paper rediscounted with the Federal Reserve Banks; and similarly that they would decrease automatically as trade needs declined. However, in an emergency period such as existed in the United States after 1929,

⁶ *Federal Reserve Bulletin*, 1947, pp. 518-519. This was done chiefly to obtain some of the Federal Reserve Banks' large profits for the Treasury. *Supra*, p. 27 n.

⁷ Seasonal elasticity was relatively greater in the 1920's and 1930's, when the total amount of currency was smaller.

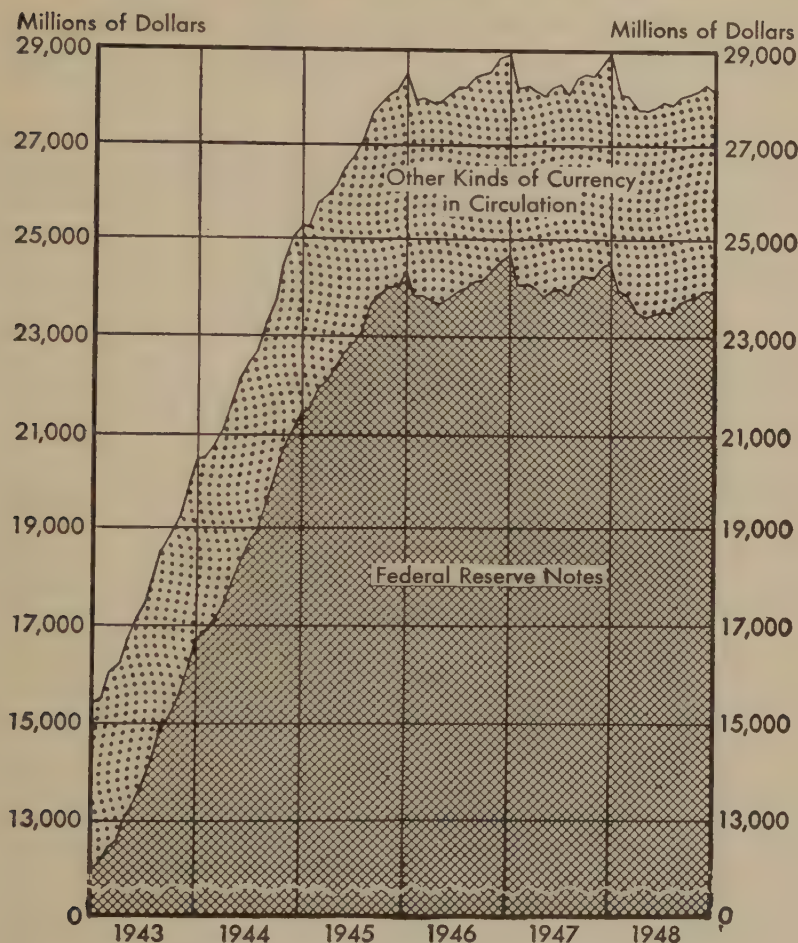


CHART IV. Total Currency in Circulation.

currency demands sometimes lost their normal relationship to the rise and fall of trade demands. The amount of currency demanded relative to the amount of business being done became greater, because of the hoarding of money, the decreased rate of monetary turnover, and the numerous bank failures. It was also owing in part to the taking of precautionary measures by many commercial banks, which substantially increased their vault cash to enable them to meet the hazards of

bank runs. All these factors increased the demand for currency despite the fact that both trade and the volume of rediscounted paper declined sharply.

While it is true that published figures reveal that there was a large volume of eligible paper in the portfolios of the member banks in the autumn of 1931 and early in 1932, many individual banks had little or no such paper. In order to take care of the situation, the Glass-Steagall Act was passed as an emergency measure on February 27,

TABLE 6. Growing Use of U. S. Government Securities as Collateral for Federal Reserve Notes

Year (Dec.)	Gov. Securities (in millions)	% Gov. Securities	% Eligible Paper	% Gold or Gold Certif.
1926	\$ none	0	46	54
1928	none	0	46	54
1930	none	0	23	77
1932	428	14	7	79
1934	241	7	.2	93
1936	95	2	.05	98
1938	none	0	.06	99
1940	none	0	.03	100
1942	385	3	.01	97
1944	11,803	52	.06	47
1946	15,227	58	.003	42
1948 (Oct.)	12,300	50	.02	50

Source: *Federal Reserve Bulletins*, *passim*.

1932. This and subsequent legislation amended Section 16 of the Federal Reserve Act and made possible the use of direct obligations of the United States government purchased in the open market as collateral for Federal Reserve notes. Until 1945 permission had to be obtained from the Board of Governors to obtain Federal Reserve notes in return for a deposit of United States government bonds with a Federal Reserve agent. Since that time such bonds have been acceptable as collateral without permission. The reason for this was the tremendous increase in bank investments in bonds during World War II. Table 6 shows how this new type of collateral, which was first regarded as only temporary, has become the chief collateral behind Federal Reserve notes.

The Federal Reserve notes of today are backed almost entirely by

government securities and gold certificates. Eligible paper has not been significant collateral for some fifteen years. Three important conclusions may be drawn regarding this change. First, the decreasing use of eligible paper as collateral does not indicate that such paper has ceased to exist. Second, Federal Reserve notes still retain the expansible half of their elasticity. Third, the use of government securities as collateral makes possible the monetizing of almost any desired amount of our large public debt. Let us look more closely at these conclusions.

Whereas in the 1920's banks' loans were twice as great as their investments, today the ratio is almost the reverse. But still one of the most profitable activities of banks is lending to customers. Such loans have yielded, on the average, from 3 to 3.5 percent in the last few years, while investments, chiefly in government issues, have yielded only about 1.5 percent. Obviously, banks would prefer to make more loans. Of course, not all loans give rise to eligible paper, but it is far more important in bank assets than the minute amounts shown (as collateral for Federal Reserve notes) in Table 6 suggest. Member banks simply prefer to get their Federal Reserve notes by selling government securities instead of rediscounting eligible paper. By turning government securities into cash they keep out of debt to the Federal Reserve Bank. Banks, like people, prefer to remain out of debt and independent.

The fact that banks use government securities as collateral still leaves the Federal Reserve notes elastic, as far as expansion is concerned. Total money in circulation expands towards the end of each calendar year, as it always has under the Federal Reserve System, and then contracts in January, and it is the Federal Reserve notes which still provide the expansion and contraction. (See Chart IV on page 51.) If banks find it desirable again to use eligible paper as collateral, they are still free to do so. Elasticity, on the expansion side, remains assured as long as there is no 100 percent requirement of something like gold or bonds whose supply is limited and not influenced by seasonal business fluctuations. Elasticity on the contraction side still takes place too, but the pressure to bring it about is not as great as before. There is no dearth of government collateral. Also,

the price for keeping the Federal Reserve notes out is only about 1 percent. This is not healthy, for it may contribute toward inflation over a period of time.

Now that our United States government securities are no longer specifically payable in gold but merely in inconvertible legal tender money, including Federal Reserve notes themselves, the policy of backing the notes by the government securities is fundamentally unsound. The notes are backed by the securities, and the securities are payable in the notes, which in turn are no longer convertible into gold on demand.⁸ Such notes are in important respects similar to the German Reichsbank notes which after World War I depreciated to a trillionth of their original gold value. While no one really expects a repetition of the notorious German inflation here, the relationship of government securities and notes has already been the mechanism for some inflation and could easily be responsible for more. Now that the emergencies that led to this policy are over, strenuous efforts should be made to discontinue it as soon as possible. Admittedly that is not easy as long as the government supports the market for its own bonds. This whole problem will be discussed more fully in Chapter XV.

ELASTICITY OF DEPOSIT CURRENCY

Elasticity of deposit currency has not received as much attention in our economic literature as has been devoted to the elasticity of bank note currency. Yet it is of greater importance because the amount of business done by means of deposit currency is many times greater than that done by means of bank notes. Prior to the Federal Reserve System our deposit currency, although not as inelastic as our bank note currency, was nonetheless deficient in the quality of elasticity.⁹ How did the Federal Reserve System remedy this defect?

⁸ About the only legal protection is the requirement of a 25 percent gold certificate reserve behind Federal Reserve notes and behind deposits in Federal Reserve Banks. How strong this is may be guessed from the fact that this requirement was formerly 40 percent for notes and 35 percent for deposits, but both were lowered in 1945 when actual reserves approached these minimum figures. In the event of further inflation, it is likely that they would be lowered again.

⁹ *Supra*, pp. 14, 18.

REMOVAL OF THE OLD, RIGID LEGAL-RESERVE REQUIREMENTS. The Federal Reserve Act and its amendments have increased the elasticity of our deposit currency in several ways.

In the first place, they removed the rigid legal-reserve requirements of our National Banking System and put in their place more flexible provisions. The only legal reserves now required of national banks are reserves deposited in the Federal Reserve Banks. For till money, banks may hold in their own vaults as much or as little money as they individually need, and the kinds they desire.

A powerful new element of elasticity was incorporated into our banking system in 1935 when the Board of Governors got authority to raise or lower legal-reserve requirements for member banks. This increased their ability to contract or expand the country's deposit-currency circulation.

The most important device of the Federal Reserve System for securing elasticity of deposit currency, as well as of bank note currency, is found in the machinery enabling member banks to borrow funds of their Federal Reserve Banks. Funds so borrowed, when left on deposit with the Federal Reserve Bank, serve as legal-reserve money for the member banks. The making of such loans to member banks was originally intended to be one of the chief functions of Federal Reserve Banks. It would be a mistake to assume, however, that these loans have been significant in recent years, for they have not. But it is important that the machinery for making them remains. Broadly speaking, the loans are of two kinds: rediscounts, and loans on collateral. Let us consider each briefly.

REDISCOUNTING. In time of need Federal Reserve Banks are always ready to rediscount eligible paper for member banks and for Federal Intermediate Credit Banks.

For the purpose of keeping the assets of Federal Reserve Banks liquid, the law and the administrative regulations of the Federal Reserve authorities place limitations upon the kinds of paper eligible for rediscount. These limitations have reference both to the length of time the paper is to run, and to the purpose for which it is issued. As to time, notes and bills rediscounted must have a maturity at the time

of rediscount of not more than ninety days (exclusive of days of grace), except that when such paper has been issued or drawn for an agricultural purpose, or is based upon livestock, it may have a maturity, at the time of rediscount, of nine months (exclusive of days of grace). The Board of Governors may regulate the volume of such agricultural rediscounts.

As to the purpose for which rediscountable bills and notes may be issued, the law limits rediscounts to the following classes of paper: (1) notes, drafts, and bills of exchange bearing the endorsement of a member bank or of a Federal Intermediate Credit Bank, issued, drawn, or used for agricultural, industrial, or commercial purposes; (2) notes, drafts, and bills of exchange bearing the endorsement of a member bank and issued or drawn for the purpose of carrying or trading in bonds and notes of the government of the United States; and (3) notes, with maturities at the time of rediscount of not more than ninety days, that represent a loan to finance the construction of a residential or farm building.

In general, paper, to be eligible, must be short-term and self-liquidating in character, although some exceptions may be found in the above list. The Federal Reserve authorities generally class as ineligible paper that is for speculative or long-term investment purposes. The fact, however, that paper is secured by assets that are not self-liquidating, like stock certificates or real estate, does not render it ineligible if the funds themselves are for a self-liquidating or otherwise eligible purpose. Paper may even be eligible despite the fact that it is unsecured and the funds are intended for investment purposes if it is accompanied by a financial statement showing that the borrower has enough excess quick assets over current liabilities to liquidate the loan readily.

More important, in practice, than some of the above exceptions is the fact that the use made of Federal Reserve funds may bear no relationship to the form and purpose of the paper rediscounted. For example, the Tenth National Bank of Nyack may rediscount a local clothing merchant's note issued sixty days ago to buy men's suits and then take the Federal Reserve funds secured and lend them in the stock market. This sort of thing was done frequently in the later

1920's. It is to be expected that bankers will always borrow on their most acceptable assets regardless of the use they expect to make of the funds received.

COLLATERAL LOANS. The second type of loan to member banks consists of short-term advances on their secured promissory notes. These advances are of three types. (1) Advances for periods not exceeding ninety days can be made by the Federal Reserve Banks on the promissory notes of member banks when secured by a deposit or pledge of direct obligations of the United States government or of promissory notes, drafts, bills of exchange, or bankers' acceptances that are eligible for rediscount or purchase by the Federal Reserve Banks. (2) Fifteen-day advances may be had when secured by the pledge of the obligations of certain government agencies such as the Federal Intermediate Credit Banks, the Federal Farm Mortgage Corporation, and the Home Owners Loan Corporation. (3) Since 1937 advances for not more than four months have been obtainable by a member bank with its promissory note if "secured to the satisfaction" of its Federal Reserve Bank at a rate 0.5 percent higher than the regular rediscount rate.¹⁰ Some of the collateral that will be "to the satisfaction" of the Federal Reserve Bank includes the bonds of various government corporations, the obligations of states and cities, obligations to finance real estate, and paper that would be eligible if its term were shorter.¹¹

There was no provision in the original act for collateral loans, but experience soon showed that member banks frequently wished to obtain advances from the Federal Reserve Banks for brief periods—so brief that they were reluctant to rediscount customers' paper for the purpose. To meet this need, an amendment to the Federal Reserve Act was passed September 7, 1916, authorizing short-time collateral loans, and several subsequent amendments on this subject have been made. The authority to make such loans proved to be particularly useful in financing World War I. Advances declined in importance in the 1920's

¹⁰ During World War II member banks could secure advances at 0.5 percent below the normal rate if they offered as collateral government securities maturing within a year. *Infra*, pp. 173, 186.

¹¹ Regulation A, Section 2, paragraphs C and D. Pratt's *Digest*, 1940, p. 697.

except in the prosperous years of 1928 and 1929. Temporary steps were taken in 1932 and 1933 to make them more attractive and useful, but the banks took only meager advantage of this. Then, in 1937, the Board of Governors, acting under the revised law of 1935, loosened restrictions still further,¹² but the banks made little use of this privilege either. However, on the rare occasions, these days, when banks borrow from the Federal Reserve Banks, they get advances rather than rediscount eligible paper.

THE FEDERAL RESERVE BANKS ARE NOT OBLIGED TO LEND TO MEMBER BANKS. Until the banking reforms of 1933-1935 a Federal Reserve Bank generally felt obligated to rediscount all eligible paper offered to it by a member bank.¹³ This attitude has definitely changed. A Federal Reserve Bank may refuse to rediscount eligible paper or to make advances on it for any of several reasons. The Federal Reserve Bank may, upon examining the original borrower's financial statement, find that his financial position is not satisfactory. In other words, the paper may be eligible but not acceptable. Or the Federal Reserve Bank may refuse to lend because the funds are to be used for speculative purposes. Or it may refuse because it believes that credit expansion in general should be curbed.¹⁴ Finally, the reserves of the Federal Reserve Banks themselves may be low, although that is unlikely.

Federal Reserve Banks are required to hold against deposits a legal reserve of gold certificates equivalent to 25 percent.¹⁵ Unlike member banks, however, the Federal Reserve Banks are not pressed by competition and by the desire for profits. Federal Reserve Banks do not keep their credit extended to near the legal limit, as individual banks commonly did in the not distant past. Despite the urgent need of

¹² *Infra*, p. 161.

¹³ This was a matter of custom, not of law, for the law gave it ample discretion. W. E. Spahr, *The Federal Reserve System and the Control of Credit* (1931), pp. 54 ff.

¹⁴ *Federal Reserve Bulletin*, 1937, pp. 977 ff., 984 ff.

¹⁵ In this connection it should be noted that the Federal Reserve Act empowers the Board of Governors "To suspend for a period not exceeding thirty days, and from time to time to renew such suspension for periods not exceeding fifteen days, any reserve requirement specified in this Act. . . ." Section 1c, June 12, 1945. *Federal Reserve Bulletin*, 1945, p. 644.

funds brought about by postwar conditions during the 1920's, our Federal Reserve Banks adopted the policy of maintaining reserves well above the legal minimum, and since 1930, with a few exceptions covering brief emergency periods, they have continued to do so. They have little incentive to reduce their reserves to a dangerously low figure, because no earnings of a Federal Reserve Bank above the amount required to pay an annual 6 percent cumulative dividend on its stock can ever be paid to a member bank.¹⁶

Member banks are sometimes deterred from expanding their credit by the behavior of other banks.

INDIVIDUAL BANKS ARE LIMITED BY OTHER BANKS IN THE AMOUNT OF CREDIT THEY MAY CREATE. The amount of credit which an individual bank may create by itself has often been exaggerated. For illustration, let us imagine a country bank whose reserve is in danger of running below the 12 percent of demand deposits and the 5 percent of time deposits required by the present law. To remedy the situation, the bank gets an advance of \$10,000 secured by government bonds from its Federal Reserve Bank. This \$10,000 is left on deposit in the Federal Reserve Bank. Theoretically, it greatly increases the bank's lending power. It might be argued that since \$10,000 is 12 percent of \$83,333, the bank may now expand its loans by \$83,333 before its reserves will run low again. But actually, if the bank expands its loans in this extravagant fashion, it will run into serious difficulties. It will find itself in debt after almost every clearing operation at the Federal Reserve Bank, and its extra \$10,000 of legal reserves will dwindle rapidly. The reason for that is, of course, that the bank's customers spend their borrowings. Many of their checks are deposited in other banks. Since those banks are not expanding their credit as much, and are not giving rise to an equal amount in checks to be deposited in our country bank, they will have money coming to them. That is deducted from our country bank's legal reserve and added to their reserves. Soon the country bank will have to replenish its reserves again either by rediscounting some eligible paper or by getting a loan from the Federal Reserve Bank. The Federal Reserve Bank's

¹⁶ *Supra*, p. 27 n.

officers will be reluctant to lend to this bank and may do so only on condition that it cease expanding its credit. In short, an individual bank cannot expand its credit greatly on the basis of Federal Reserve loans or rediscounts unless all banks are doing it. That would normally have to be with the knowledge and coöperation of the Federal Reserve Banks.¹⁷

In recent years the conservative behavior of other banks has been at least as much of a deterrent to individual banks wanting to expand their credit as has Federal Reserve policy. The Federal Reserve Banks have rarely been in a position to dictate what kinds of eligible paper they will accept or whether they will allow a bank an advance. As long as member banks have plenty of government securities to sell, they have not had to borrow from the Federal Reserve Banks.

MEMBER BANKS' INDEPENDENCE RESTS ON EXCESS RESERVES AND LARGE HOLDINGS OF GOVERNMENT SECURITIES. Banks have been in a position to expand their loans during much of the last fifteen years whether the Federal Reserve Banks wished it or not. This whole situation will be discussed at greater length in Chapters XIII and XV. Here we are concerned with the means they have had to expand bank credit. From 1934 to 1942 they had large excess reserves, and after 1942 they could sell their government securities at no significant loss and use the proceeds to increase their reserves and thus be able to expand their loans.

CONTRACTION OF DEMAND DEPOSITS. So far discussion has centered on the expansive part of the elasticity of deposit currency in times of increasing demand. Let us look at the contractive part of elasticity of deposits. According to the theory on which the Federal Reserve System was established, when contraction of deposit currency becomes necessary, it should be brought about by the pressure of rising rediscount rates and the sale by the Federal Reserve Banks of government securities and bankers' acceptances in the open market.

¹⁷ The banking system as a whole might expand its credit eight and a third times if all banks behaved like our imaginary country bank. *Federal Reserve Bulletin*, 1940, pp. 100 ff.

Such sales withdraw money from the market when payment is made for them, reduce member banks' reserves, and tend to increase the indebtedness of the member banks to the Federal Reserve Banks. Rising rediscount rates, in turn, make all borrowing from the Federal Reserve Banks more expensive. The result is that the member banks become more reluctant to make new loans to their customers and less disposed to renew loans already outstanding.

This was the system that worked satisfactorily until World War II. It should now work even better than it formerly did. The Securities and Exchange Act of 1934 gave the Board of Governors the power to raise margin requirements on the stock exchange and thus make speculation less profitable. The Banking Act of 1935 gave the Board of Governors authority to double previous reserve requirements, and this authority was further enlarged in 1948.¹⁸ But all these mechanisms are of little value if they are not used. The Treasury opposed using them lest they raise interest rates and thereby add to the cost of carrying the large public debt and perhaps bring on a depression as well. Apparently emergency measures are needed to contract credit in a period of prosperity.¹⁹

¹⁸ *Infra*, pp. 193-195.

¹⁹ Just as emergency measures were needed to provide expansion elasticity in the depressed 1930's. *Supra*, p. 52; *infra*, pp. 188-190.

Σ CHAPTER VII Σ

Domestic and Foreign Exchange Under the Federal Reserve System

HOW did the Federal Reserve System solve the difficulties of the old banking regime with domestic and foreign exchange? Domestic exchange will be considered first.

DOMESTIC EXCHANGE

Formerly the collection and clearing of out-of-town checks for country banks was handled largely by the banks in reserve and central reserve cities, which were the depositaries of a large part of the legal reserves of the country banks.¹ The service of collecting these out-of-town checks was rendered to the country bank as a partial compensation for the use of its reserve deposits at a low rate of interest, and as a lure in securing other business from the country bank, since competition for the accounts of out-of-town banks was keen among large banks in money market centers. When Congress decided, therefore, that the practice of pyramiding the legal reserves of national banks by permitting them to be deposited to a large extent in other national banks was unsound and should be discontinued, it was naturally forced to provide machinery to take the place of the reserve and central reserve city correspondent banks for the work of collecting out-of-town checks. If the country bank was no longer to be permitted to count a deposit with its city correspondent as legal-reserve money, but was to be compelled to maintain its entire legal reserve on deposit with a Federal Reserve Bank, it would naturally withdraw or at least greatly reduce its deposit balance with its correspondent banks. But under such circumstances who would collect its out-of-town checks and otherwise serve it in connection with out-of-town business?

¹ *Supra*, pp. 19-20.

If the new Federal Reserve Banks were to displace city correspondent banks as the holders of the country banks' deposited reserves, they should also perform for the country banks the service of collecting or clearing their out-of-town checks.² To this end, Section 16 of the Federal Reserve Act provides that the Board of Governors "may at its discretion exercise the functions of a clearing house for . . . Federal Reserve Banks, or may designate a Federal Reserve Bank to exercise such functions, and may also require each such bank to exercise the functions of a clearing house for its member banks." The act also requires a Federal Reserve Bank to "receive on deposit at par from member banks or from Federal Reserve Banks, checks and drafts drawn upon any of its depositors."

The problem of establishing a satisfactory clearing and collection system was looked upon as perhaps the most difficult and complicated one confronting the Federal Reserve authorities in the early days. At first they moved slowly and allowed the different Reserve Banks a wide discretion in the matter of arrangements for the clearing and collection of checks. Moreover, in most districts the utilization of the clearing and collection system established by the Federal Reserve Banks was optional with member banks. Some joined the system and many did not. It soon became evident that to be effective a clearing and collection system needed to be approximately uniform in its workings throughout the country and to embrace the largest possible number of banks. Any system in which only a limited number of banks should use the Federal Reserve clearing and collection system and a large number of banks handle their checks in the old way would be unsatisfactory. It would mean a wasteful duplication of machinery analogous to that which exists when a city has two separate telephone services. After nearly two years of experimentation, therefore, the Board issued regulations for a clearing and collection system, which was put into operation July 15, 1916, in all Federal Reserve Districts.

² Dr. H. Parker Willis, formerly Secretary of the Federal Reserve Board, made this concise distinction between collecting and clearing checks: "A check is said to be collected when it is sent home to the bank on which it is drawn, and arrangement is made to remit the proceeds; it is said to be cleared when the bank receiving it offsets it against checks in favor of the institution by which it is to be paid, and then collects or remits only the balance, if any." *The Federal Reserve* (New York, 1915), p. 223.

These privileges, under certain limitations, were extended by an amendatory act of June 21, 1917, to qualifying banks which do not belong to the Federal Reserve System.

THE PRESENT CLEARING AND COLLECTION SYSTEM. Briefly summarized, the two main features of the plan are as follows: First, each Federal Reserve Bank exercises the functions of a clearing house *in its district* for member banks and for qualified nonmember banks, known as "clearing member banks." To qualify as one of these, a bank has to agree to pay its own checks at par and to maintain a clearing balance with the district Federal Reserve Bank. At this writing (1949), almost half of all check-paying banks are members of the Federal Reserve System, and the majority of the others are clearing members.

In recent years, banks have made even fuller use of these Federal Reserve collection facilities than they did before. This was because the Board ruled that after September 1, 1939, banks be given more prompt credit³ for checks deposited with the Federal Reserve Banks and also that the preparation of the checks for deposit be handled largely in the Federal Reserve Banks instead of in the member banks or their correspondent banks. As a result of this ruling, about 90 per cent of all out-of-town checks are now collected through the Federal Reserve System.

Second, clearing and collection services for member and clearing member banks and for other Federal Reserve Banks are also rendered by each Federal Reserve Bank in the case of checks received from *outside the district*, which are drawn upon member and clearing member banks of the district and upon all nonmember banks of the district whose checks can be collected at par by the Federal Reserve Bank.

These two provisions make the field of the par clearing and collection system coextensive with the United States and provide machinery for the handling of checks received from practically all important points without the district as well as from within. During 1947 the twelve Federal Reserve Banks handled approximately two billion checks with a total value of \$800 billion. All banks belonging to the clearing system are required to pay without deduction checks drawn

³ *Federal Reserve Bulletin*, 1939, pp. 719-721, amendments to Regulation J.

upon themselves when presented by a Federal Reserve Bank. On December 31, 1947, there were 12,047 banks on the par list of the Federal Reserve clearing system, of which 6,923 were member banks and 5,124 nonmember banks. These figures included most of the commercial banking resources of the country, since the commercial banks remaining outside the system are for the most part small ones. Of the 2,041 banks which were still refusing to remit at par to the Federal Reserve Banks for checks drawn upon them, 1,299 were situated in twelve southern states, and most of the others were in the western north-central states and the adjoining state of Wisconsin. There were no such banks in the Boston, New York, Philadelphia, or Cleveland district, and there were only four in the San Francisco district.

The old evil, previously described,⁴ of carrying the "float" as a part of a bank's legal reserve was eliminated by a new regulation. Although checks received by the Federal Reserve Bank are immediately credited (subject to final payment) to the bank sending them, the proceeds thereof are not counted as part of the legal reserve, or made available to meet checks drawn against them, until a sufficient time has elapsed to allow for their actual collection. One or two days generally suffices, and credit is granted after three days in any event. A bank sending in checks is not permitted to draw against the credit which they create until a sufficient time has elapsed for their collection. Likewise, the checks are not charged by the Federal Reserve Bank against the reserve account of the bank upon which they are drawn until there has been time for them to reach the member bank and for returns in due course to reach the federal reserve bank. This is the rule now in force.

If a bank's deposit at the Federal Reserve Bank is insufficient to cover its legal-reserve requirement and in addition to meet an adverse balance which arises against it out of clearing operations, it is authorized to ship currency or specie from its own vaults at the expense of its Federal Reserve Bank in order to cover the deficiency. The member bank may also make up the deficiency by borrowing from the Federal Reserve Bank.⁵

The cost of collecting and clearing checks for member and clearing

⁴ *Supra*, pp. 19-20.

⁵ *Supra*, pp. 55-58. Many banks keep a balance with a correspondent bank in the Federal Reserve city and depend on that bank to see to it that their Federal Reserve balance is not deficient.

member banks is borne by the Federal Reserve Banks. For some time, service charges of so much per item were imposed. But these charges, so far as they relate to cash items, were discontinued by an order of the Federal Reserve Board effective June 15, 1918.⁶

The collection service now covers items other than checks, such as promissory notes, trade bills, time drafts, coupons, and acceptances. This is an obvious need if the Federal Reserve Banks are to serve member banks as adequate substitutes for the member banks' former reserve agents. Such items, when payable at places where the Federal Reserve Banks have satisfactory arrangements for collecting checks through banks, are collected for member banks without any charge other than an exchange charge that may be made by the collecting bank. Upon items returned unpaid, however, there is a charge of fifteen cents. The purpose of this is to prevent the Federal Reserve collection system from being clogged with dunning drafts.

THE INTERDISTRICT SETTLEMENT FUND. Another serious difficulty of the old collection system was the need of numerous and expensive shipments of currency back and forth over the country as the seasonal stresses in the trade demands for currency shifted from one section to another. The new system eliminates a large proportion of these currency shipments and reduces the expense of those which do take place.

The mechanism by which these currency shipments are avoided is the Interdistrict Settlement Fund, formerly called the Gold Settlement Fund. The Fund was established May 27, 1915. The order of the Board establishing the Fund⁷ required each Federal Reserve Bank to forward to the Treasury or the nearest subtreasury for the account of the Gold Settlement Fund \$1,000,000 in gold or gold certificates, and in addition an amount at least equal to its indebtedness to all other Federal Reserve Banks. The sums so deposited, which since January, 1934, cannot be held in the form of gold coin or gold bullion,⁸ are made payable to the order of the Board. Each Federal Reserve Bank

⁶ *Federal Reserve Bulletin*, 1918, pp. 371-372.

⁷ Regulation L.

⁸ *Infra*, pp. 120, 155.

is required to maintain a balance in the Fund of not less than \$1,000,000. Actually, all the banks carry much larger balances. Credit on the books of the Fund is counted as a part of a Federal Reserve Bank's legal reserve. The settlement of balances between Federal Reserve Banks is effected daily, through the instrumentality of telegrams sent to the Board, by transfer of debits and credits on the books of the Interdistrict Settlement Fund.

Through the machinery of this Fund, transfers may be made among all the Federal Reserve Banks, between any Federal Reserve Bank and any Federal Reserve agent, and between any Federal Reserve Bank or any Federal Reserve agent and the Treasury of the United States. Also, by means of the Fund and of the other transfer facilities of the Federal Reserve Banks, these banks can now telegraph funds to all parts of the United States for their members without charge. They have, in addition, inaugurated a system of Federal Reserve exchange drafts, according to which a member bank may draw special drafts on its Federal Reserve Bank for amounts not exceeding \$5000, which are receivable for immediate use at any other Federal Reserve Bank.

The Interdistrict Settlement Fund, used in effecting payment between Federal Reserve Banks, has almost eliminated the necessity of shipping money between Federal Reserve Banks. On December 31, 1947, that Fund amounted to \$7 billion. The transit clearings between Federal Reserve Banks effected through the Fund during 1947 amounted to about \$300 billion.

The Federal Reserve clearing and collection system eliminated most of the evils of the old system. Excessive collection charges are virtually things of the past. Banks no longer have to tie up large sums in scattered deposits with correspondent banks in order to have adequate facilities for the collection of checks.⁹ These deposits can now be brought home and the funds loaned out. The routing of checks has been eliminated, and the "float" has become insignificant. All of these are important gains to the public. Heavy currency shipments are

⁹ They sometimes keep sizable balances with correspondent banks, however, in order to enjoy the many helpful services offered by these banks. *Supra*, pp. 19-20; *infra*, pp. 212-213.

avoided, and the expenses of a large part of the currency shipments that do take place are assumed by the Federal Reserve Banks for the member banks.

FOREIGN EXCHANGE

OPERATIONS OF MEMBER BANKS. The Federal Reserve law brought about important reforms in the financing of our foreign trade. The machinery created by the twelve Federal Reserve Banks has done much toward developing an American discount market. This development was first expedited by the heavy demands for American funds on the part of foreign nations, caused by World War I, and by reconstruction needs and the disruption of foreign money markets following that war. Much of our foreign trade which was once financed through letters of credit, under which sterling bills were drawn, has for some time been financed directly by means of dollar exchange, namely, bills drawn on banks and business houses in the United States and payable in dollars. Banks are willing to buy such paper drawn in connection with our import and export trade, because there is a ready market for its sale and rediscount—a market created at first by the Federal Reserve System. Furthermore, bank acceptances in connection with foreign trade are now legalized in the United States, and importers may arrange with American banks to have their foreign exporters draw bills in dollars directly on the importer's bank in the United States. Likewise, foreign importers may open credits in American banks upon which American exporters may draw, the bills being accepted by the American bank and sold in the American discount market.

Like the domestic commercial paper business, this form of loan has fallen in importance in recent years, as Table 7 shows. This was owing, at first, to the decline in foreign trade which took place in the 1930's, and then to the growing magnitude of government-financed operations abroad.

Under the provisions of the Federal Reserve Act, national banks with a capital and surplus of \$1,000,000 or more may be authorized by the Board of Governors under certain restrictions to establish branches abroad. Many such branches have been established. Similarly, national banks may invest an amount not exceeding 10 percent of their capital

and surplus in the stock of banks chartered in the United States and principally engaged in international or foreign financial operations which facilitate our foreign trade. In this way a number of banks have been established which are owned either wholly or in part by groups of national banks.

In order to encourage American trade and the investment of American capital in foreign enterprises, there was added to the Federal

TABLE 7. Bankers' Acceptances Outstanding

Year (Dec.)	Held by All Banks, Incl. F. R. Banks	By F. R. Banks
1924	\$ 821 million	\$430 million
1929	1,732 "	939 "
1934	543 "	1 "
1939	233 "	
1944	129 "	
1948	259 "	

Source: *Banking and Monetary Statistics; Federal Reserve Bulletins, passim.*

Reserve Act on December 24, 1919, an amendment popularly known as the Edge amendment.¹⁰ This amendment authorizes the organization of corporations "for the purpose of engaging in international or foreign banking or other international or foreign financial operations." The field of operation also includes the insular possessions of the United States. Corporations organized under this amendment may conduct their business directly or through local institutions abroad. They operate under the supervision of the Board and are subject to close examination and control by them.¹¹ Three international corporations were organized under the Edge amendment in the early 1920's, but not until 1927 were any debentures issued by such a corporation.¹² Later these corporations were all liquidated. Today the Chase National Bank of New York, authorized to operate under the amendment in

¹⁰ The amendment comprises Section 25a of the Federal Reserve Act.

¹¹ The Federal Reserve Board, on March 23, 1920, issued its Regulation K, governing the organization and operation of corporations organized under the Edge amendment. Regulation K has been revised several times by the Board, substantially in 1927 and to a lesser extent in 1930, 1943, and 1945. See the *Annual Reports of the Federal Reserve Board* for these years.

¹² *Annual Report of the Federal Reserve Board*, 1927, p. 42; *ibid.*, 1928, p. 36.

1930 with a capital of \$5,000,000, is the only Edge corporation operating.

As a result of World War I and of subsequent changes in our banking system, we became able to finance directly a larger portion of our foreign trade than before. While this portion has declined in recent years, the mechanisms for handling trade on a private basis are well established and are available any time anyone wishes to use them. It must be admitted, however, that the current trend seems to be strongly in the direction of more governmental activity in the field of both regulating and providing foreign exchange.

OPERATIONS OF THE FEDERAL RESERVE BANKS. The foreign exchange division created by the Federal Reserve Board in December, 1917, rendered valuable service during World War I in stabilizing exchange both with our allies and with neutrals.

During the 1920's Federal Reserve Banks purposely maintained a low-rediscount policy on occasion to help foreign nations return to the gold standard. Low interest rates here discouraged speculators from raiding those nations' meager gold redemption funds.

Again, in 1936, when several European nations were on the verge of another round of currency devaluation, this country took the lead in establishing currency stability. A tripartite agreement was announced, among the United States, Great Britain, and France, under which this country undertook to work with them in maintaining the greatest possible stability in the three currencies relative to each other. Belgium, Switzerland, and the Netherlands subsequently joined in the agreement. For this purpose the United States had the use of a stabilization fund of \$2 billion.¹³ Under the agreement considerable stability was maintained until the outbreak of World War II in 1939. The Federal Reserve Bank of New York acted for the Treasury in the foreign exchange operations of the Treasury's stabilization fund.

Both before and during World War II the New York Federal Reserve Bank acted as depositary for foreign central banks and served as their correspondent. At the end of 1945 that bank held accounts for

¹³ This money was part of the "profit" from the devaluation of our gold dollar in 1933-1934.

the central banks of sixty countries. Foreign-owned dollar deposits, earmarked gold, and securities held by all accounts of foreign depositors with the New York Federal Reserve Bank totaled almost \$7 billion. At the end of 1948 these accounts still amounted to over \$600 million.

The Federal Reserve Bank of New York, in 1946, was also made a depositary of the International Monetary Fund and of the International Bank for Reconstruction and Development.

Σ CHAPTER VIII Σ

The Federal Reserve System and the Federal Treasury, Especially in World War I

THE fourth and last of the faults of the old banking system was the defective organization from the standpoint of the federal Treasury. How did the Federal Reserve System remedy this defect?

The main provision of the Federal Reserve Act concerning the deposit of government funds states: "The moneys held in the general fund of the Treasury, except the five per centum fund for the redemption of outstanding national-bank notes and the funds provided in this Act for the redemption of federal reserve notes, may, upon the direction of the Secretary of the Treasury, be deposited in Federal Reserve Banks, which banks, when required by the Secretary of the Treasury, shall act as fiscal agents of the United States; and the revenues of the government or any part thereof may be deposited in such banks, and disbursements may be made by checks drawn against such deposits.

"No public funds of the Philippine Islands, or of the postal savings,¹ or any government funds, shall be deposited in the continental United States in any bank not belonging to the system established by this Act:² Provided, however, that nothing in this Act shall be construed to deny the right of the Secretary of the Treasury to use member banks as depositaries.

"The Federal Reserve Banks are hereby authorized to act as depositaries for and fiscal agents of any National Agricultural Credit Corporation or Federal Intermediate Credit Bank."³

¹ Under certain conditions, the deposit of postal savings funds is permitted in banks not members of the Federal Reserve System. See Edwin W. Kemmerer, *Postal Savings* (Princeton, 1917), pp. 112-116.

² But see above, p. 75.

³ Section 15 of the Federal Reserve Act.

DEPOSITARIES FOR GOVERNMENT FUNDS

Many of the advocates of the Federal Reserve System believed that this section did not go far enough. They maintained that the practice of depositing government funds in thousands of banks scattered over the country was unsound and expensive. They urged that the Federal Reserve Banks be made the depositaries of practically all general funds, dispensing with the use of individual banks as depositaries and ultimately with the independent treasury system. It was felt by many, however, that the immediate adoption of such a plan was undesirable. That would tie the hands of the Secretary of the Treasury, who is responsible for the safety of government funds. The extent to which he should keep general funds in the Federal Reserve Banks, in member banks, and in the subtreasuries was, therefore, left to his discretion. There appears, however, to have been a widespread belief that the Federal Reserve Banks would become to an increasing extent the depositaries of federal funds, and that national banks and the subtreasuries would, as time went on, receive an ever-declining proportion of these funds.

There is much to be said in favor of the proposition that banks desiring funds should present their claims for advances to their respective Federal Reserve Banks, and receive such funds only by the ordinary method of borrowing. This would simplify the problem, remove from the Secretary of the Treasury the onerous task of apportioning funds among thousands of individual banks, and discourage the banks from depending upon the Secretary of the Treasury as a sort of grandfather for aid in time of need. The Federal Reserve Banks are presumably in a better position to judge the comparative needs of different banks than is the Secretary of the Treasury. Moreover, how can a Federal Reserve Bank (by advancing rediscount rates, contracting loans, and making sales in the open market) place adequate pressure on member banks to conserve their strength for times of need if the member banks can "go around" the Federal Reserve Bank and the Board and obtain funds directly from the Treasury?⁴

⁴ In recent years the question might well be reversed: How can the Federal Reserve Banks dictate banking policy if the Treasury can "go around" them? For a discussion of this see pp. 181 ff.

For these and other reasons it was expected that the Secretary of the Treasury would deposit the government funds to a large and increasing degree in Federal Reserve Banks. Events pointed clearly in this direction prior to our entrance into World War I. Governor Benjamin Strong of the New York Federal Reserve Bank wrote: "The first deposit of government funds made by the Treasury with the federal reserve banks was on September 4, 1915, when certain special deposits were made in a number of banks. Later, arrangements were made to have the collectors of customs and collectors of internal revenues in the twelve Federal Reserve Bank cities deposit all of their funds in the Federal Reserve Banks and as a matter of fact, for a long period prior to the passage of the Bond Act of April 24, 1917, which altered the status of public deposits, the Federal Reserve Banks had been receiving the principal revenues of the government outside of postal funds and had been paying a very large proportion of government checks and warrants. The limitation of this fiscal agency service in the collection of revenues and payment of checks to the twelve Federal Reserve Bank cities was, of course, due to the inconvenience of extending these operations to places where Federal Reserve Banks had not yet established branches. The plan, therefore, of actively employing the Federal Reserve Banks as fiscal agents had been put into operation some time before the first bond bill was passed and was an important and very active part of the work of the reserve banks almost immediately after the arrangement was established."⁵

During the early days of World War I, the heavy demands for funds in America to meet obligations abroad and the frenzied condition of the money markets throughout the world prevented the withdrawal of government funds from individual banks and the deposit of them in the Federal Reserve Banks. Later, the heavy buying in this country by European belligerents also discouraged this policy. It was not a time for withdrawing large sums from individual banks. Finally, our own entrance into World War I and the floating of our huge Liberty Loans rendered such a transfer out of the question. To minimize the disturbances to the money market involved in the floating of these loans, the government adopted the policy of keeping the funds scat-

⁵ Personal letter to E. W. Kemmerer.

tered and, in so far as practicable, in the banks of the communities where they were received. Consequently, during 1917 and 1918 there were more government funds in individual banks than ever before in our history. The deposits of government funds, moreover, were not limited, during the war period, to banks that were members of the Federal Reserve System. The law under which government war bonds and certificates of indebtedness were issued provided for the deposit of their proceeds in qualified national banks, state banks, and trust companies against certain approved collateral. Numerous nonmember banks temporarily qualified as depositaries in connection with Liberty Loans and issues of certificates of indebtedness.

FISCAL SERVICES OF THE FEDERAL RESERVE SYSTEM IN WORLD WAR I

Everyone knows what happens to government receipts and expenditures in wartime. During the years 1917-1919, the figures jumped to proportions never dreamed of before, as Table 8 shows. Liberty Bond issues and certificates of indebtedness combined amounted to over \$65 billion up to October 31, 1920. The federal government received over

TABLE 8. Financial Statistics, 1916-1920

Item	1916	1919	1920
Gross interest-bearing debt of the U. S. gov't	\$ 972 million	\$25,234 million	\$24,063 million
Internal revenue receipts	513 "	3,850 "	5,407 "
Currency	3,320 "	4,877 "	5,468 "
Demand deposits	11,973 "	17,624 "	19,616 "
B.L.S. consumer price index (1935-1939 = 100)	77.9	123.8	143.3

Source: *Statistical Abstract of the U. S.*

its own counters, in one year, from five to six times the total amount of currency in circulation. It could not withhold these receipts from circulation. Therefore, as fast as the government received the money, steps were taken to put it back into circulation and to avoid withdrawing it again sooner than necessary. The enormous fiscal operations of the government during this period were very largely handled by the Federal Reserve Banks. During 1919 the Federal Reserve Banks and

their branches handled approximately thirty-three million government checks, amounting to \$14,500 million.

Deposits were kept as nearly as possible in the places where the funds were received by the government. The work of handling this, too, fell largely on the twelve Federal Reserve Banks. They were asked to select the banks that were to handle the government funds, to allot deposits to the banks in proper amounts, to examine the collateral, to withdraw funds from banks as they were needed by the government, and to allot new funds.

To avoid money market disturbances, the government adopted a number of other devices. For example, in order to minimize the disturbances resulting from the withdrawals of funds representing payments of income taxes and excess profits taxes, arrangements were made in New York whereby the seven collectors of internal revenue in the district deposited their receipts in cash, checks, and certificates of indebtedness with the Federal Reserve Bank. Then the Federal Reserve Bank took all the checks drawn on depositary banks in the district, sorted them out, and deposited each right back in the depositary bank from which it came. For example, when it received from the collector of internal revenue a bunch of checks coming from Rochester, it sorted out those checks and sent them back for deposit in the proper banks in Rochester.

Another device, and a most important one, used to prevent disturbances in the money market was that of issuing certificates of indebtedness. These were short-term government obligations paying low rates of interest. There were ninety-five series in all issued up to October 31, 1922, and they totaled \$54,700 million. These certificates were issued mostly in anticipation of receipts from government bond drives and from income taxes and excess profits taxes.

Let us take the latter device. The object of issuing certificates in anticipation of Liberty Loans was twofold. In the first place, the government needed the money and needed it promptly. It took time to get money from Liberty Bonds. Anticipating these funds, the government borrowed money by issuing short-time certificates with the expectation of paying them off as soon as the Liberty Bonds were sold. It thus got the money it needed months in advance of the Liberty Bond sales and

paid off the certificates when the Liberty Bond money came in. In the second place, by this procedure the government could prevent Liberty Bond sales from greatly disturbing the money market. If it had thrown on the market billions of dollars in Liberty Bonds and had received payment for them in a short period of time, it would have tied up the money market. By this procedure it spread these receipts out over a considerable period of time.

Government receipts and expenditures were more perfectly synchronized than the above discussion indicates. The government received its money when it issued the certificates of indebtedness, and then by the time the Liberty Bond receipts began to come in, the certificates were due. The government had to pay the public on the certificates at the same time the public was to pay the government for the Liberty Bonds. Thus, careful timing avoided disturbances that would otherwise have arisen from the periodical withdrawing of funds and the periodical pumping of other funds into circulation.

The same synchronizing principle was applied in connection with the tax certificates. People knowing that they would have taxes due in June would buy these certificates, receiving on them a low rate of interest, months ahead of the time the taxes were due. The purchaser of the certificates could pay his taxes when they fell due by means of the certificates; or, if he held the certificates solely as an investment, the government would pay off the certificates at the time the public was paying its taxes, the one canceling the other.

One of the finest pieces of work that the government did was the synchronizing of these disbursements and receipts during the war so that one tended to cancel the other. These heavy transactions were handled largely by Federal Reserve Banks.

Other tasks entrusted to the Federal Reserve Banks were the sale of the certificates of indebtedness, their allotment to the different banks subscribing for them, and the receipt and deposit of the proceeds. The great work of floating the Liberty Loans fell in no small degree upon the twelve Federal Reserve Banks. They were the first institutions called in to help organize this task. It was the Federal Reserve Banks that were the headquarters of the publicity campaigns. They distributed and converted the bonds to a very large extent, handled the inter-

est payments, and made the advances to the banks, in the way of loans, which made possible the buying of so many bonds.

There are a number of other ways in which the Federal Reserve Banks assisted the government as fiscal agents. More than once a Federal Reserve Bank found that the government's account was short—in the language of the street, there was a government overdraft—and the government met that overdraft by a temporary certificate constituting a loan for a day or two. In the New York Federal Reserve Bank alone, in one year, the total amount of those short-time certificates issued was \$3 billion. The Banks also helped the government in the sale of the war savings stamps and thrift stamps in the latter days of the war.

The Secretary of the Treasury said in his report of 1917: "The Federal Reserve System has been of incalculable value during this period of war financing on the most extensive scale ever undertaken by any nation in the history of the world. It would have been impossible to carry through these unprecedented financial operations under our old banking system. . . . Great credit is due to the 12 Federal Reserve Banks for their broad grasp of the situation and their intelligent and comprehensive cooperation."

INFLATION IN WORLD WAR I

Yet, helpful as the Federal Reserve System was in financing World War I, it cannot be said that it made strenuous effort to combat the danger of inflation. Table 8 shows that the total money supply (currency and demand deposits) increased from \$15 billion to \$25 billion between 1916 and 1920. The consumer price level went up from 78 to 143 in the same period.⁶ This sharp rise in prices is not surprising, for there was little to offset it and much to encourage it. There was no great increase in total goods produced during the war period,⁷ only a third of the war was paid for at the time by taxes, and price controls were primitive and often ineffective. On the other hand, probably a third of the war was paid for by the creation of money. The Federal

⁶ *Supra*, p. 75.

⁷ National income adjusted by cost of living was \$63.2 billion in 1916, \$66.9 billion in 1918, and \$60.4 billion in 1920. National Industrial Conference Board, *Economic Almanac*, 1949, p. 94.

Reserve authorities encouraged money creation by maintaining rediscount rates that were low for that period (from 3.5 to 4 percent most of the time), by lending to member banks at preferential rates, and by not discouraging banks from lending money to customers to buy bonds.⁸ Commercial banks themselves held some \$5 billion of government securities. Although the Federal Reserve authorities always said that they wanted to prevent inflation, that was not their primary interest. Rather, they focused their attention on the efficient sale of government securities, on minimizing disturbances in the money market, and on seeing to it that the Treasury never lacked funds.⁹ Probably they could have done little else, but few had any serious misgivings about the policy. Almost everyone complained about inflation, but those in policy-making circles seem to have accepted it as one of the inevitable pains of war.

FEDERAL RESERVE BANK SERVICES TO THE TREASURY AFTER WORLD WAR I

While we are discussing the Treasury's relationships with banks and with the Federal Reserve Banks, let us glance at the general trends after World War I. The old independent treasury system with its nine subtreasuries was liquidated in 1921 and its functions assigned to Federal Reserve Banks, national bank depositaries, and other government agencies. During the 1920's the Treasury kept from \$30 million to \$40 million in the Federal Reserve Banks and some \$200 million more in various national banks. On May 7, 1928, Congress authorized state banks and trust companies that were member banks also to hold Treasury funds and to act as fiscal agents, just like the national banks. During the 1930's the Treasury's deposits in Federal Reserve Banks in-

⁸ Before the Fourth Liberty Loan drive Congress enlarged the powers of national banks to lend on Liberty Bond collateral. Many banks thereupon advertised that "we will lend you money secured by the Fourth Liberty Loan at 4.25 percent for ninety days with renewals at the same rate covering the entire period of one year." Almost \$1 billion of loans were made this way. In so far as these loans represented a diversion of savings of the near future into bond purchases, they created little or no inflation. The longer such savings took to materialize, however, the more inflationary the process was. *Annual Report of the Secretary of the Treasury*, 1918, pp. 74, 175, 905; *ibid.*, 1919, p. 955.

⁹ A. D. Noyes, *The War Period of American Finance, 1908-25* (1926), pp. 377-378.

creased, generally totaling several hundred million dollars. The same was true of Treasury deposits in the member bank depositaries. Then, in World War II, the Treasury again held vast sums in the member banks, just as it had in World War I. It had on deposit over \$24 billion in 1945, for example. This was used soon after the war to pay off short-term government securities, with the result that Treasury deposits declined to one or two billion dollars. Treasury deposits with the Federal Reserve Banks were modest during World War II but have increased since then to one or two billion dollars also.

Depository member banks were not required to keep reserves against government deposits under the terms of the First Liberty Bond Act of 1917 and subsequent legislation until the Banking Act of 1935. Then the same reserves were required against government deposits as against those of individuals or corporations. But in World War II, from April 13, 1943, to June 30, 1947, member bank depositaries were again exempt from keeping reserves against demand deposits.¹⁰ This is more reasonable than it may seem at first glance. In the war emergency vast sums were being left with the member banks, on which they had to keep accounts and which they had to pay out on short notice. They had little opportunity to lend this money and make a profit.¹¹

As for interest on government deposits, beginning January 1, 1913, all government depositaries except the Federal Reserve Banks were required to pay interest to the government on their daily balances. This practice was discontinued by the Banking Act of 1933, which provides that with certain exceptions no member bank shall pay interest on demand deposits. Since all government deposits maintained with depositaries under the supervision of the Treasury are demand deposits, the collection of interest upon such government deposits terminated June 30, 1933, except in the case of certain special deposits.¹²

A large number of depository banks failed during the banking crisis of early 1933: as of March 16 of that year approximately one-third of the regular depositaries were unlicensed. Thanks largely to the fact

¹⁰ *Federal Reserve Bulletin*, 1943, p. 378; Board of Governors, *Annual Report*, 1946, p. 45.

¹¹ The interest (0.375 percent) received from investment of these funds in (short-term) Treasury bills probably paid these costs but at best provided meager additional profit.

¹² See *Annual Report of the Secretary of the Treasury*, 1933, p. 70.

that these government deposits were secured by collateral in the hands of the government, the Secretary of the Treasury was able to say in his report for the fiscal year 1934: "To date, the United States has not sustained any losses through the failure of depository banks."¹³

The United States government has been the sole owner of the nation's monetary gold since the legislation of 1933 and early 1934 which outlawed the circulation and even holding of gold coin, gold bullion, and gold certificates by the American public. The Treasury took into its own vaults all the country's monetary gold stock. The Federal Reserve Banks, in return for the gold they turned over to the Treasury, received a new form of gold certificate to be used for reserve purposes. These certificates may be held only by Federal Reserve Banks and the Treasury. They are redeemable in gold by the government for the Federal Reserve Banks alone, and only "at such times and in such amounts as, in the judgment of the Secretary of the Treasury, are necessary to maintain the equal purchasing power of every kind of currency of the United States."¹⁴ At the present time, when certificates are redeemed by the Treasury to provide gold for export, they are redeemed at the rate of 13.71 grains of gold to the dollar. This is the gold equivalent of our present dollar and is equal to 59.06 cents of our old gold dollar.

When the government forcibly took over the gold owned by the people and the banks in 1933, it paid for it dollar for dollar in inconvertible paper dollars which it administratively stabilized at this new level. This gave the government a profit of approximately 69 percent on each dollar of gold taken over, because the old dollar of 23.22 grains of fine gold is the equivalent of \$1.693 of the new bullion dollar of 13.71 grains. In this way the government realized a so-called "revalorization profit" of approximately \$2,808 million. Of this sum, the major part, \$2 billion, was placed in the "exchange stabilization fund,"¹⁵ \$675 million was used after 1935 to retire national bank notes by paying off

¹³ *Ibid.*, 1934, p. 73.

¹⁴ Gold Reserve Act of 1934, Section 6.

¹⁵ The stabilization fund is under the exclusive control of the Secretary of the Treasury with the approval of the President, "whose decisions shall be final and not subject to review by any other officer of the United States." The law gives him wide discretion as to the purposes for which the fund may be used. Gold Reserve Act of 1934, Section 10b. *Supra*, p. 70. Most of the stabilization fund has now been turned over to the International Monetary Fund.

the bonds backing them, and the remainder was turned over to the general funds of the Treasury.

As will be seen in subsequent chapters, the relationships between the Treasury and the Federal Reserve Banks grew closer with each new major emergency like the Great Depression and World War II. Today the Federal Reserve System is quite subordinated to the Treasury. How that condition developed is the main theme of the remainder of this book.

Σ CHAPTER IX Σ

The Federal Reserve System in the 1919-1921 Boom and Depression

THE forepart of this book dealt with the principal defects of the American banking system as it existed before 1914, and the last four preceding chapters have shown how the Federal Reserve System remedied these defects. Chapter VIII also related in some detail how the Federal Reserve System helped in the financing of World War I. The sudden ending of that war was followed by a period of readjustment for which little preparation had been made. Even with preparations, the readjustment would have been difficult. The experiences of that period are of particular interest to us today because we have been living through another period of postwar readjustment. We have frequently looked at the 1919-1921 era to find what difficulties we might expect to meet and what mistakes we might hope to avoid. There are definite similarities between the two postwar eras. Also, there are some striking dissimilarities. Both will be apparent as our discussion continues.¹

ECONOMIC TRENDS UP TO MID-1920

When World War I ended, there were two main schools of thought as to what the trend of business would be in the years immediately ahead. The optimists argued that the work of reconstructing war-torn Europe, plus the postponed demands for peacetime goods by millions

¹ Among the similarities were the willingness of the Board to keep interest rates relatively low for the convenience of the Treasury, the expansion in bank loans, the stimulus provided by abnormally large exports, the shortages of certain classes of goods, rising prices, and a period of prosperity. Among the dissimilarities were the facts that interest rates were much higher after World War I, government securities were unsupported, foreign currencies were unpegged early, the nation returned quickly to a gold coin standard, gold moved out instead of in, inventories were higher, the Federal Reserve authorities had a few credit controls at their disposal, the banks did not have large excess reserves, and the "hot" war was not followed by a "cold" war.

of Americans, would easily make up for the cancellation of military orders. The pessimists answered that Europe was financially exhausted and quite unable to spend vast sums on imports to reconstruct factories and devastated areas.

The first months following the armistice seemed to bear out the gloomier prophecies just mentioned. Wholesale prices dropped 5 percent between November, 1918, and February, 1919. The Federal Reserve index of production showed a steady decline until June, 1919. Then business picked up rapidly, and during most of the ensuing year the country enjoyed the excitement of a full-scale boom.

Apparently it was the export business that brought on the postwar prosperity. During 1919 the United States government loaned about \$1,800 million to Allied governments, and American banks generously financed about \$2 billion of exports. By June, financial journals were commenting on the enormous scale of the export trade.² All this had a stimulating effect on the domestic market, where prices started to climb once more. Complaints began to be heard about the scarcity of goods, slow deliveries, and the need for increased production. As prices rose, so did wages, but often not as rapidly. Many wage earners, however, seemed more impressed by the fact that they were receiving a greater number of dollars than by the fact that their wages bought less than before. They spent money extravagantly: for a while there was a mania for silk shirts. Farmers enjoyed the postwar prosperity too, enlarging their farms and buying new equipment. Faced with a seemingly insatiable demand for their goods, merchants placed large orders with manufacturers, who delivered only a portion of those orders. That led to even larger second orders by some, who calculated that they would not get all that they asked for anyway. Others hoarded goods and raw materials in anticipation of a continued rise in prices. Manufacturers drew plans for plant additions to take care of the new business. Bank loans of all banks rose from a total of \$24,700 million in June, 1919, to \$30,700 million in June, 1920—a rise of about 25 percent in one year. There was a boom in the stock market, too.³ Those with a knowl-

² Federal Reserve Board, *Annual Report*, 1919, pp. 24-25.

³ Standard and Poor's index of industrial common stocks rose from 60.4 in April, 1919, to 74.5 in October, was down to 62.1 in February, 1920, and up to 67.4 in April before slipping again. Its low was 42 in August, 1921. Railroad stocks did not have a boom. *Monetary and Banking Statistics*, p. 480.

edge of financial history knew that this kind of expansion was not likely to last. Some even wondered why it was permitted to go this far. Both the chairman of the Board and the Federal Advisory Council urged a rise in rediscount rates in the summer of 1919.⁴ The view of the Board as a whole in July, however, was that there was "no necessary connection between rates for speculative purposes and for commercial transactions." In October they said that an increase in rates would have "little restraining influence."⁵ At this time banks were indebted to the Federal Reserve Banks to the extent of \$2,100 million and were still borrowing to lend to their customers. (See Table 9, page 87.)

A POLICY OF COÖPERATING WITH THE TREASURY. The Board were not as obtuse as their statements might suggest. They did not raise their rediscount rates in the face of the mounting boom and rising prices because they considered it more important at the time to coöperate with the Treasury. The Treasury had a floating debt left over from the war of \$6,500 million in certificates of indebtedness. These ran for six months and had to be renewed regularly. The Treasury wanted to keep the interest rate low on them; but, more than that, it wanted to convert them into longer-term obligations and get them into the hands of people or institutions who would hold them permanently.⁶ Low discount rates at the Federal Reserve Banks kept interest rates low and bond prices high. That was fine for the Treasury, but there were disadvantages as well. Low interest rates also stimulated bank loans and speculative activity.

The Federal Reserve authorities were becoming worried over the consequences of their low interest policy. The *Bulletin* commented in November, 1919, on the "Marked Advance in the growth of speculative transactions"⁷ and strongly implied that the growing amount of

⁴ W. P. G. Harding, *The Formative Period of the Federal Reserve System* (1925), pp. 157-158.

⁵ A. D. Noyes, *The War Period*, pp. 320-321.

⁶ Federal Reserve Board, *Annual Report*, 1919, pp. 3, 69, 72; *Federal Reserve Policy*, p. 4; A. D. Noyes, *The War Period*, pp. 309 ff.

⁷ *Federal Reserve Bulletin*, 1919, p. 1010. The Board remarked in their *Annual Report* (p. 3): "The purchasing power of the public growing out of high wages and large profits is greater than it has ever been before, and this purchasing

rediscounting was helping to support these speculations. Then, to the public's surprise, the New York Federal Reserve Bank and some of the others raised their rediscount rates. The stock market boom collapsed, and the speculators furiously denounced the Federal Reserve System. There were even newspaper editorials demanding that Congress "investigate" it.⁸ But other markets merrily continued their speculative sprees for several months longer.

RESTRAINING FORCES BEGIN TO BE FELT. A number of forces were gathering that would eventually end this postwar boom. Some resulted from the unpegging of foreign currencies and the removal of the embargo on gold which had taken place earlier in the year. In March the government had announced that it would no longer loan money to our allies to support their currencies at wartime pegged rates. The pound sterling fell from \$4.7575 in March to \$3.46725 in December, and francs dropped from 19.33 cents to 8.62 cents. In June the embargo on gold exports was removed; in other words, the United States went back on the gold standard, and gold might be freely shipped in or out.⁹ The cheapening of foreign currencies, together with the large credits extended to foreigners and their governments, stimulated the export of gold on a large scale. About \$400 million in gold, approximately one-seventh of our gold stock at that time, left the country between June, 1919, and June, 1920.¹⁰ One effect of these gold exports was to reduce Federal Reserve Bank reserve ratios. Meanwhile, another development was reducing them even more. During this period of prosperity a great many member banks were expanding their loans and offering more paper to be rediscounted. Banks were getting between 5 and 7 percent

power, competing with export demands arising out of the necessities of Europe has raised prices to a point that takes no account of prudence. Every element of increased cost is added to price, and there is, therefore, no incentive to manufacturers to produce cheaply or to hold back because of any element of cost, whether of credit, labor or material, as they can always sell their output at a profit. There is practically unlimited demand for credit, not only for the manufacture and distribution of goods, but also for speculation in commodities and in the securities representing ownership of the industries producing those commodities and which profit by their production and sale."

⁸Noyes, *The War Period*, p. 323.

⁹*Ibid.*, pp. 313-314.

¹⁰Board of Governors, *Banking and Monetary Statistics*, p. 536.

on their loans to customers, and the Federal Reserve rediscount rates were from 4 to 4.5 percent. That spread tempted banks to borrow to make more loans to customers. By November the Federal Reserve Banks' overall ratio of cash reserves (mostly gold) to liabilities had fallen to 45 percent. The New York Federal Reserve Bank's ratio was down to 40 percent, and it soon had to borrow from other Federal Reserve Banks.¹¹ In late January and early February, 1920, all the Fed-

TABLE 9. Why Federal Reserve Bank Reserves Declined, 1919-1920

Date	Member Bank Loans, for Cities (billions)	Member Bank Borrowings at F.R.B.'s (billions)	F.R. Notes and Member Bank Deposits (billions)	Gold Exports (- = Imports)	F.R.B. Reserve Ratio (%)	N. Y. F.R.B. Rediscount (%)	Average N.Y. Commercial Bank Interest Rate to Customers (%)
Jan., 1919	\$ 9.9	\$1.7	\$4.2	\$ 1.3	49.6	4.0	5.8
Mar., "	9.8	1.9	4.2	-6.7	49.4	4.0	5.7
May, "	10.0	2.0	4.2	0.9	50.2	4.0	5.7
July, "	10.8	1.9	4.2	52.8	48.5	4.0	5.7
Sept., "	11.3	1.8	4.4	27.6	47.3	4.0	5.7
Nov., "	12.2	2.2	4.6	49.5	45.3	4.75	5.8
Jan., 1920	12.7	2.1	4.8	35.8	42.7	6.0	6.0
Mar., "	13.2	2.3	4.9	30.1	40.6	6.0	6.2
May, "	13.4	2.5	5.0	-8.1	40.9	6.0	6.5
July, "	13.5	2.5	5.0	2.1	41.9	7.0	6.8
Sept., "	13.7	2.7	5.1	-22.0	41.2	7.0	6.9
Nov., "	13.6	2.8	5.1	-37.0	42.3	7.0	6.9
May, 1921	12.3	2.0	4.5	-57.1	56.4	6.5	6.9
Nov., "	11.5	1.2	4.1	-50.7	71.7	4.5	6.3
May, 1922	11.0	0.5	4.1	-5.6	77.6	4.5	5.5
Nov., "	11.4	0.6	4.2	-14.9	76.1	4.0	5.4

Source: Board of Governors, *Banking and Monetary Statistics*, pp. 132-135, 399, 346, 536, 346, 439, 464, respectively. Federal Reserve Bank cash reserves (mostly gold, but also U. S. notes, silver, and silver certificates) varied in 1920 within the narrow range of \$2,053 million in February and \$2,222 million in December. Member bank reserves varied from \$1.7 billion to \$1.9 billion between June, 1919, and June, 1920; and Federal Reserve notes outstanding varied from \$2.5 billion to \$3.3 billion between January, 1919, and December, 1920.

eral Reserve Banks raised their rediscount rates to 6 percent.¹² Speculation on the commodity markets continued despite this sharp warning by the Federal Reserve Banks, and it started anew on the stock exchanges. Prices kept climbing, gold continued to flow out, interest rates rose still higher—and yet banks continued to increase their loans. Reserves, of course, fell off. (See Table 9.) But not until June did the Federal Reserve Banks again raise their rediscount rate—to 7 percent.¹³ This was just after the peak of the boom.

The news of the collapse of Japan's speculative boom had had a

¹¹ Noyes, *The War Period*, p. 318.

¹² Board of Governors, *Banking and Monetary Statistics*, p. 439.

¹³ *Ibid.*, p. 439.

cooling effect on some speculators in April. Others were given pause by the startling bargain sale advertised on May 3 by John Wanamaker at a time when goods were still considered scarce.¹⁴ That store was one of the first to deal with a problem which many were beginning to worry about. Thousands of firms were finding themselves overextended as their goods moved sluggishly at high prices. There was widespread complaint of a "buyers' strike." Under the circumstances, businesses which had bank loans found the banks reluctant to renew those loans. Rising interest rates lowered bond prices, too.

The Fourth Liberty Loan bonds, the 4.25's which people had been urged to borrow money to buy in 1918, fell to 82.5 in May, 1920.¹⁵ It was at this point that the Federal Reserve Banks raised their rediscount rate to 7 percent.

A frantic and general liquidation took place in the months that followed. It was probably one of the most drastic in all our economic history. Merchants tried desperately to move the large inventories which they had accumulated; wholesalers frequently could not pay for goods they had ordered; and every day manufacturers received letters and telegrams canceling orders which buyers had been anxious to secure a few months earlier. Business failures mounted, as Table 10 shows.

TABLE 10. Business Failures from June, 1919,
to June, 1922

Date (June)	Number of Failures	Liabilities
1919-1920	6,151	\$107,700,000
1920-1921	13,918	517,500,000
1921-1922	23,851	686,800,000

Source: *Statistical Abstract of the U. S.*, 1926, p. 309.

One that was little noticed at the time but has become famous in recent years was a Kansas City haberdashery in which Harry S. Truman was a partner. Sacrifice sales of merchandise and raw materials caused wholesale prices to plummet from 247 (1913 = 100) in May, 1920, to 145.5 one year later.

¹⁴ Noyes, *The War Period*, pp. 332-335.

¹⁵ Noyes, *The War Period*, p. 342.

WHAT THE BANKS AND FEDERAL RESERVE BANKS DID TO HELP

Before the days of the Federal Reserve System such a general collapse of markets would have produced a most formidable panic. But now the individual banks did not have to protect their reserves as carefully as banks had had to do in 1873, 1893, and 1907, for they had the Federal Reserve Banks to fall back upon. These could and did express a willingness to make loans to anyone who really needed help and was in a position to pay for it. The test was whether the borrower was willing and able to pay high interest rates. Loans at member banks actually increased over the summer and were at about the same figure in November, 1920, as they had been in May. They declined moderately in 1921. Rates on customers' loans remained close to 7 percent, and Federal Reserve rediscount rates remained near the high May levels for almost a year. Borrowers at Federal Reserve Banks increased.¹⁶ (See Table 9.) Few member banks failed (only twenty-eight) in the first year of the depression. Many of the usual hysterical aspects of panics—such as numerous bank runs, hoarding of currency, premiums on currency, and the use of clearing house certificates—were absent. Most of this improvement can be attributed to the willingness of the Federal Reserve System to help banks and to the consequent greater willingness of banks to carry their customers. The founders and the directors of the Federal Reserve System had reason to be proud of it.

The year 1921 was a bleak one. The index of industrial production dropped from 75 to 58. Prices reached their low point. Business failures and bank failures grew. But gold began to flow in again, loans were gradually liquidated, Federal Reserve Bank reserve ratios rose, and interest rates declined. (See Table 9 again.) By mid-1922 the depression had largely passed.

CRITICISM OF THE FEDERAL RESERVE SYSTEM, 1919-1921

The Federal Reserve System was accused after World War I of being under the thumb of the Treasury. Incidentally, both occupied the same building in those days. Certainly the Federal Reserve authorities kept interest rates low out of deference to the Treasury for a longer

¹⁶ *Federal Reserve Bulletins*, 1919, 1920, *passim*.

time than they otherwise would have done. Yet, admitting this, by the end of 1919 the Federal Reserve authorities' hands were reasonably free, a boom was in progress (some called it an "orgy of speculation"), and their reserves were near rock bottom. Why did they act so cautiously and slowly? Possibly because of the consequences in the stock market of their first rate increase, in November, and the criticism they received for it.¹⁷ But other markets and prices were not appreciably affected. Karl Bopp, vice-president of the Philadelphia Federal Reserve Bank, writing a generation later, said, "Virtually every analyst who has viewed this period in retrospect agrees that it was a serious error to wait so long to bring credit under 'effective control.'"¹⁸

The 1919-1921 episode was the Federal Reserve System's first experience with a boom and depression. Once the panic and depression got under way, the system gave a fine demonstration of its virtues. But it did little to keep the boom from developing. True, the rediscount rate was the only effective instrument of control that the Federal Reserve authorities had at the time. However, they used that clumsily. They hesitated too long before raising it, they gave the public some reason to believe they would not raise it, and then they wielded it too slowly when they did use it. The Federal Reserve authorities obviously needed to improve their timing, to watch their public announcements, to act with more courage, and to have additional instruments of control. How they obtained a new and more effective instrument will be discussed in the next chapter.

¹⁷ *Supra*, p. 86.

¹⁸ Board of Governors, *Federal Reserve Policy* (Post-War Studies, No. 8), p. 5.

⌘ CHAPTER X ⌘

Federal Reserve Bank Open-Market Operations in the 1920's

WORLD War I was the first major crisis that the Federal Reserve System was called upon to meet. The threat to the nation's financial well-being was clear, and the Federal Reserve Banks responded satisfactorily. Likewise, there can be little doubt that they dealt with the 1920 panic better than the old regime had handled the 1907 panic. During the rest of the 1920's, until 1929, there were several lesser crises to be met and minor problems to be solved, but no major emergency was apparent. The Great Depression of the 1930's was, of course, in the making. On the whole, the Federal Reserve System handled these minor crises and problems well. This it did largely with a new financial tool called open-market operations, which was used with such seeming success that some experts believed that the Federal Reserve System could probably eliminate the more serious aspects of the business cycle and stabilize the price level.¹

This illusion made the Federal Reserve authorities largely unaware of the underlying financial weaknesses which would manifest themselves after 1929. Thus they used their open-market and rediscount powers sparingly and sometimes belatedly. Perhaps, of course, they could have done little even if they had realized these weaknesses more fully. The country enjoyed the boom of 1927-1929 while it lasted and was in no mood to listen to "prophets of doom." People did not know what the years ahead held for them: that is something which the amateur historian must never let himself forget.

To understand what took place in the 1920's, it is necessary to have a clear grasp of open-market operations. These affect the supply of credit available in the nation's money markets. But first, what are money markets?

¹ Board of Governors, *Federal Reserve Policy*, p. 8.

THE MONEY MARKETS

Large corporations and banks in New York and in the interior of the country often have liquid surplus funds on which they would like to earn a return. The banks generally feel that it would be unwise to lower their local rates to attract new borrowers. That raises all kinds of complications. Putting the funds to work elsewhere avoids the difficulties. This is all the more desirable if the funds may be committed for only a short period of time. Where is there such a place? There are money markets in several of the larger cities, but the New York money market is the national market for liquid surplus funds. It is also the largest such market in the world. Who is able to borrow in this market? In general, banks, big merchants and manufacturers, brokers with good collateral, and the government. These all want large amounts of capital at lower-than-ordinary rates or on special terms. Because the lenders are anxious to lend their surpluses, and because the borrowers enjoy excellent credit or have good collateral, the funds are loaned at rates that are normally lower than those offered at the commercial banks. Where in New York is this market?

The New York money market is not one institution where buyers and sellers of funds congregate and bid and offer. It is four specialized markets. These four are the banker's acceptance or bill market, the commercial paper market, the government securities market, and the call money market. There is a fairly definite relationship among the interest rates prevailing in these markets. Funds are easily moved from one market to another. In general, then, the money market is where the "marginal" demand for funds and the "marginal" supply of them meet, to use the economist's terms. It is a highly sensitive market, and changes in it may eventually affect interest and discount rates for all kinds of loans.

It is not necessary for us to know the detailed operations of these four markets. We need only summarize the basic functions of each.

Let us look first at the bill market. The bill, or banker's acceptance, was a European device that became popular after the establishment of the Federal Reserve System. As the name implies, it is a seller's bill to a buyer. It takes the form of a draft on the buyer's bank. The bank

"accepts" it, that is, guarantees payment on it, so that the seller may sell it to someone else and get his money immediately. The seller, of course, must take a trifle less than if he waited. How much less? That is the interest rate, known in this connection as the bill rate. Who buys such bills? Anyone may: the market is open. But usually "dealers" buy them and then sell them to banks, savings banks, insurance companies, and business concerns. The largest dealer is the Discount Corporation of New York. The Federal Reserve Banks themselves bought large amounts of bills in the 1920's. As a result, the open-market rate and the Federal Reserve Bank buying rate for bills were about the same.

The commercial paper market is like the bill market except that dealings are in terms of trade acceptances or drafts drawn on a buyer instead of on his bank. The buyer is a well-known merchant or manufacturer like Sears Roebuck or General Electric. He "accepts" the bill, i.e., confirms future payment of it, and then the owner sells it to a commercial paper house. This house, in turn, sells such drafts to its customers. The commercial paper house sells the drafts, it does not endorse them.² Except for Federal Reserve Banks,³ the same general type of customers buy commercial paper in the open market as buy bankers' bills. Commercial paper generally pays a little higher interest.

Likewise akin to bankers' bills and commercial paper in this period were short-term government securities like Treasury certificates of indebtedness and Treasury notes. Since the government's credit was excellent and maturity was near, the rates on these bills were low. The short-term government issues of the 1920's differed slightly from those of today: there were no Treasury "bills" then. The certificates of indebtedness ran for three months or more, whereas the Treasury notes ran from three to five years. All these securities were sold in the

² Buying bills should not be confused with discounting them or rediscounting them. When banks discount bills, they assume liability for them, but when banks or dealers sell bills, they assume no such liability. More bills were rediscounted than sold in this period because the names on most bills were not well enough known to warrant sale.

³ The term "commercial paper" is often used loosely, which is confusing. Sometimes it excludes bankers' bills and sometimes it includes them. For example, commercial paper houses do not normally handle bankers' bills. On the other hand, the only kind of "commercial paper" that Federal Reserve Banks may buy in the open market is bankers' bills.

first instance through the Federal Reserve Banks to a wide variety of institutions, companies, and individuals. Subsequent sales took place on the stock exchanges or through such houses as C. J. Devine and Company. These, together with the Federal Reserve Banks, were the government security market.

The call money market is different from the three markets just described. No discounting is done there. It is the market where stock-brokers get funds to finance the margin purchases of customers. A speculator buying securities "on margin" in the 1920's would probably pay for them with funds that were 15 percent his own and 85 percent borrowed "on call." His broker would arrange to leave the securities as collateral for the money borrowed. The speculator expected the securities to rise in price so that he could sell them and thus make over six times the profit he would have made if he had limited himself to what he could buy with his own funds. The call money loan desks are located in the stock exchange buildings, and rates are set the morning of every business day for new loans and for renewals. Brokers, banks, corporations, and others with money to lend made contact through these desks with those who wanted to borrow funds. Call loans may be terminated on twenty-four hours' notice, and so they are liquid in addition to being well secured. But because they cannot be rediscounted, the rates are sometimes fairly high for a money market loan. Of the four money markets the call money market is the most volatile.

The following table shows the money rates prevailing in these four markets in November, 1926. The average rate for loans to bank customers was 4.70, which is slightly higher than the highest of the money market rates. The rediscount rate for eligible paper of the New York Federal Reserve Bank was 4.0. This rate customarily stood between the bill rate and the commercial paper rate.

TABLE II. Money Market Rates, 1926

Treasury certificates, 3-6 months	3.35 percent
Prime bankers' acceptances, 90 days	3.75 to 3.875 "
Prime commercial paper, 4-6 months	4.50 "
Call loans, renewal rate	4.56 "

Source: *Federal Reserve Bulletin*, 1926, p. 829.

The New York money market was a sensitive and important institution. Any action noticeably affecting the demand and supply conditions in this market would usually be felt in changes in interest rates in other financial markets throughout the country. The New York money market was the strategic point at which to effect either stability or changes in interest rates. And the Federal Reserve Banks were in the best position to do this, for they could buy or sell heavily and at will in the money market. Indeed, they were the flexible factor to the money market that the money market was to the banks of the nation. By a change in their policy, therefore, they could sometimes influence the credit situation for the entire nation. At different periods in the 1920's the Federal Reserve authorities used this power to achieve certain ends. The occasions will be discussed shortly. The methods they used to influence money rates were not always the same, but they came to prefer open-market operations.

✓ OPEN-MARKET OPERATIONS

Before World War I and immediately afterwards changes in rediscount rates by central banks constituted the principal method of controlling the money market. In the London money market, in particular, attention had been focused for many years upon the use of the rediscount rate to maintain stability. It was natural, therefore, that during the early years of the Federal Reserve System the rediscount rate was in the foreground in all discussions of the policies of the Federal Reserve Banks. At the time of the abrupt deflation in 1920-1921, the rediscount rate was the principal factor in Federal Reserve control of the market. Yet it was this depression that led to the discovery of open-market operations.

The depression reduced the earnings of several interior Federal Reserve Banks. To avoid a loss, these Banks bought securities with idle funds. That had to be done in New York. Some of the sellers of the securities deposited their receipts in member banks there. With additional deposits, the member banks were able to get out of debt to the New York Federal Reserve Bank, which reduced that Bank's earnings. In other words, several of the Federal Reserve Banks were increasing their earnings by transactions which then decreased the earnings of the

New York Federal Reserve Bank. Such competition between Federal Reserve Banks was undesirable. In addition, all this affected the stability of government securities. But, most important, it was noticed that these operations had a stimulating effect on the supply of credit. At the instance of the Treasury, a policy of coöperation among Federal Reserve Banks was inaugurated.⁴ Without going into the evolution of the administrative details, the result was the Open-market Investment Committee of the 1920's.

The Committee was subject to the Federal Reserve Board and consisted of five governors of Federal Reserve Banks, with Governor Benjamin Strong of the New York Federal Reserve Bank as chairman. It was instructed that "the time, character, and volume of all purchases and sales of paper . . . eligible for open market operations shall be governed with a view to their bearing upon the general credit situation of the country."⁵ An account was set up in the New York Federal Reserve Bank, and the other Federal Reserve Banks generally participated in all purchases and sales on a pro rata basis.

After 1922 the Federal Reserve authorities relied chiefly on open-market operations when dealing with the money markets. Why did they prefer these to changes in their rediscount rate? Any changes in the rediscount rate or bill-buying rate were only an announcement of a change in the credit situation as seen by the Federal Reserve authorities. These changes might or might not have much influence on the attitude of businessmen, depending on the atmosphere of business confidence. And it took time for the announcement's effects to be felt in a country with thousands of individually owned banks. In short, the initiative often remained with member banks.⁶ On the other hand, the Federal Reserve Banks found that through open-market operations in

⁴ R. Westerfield, *Money, Credit and Banking* (New York, 1938), pp. 692-693.

⁵ Section 12A, paragraph 3, Amended Federal Reserve Act.

⁶ Another reason sometimes advanced in favor of open-market purchases and sales of United States government securities by the Federal Reserve Banks, over changes in the rediscount rates, as a means of controlling the money market, was that the use of the rediscount rate sometimes resulted in sharp and often undesirable psychological reactions. Just as, in taxation, indirect taxes produce revenues less painfully than do direct taxes, so, in the control of the money market, purchases and sales of United States government securities by the Federal Reserve Banks accomplished their purposes more effectively than changes in the rediscount rate and usually with less public irritation and criticism.

Treasury certificates and notes they could play a more effective part in the disposition of credit. True, they could operate through only two of the four markets, and only one of those usually was significant. That was the government securities market. But funds were transferred

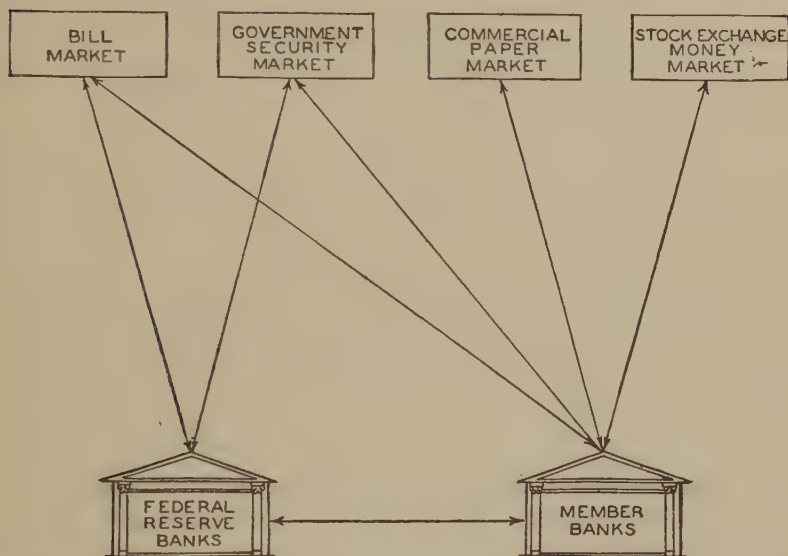


CHART V. The Bill Market and the Government Security Market Have Direct Access to the Federal Reserve Banks, but the Commercial Paper Market and the Call Money Market Have Access only Through Member Banks. (From R. Burgess, *The Reserve Banks and the Money Market*, rev. ed., New York, Harper, 1946, p. 152. Courtesy of the author and the publisher.)

readily from one market to another, and so interest rates adjusted themselves fairly quickly.

When the Open-market Investment Committee ordered the sale of government securities, the result was to contract credit in general. This was because the purchasers paid with checks on their own banks, and in the clearing process these checks were deducted from member banks' reserves. Then the member banks had to replenish those reserves. They might do so by pulling their surplus funds out of the money markets, or they might even have to borrow from their Federal

Reserve Bank. Interest rates rose in the money market, and perhaps the banks raised their interest rates too. In any event, the banks had less funds to lend. In this way open-market selling operations curtailed credit.

On the other hand, when the Committee ordered the purchase of government securities, the result was to expand credit. The persons or institutions who had sold the securities received checks drawn on the Federal Reserve Banks. When they deposited these checks in their own banks, their banks' reserves with the Federal Reserve Banks were increased. Their banks could now lend more freely. They might send surplus funds to the money market, where rates would fall, or they might even lower their own local rates to encourage borrowing. Thus open-market buying operations tended to expand credit.

Open-market operations could be used and were used, as we shall see, to moderate or to accentuate the effects of gold imports or of gold exports. The Federal Reserve authorities were now less at the mercy of the vagaries of the international gold standard than before, when changes in rediscount rates were their only defense. The discovery of open-market operations resulted in more planning by the central financial authority. Thus it marks a decline in the automatic gold standard. Virtually no one, however, thought that the new device seriously jeopardized the gold standard. Its prestige was high in the 1920's. Nor do we mean to imply that using open-market operations was a mistake. Their use simply represented an unconscious but significant step from an economy based on the theory of automatic price adjustments to a more planned economy.

FEDERAL RESERVE POLICY AND BUSINESS ACTIVITY

About 1922 there began to emerge something like a definite policy on the part of the Federal Reserve authorities. As may be seen from Charts VI and VII, there appears from that time a more or less consistent relationship between the various components of Federal Reserve credit and business activity, as measured by the index of industrial production. While the interests of foreign countries at times played an important part in determining Federal Reserve action, the policies of the Federal Reserve authorities were dominated by domes-

tic considerations. In Chart VI the index of industrial production is shown. In Chart VII are shown the principal items of Federal Reserve credit outstanding. These are: (1) bills rediscounted, which includes

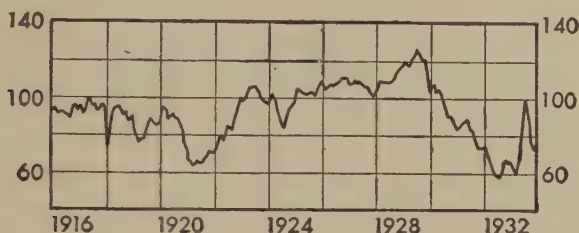


CHART VI. Index of Industrial Production, 1916-1934 (1923-1925 = 100). (The index for 1916-1919 is from *Standard Statistics—Basic Statistics*, April 29, 1938, p. 67; that for 1919-1934 is from Board of Governors, *Annual Report*, 1936, pp. 184-189, and *Federal Reserve Bulletin*, June, 1938, p. 526.)

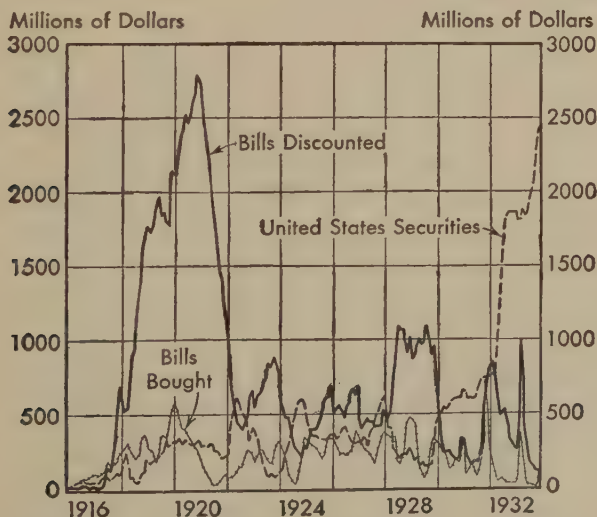


CHART VII. Principal Items of Federal Reserve Credit Outstanding. (The data were obtained from Federal Reserve Board, *Annual Reports* and *Federal Reserve Bulletin*, passim.)

the member banks' collateral loans; (2) bills bought, which means essentially the Federal Reserve open-market purchases of bankers' acceptances; and (3) United States government securities bought, which means the portfolio of open-market purchases of United States government securities held by Federal Reserve Banks.

From the beginning of 1922 through the year 1931, the money market was controlled mainly through the open-market operations of the Federal Reserve Banks, and particularly through purchases and sales by them of government securities. The Federal Reserve rediscount rates rose and fell in accordance with open-market operations. With the exception of the autumns of 1924, 1928, and 1931, Federal Reserve Bank policy was not reflected to any substantial extent in open-market purchases of acceptances. Such purchases were dictated rather by the exigencies of the acceptance market and the desire of the Federal Reserve authorities to develop this market. A discussion of the relationship of the broken line on Chart VII, representing the portfolio of United States government securities held in the Federal Reserve Banks, and industrial production (Chart VI) will help to explain Federal Reserve policy during the period 1922-1931.

RELATIONSHIP BETWEEN MEMBER BANK BORROWING AND FEDERAL RESERVE BANK SECURITY PURCHASES. At the beginning of 1922, much of the world, including England, Sweden, Netherlands, Japan, Italy, Austria, Canada, and Argentina, was in a state of business depression. The United States was emerging from depression; France, Belgium, and one or two other countries were relatively prosperous. Easy credit conditions gave promise of bringing the world out of the depression, and this was particularly true of the United States. An easy credit policy was, therefore, followed by the Federal Reserve authorities, through the increase of Federal Reserve Bank holdings of United States government securities, as shown in Chart VII. This policy, along with the gold flowing in during the year, enabled member banks to pay off their indebtedness at the Federal Reserve Banks and, in addition, to increase their reserve balances with Federal Reserve Banks. By the middle of 1922, however, the continued inflow of gold seemed to have been a sufficient stimulus to member bank credit expansion. In

fact, the rapid rise about that time in the index of industrial production seemed to presage another boom. The Federal Reserve easy credit policy was therefore reversed to a relatively firm credit policy, and United States government securities were heavily sold by the Federal Reserve Banks. As the securities were sold, member bank balances were depleted by an equal amount, and this forced the member banks to rediscount with the Federal Reserve Banks, that is, to borrow from them (see in Chart VII the rise in bills discounted with the decline in United States government security holdings of the Federal Reserve Banks). Industrial production reached its peak late in the spring of 1923, followed by the downward movement culminating in the "minor depression of 1924" (see Chart VI).

By 1924, all of the more important countries, with the exception of Japan, had emerged from the depression of 1921, and the world was in a relatively prosperous condition—a minor depression taking place in the United States. Even though much of the world was prosperous, it appeared to the Federal Reserve authorities safe to follow an easy credit policy, in view of the minor depression in this country, and for the purpose of helping England to return to the gold standard.⁷ The Federal Reserve policy, therefore, was to purchase government securities at a fairly rapid rate throughout most of the year 1924.⁸ This enabled member banks again to pay off much of their indebtedness to Federal Reserve Banks and to expand credit on a cheaper credit base.

Somewhat alarmed by the spurt in business activity which followed and also by the large amount of speculation in stocks and bonds, the Federal Reserve authorities early in 1925 sold government securities

⁷ Low interest rates here would not be likely to attract surplus funds from England. High interest rates might have done so, thereby threatening England's gold redemption funds just as she was trying to return to the gold standard.

⁸ Following is the comment of the Federal Reserve Board concerning its policy during 1924: "At the time when the open-market purchases were made, there was a recession in industrial activity, the attitude of the business community was hesitant, and there was no evidence of the growth of speculation. Open-market purchases during this period served to build up a portfolio of securities and to increase the proportion of outstanding reserve bank credit under the direct control of the federal reserve banks. By these purchases the reserve banks placed themselves in a position, through the subsequent sale of securities in case it should become desirable, to cause member banks to discount and to bring a larger part of the outstanding reserve bank credit under the influence of the discount rate." Federal Reserve Board, *Annual Report, 1924*, p. 12.

rather heavily and thereby made credit conditions firmer. This, together with an outflow of gold in the spring of 1925, forced member banks once more to rediscount with their Federal Reserve Banks. From the course of the index of industrial production, this tightening of the money market seemed to have the desired effect of leveling off the boom and, in fact, causing a slight recession. Conditions seemed to be fairly well stabilized at a high level of prosperity during 1926 and the first part of 1927.⁹ During the summer and fall of 1927, some recession appeared in the index of industrial production for the United States. However, many of the important countries of the world were riding on the crest of boom times, including Australia, England, Germany, and Poland. Only Italy, Japan, and Norway were depressed.

FEDERAL RESERVE CREDIT AND SECURITY SPECULATION. A striking characteristic of the year 1927, from the point of view of the United States, was the flotation of foreign and domestic securities, which assumed record-breaking volume,¹⁰ and the growing activity in the stock market. (See Table 12.) Still, it did not seem to the Federal Reserve authorities that speculative activity was assuming dangerous proportions. Because of the slight business recession in this country in 1927, the Federal Reserve System eased credit conditions by the purchase of government securities, beginning in the forepart of 1927. This policy was also owing to a desire to help the world maintain the gold standard. We particularly wanted to help England reduce the amount of deflation necessary to enable her to clinch her recently reestablished gold

TABLE 12. Stock Market Statistics

Item	1922	1925	1927
General Motors stock (high)	15	150	282
September stock averages (1935-1939 = 100)	77	98	135
Brokers' loans, Sept. (in billions)	\$1.8	\$2.9	\$3.9
Annual volume (in millions of shares)	261	460	582

standard.¹¹ At any rate, this easy credit policy was continued by the

⁹ *Ibid.*, 1926, pp. 1-3, and 1927, pp. 1-3.

¹⁰ Federal Reserve Board, *Annual Report*, 1927, pp. 5-8, and 1928, pp. 1-3.

¹¹ *Ibid.*, 1927, p. 10.

Federal Reserve Banks throughout the remainder of the year 1927. Instead of member banks using this credit, however, as they had on similar occasions, to reduce their indebtedness to the Federal Reserve Banks, they used it as a basis for the expansion of security loans.¹²

Inflation in the securities market, thus stimulated, was an object of great concern to Federal Reserve authorities, and early in 1928 Federal Reserve policy was again reversed: the Federal Reserve Banks began to sell rapidly their holdings of United States government securities. This was accompanied by an outflow of gold and had the effect of tightening the money market and forcing member banks to rediscount with their Federal Reserve Banks. The boom seemed to have been leveled off by the late spring and early summer of 1928, as the index of industrial production shows. There also had been a significant pause in stock market speculation, in the rise of security prices, and in loans on securities.

In the late summer and fall of 1928, Federal Reserve policy changed once again. A halt was called in the sale of United States government securities; and not only that, but unusually large purchases of bank acceptances were made—more than enough to take care of the seasonal requirements. This so eased the credit situation that member banks were able to reduce their indebtedness at Federal Reserve Banks.¹³ There followed a resumption of the stock market boom and of the business boom, as indicated by the extraordinary rise in the index of industrial production (Chart VI).

EXPERIMENT WITH "MORAL SUASION." About the beginning of 1929, the Federal Reserve authorities resumed their tight-money policy by a much larger reduction in holdings of acceptances than the normal seasonal reduction, and also by some sales of government securities. In addition, the Federal Reserve Board attempted to exercise "direct pressure" or "moral suasion" upon the member banks to restrict the wild expansion of speculative credit. Accordingly, the Board addressed two letters to the Federal Reserve Banks, under dates of February 2 and 7, 1929, calling attention to the fact that security spec-

¹² *Ibid.*, pp. 5-6 and 10-11.

¹³ *Ibid.*, 1928, pp. 6-7.

ulation was assuming dangerous proportions, which made it "incumbent upon the federal reserve banks to give constant and close attention to the situation in order that no influence adverse to the trade and industry of the country shall be exercised by the trend of money conditions, beyond what may develop as inevitable.

"The extraordinary absorption of funds in speculative security loans which has characterized the credit movement during the past year or more, in the judgment of the Federal Reserve Board, deserves particular attention lest it become a decisive factor working toward a still further firming of money rates to the prejudice of the country's commercial interests.

". . . A member bank is not within its reasonable claims for rediscount facilities at its federal reserve bank when it borrows either for the purpose of making speculative loans or for the purpose of maintaining speculative loans.

"The Board has no disposition to assume authority to interfere with the loan practices of member banks so long as they do not involve the federal reserve banks. It has, however, a grave responsibility whenever there is evidence that member banks are maintaining speculative security loans with the aid of federal reserve credit. . . ." ¹⁴

Unfortunately, the country was by this time thoroughly enjoying the speculative spree. It would have taken strong measures by men of great courage and insight to stop it, and it is doubtful if such paragons would ever have been thanked for their efforts. Whether the Board was doing all that might have been expected of it may be debated. In any event, the Board did not have as full control of the situation as might be imagined. Three episodes in 1929 will illustrate this: one shows the independence of individuals, one of member banks, and one even of Federal Reserve Banks.

The bulk of the speculation was being financed by brokers' loans, which were obtained on the call money market. As has been mentioned, in normal times such funds came from New York banks and their correspondents. But in 1927-1929 "others" began putting their funds into this market. These "others" were corporations with surplus funds, investment trusts, wealthy individuals, and even some middle-class per-

¹⁴ *Ibid.*, 1929, pp. 2-3.

sons like college professors. The high interest rate, the liquidity, and the collateral provided made call loans highly attractive. Table 13 shows how brokers' loans increased during this period.¹⁵ Notice the column "Loans for Others" during 1929: it made up more than half the total at times.

TABLE 13. Composition of Brokers' Loans
(in millions)

Date	Funds of N. Y. Banks	For Out-of- Town Banks	"Loans for Others"	Total
Feb. 3, 1926	\$1,222	\$1,280	\$ 590	\$3,092
Jan. 4, 1928	1,511	1,371	928	3,810
Nov. 28, 1928	1,235	1,768	2,287	5,290
Apr. 3, 1929	1,021	1,652	2,889	5,507
July 31, 1929	1,205	1,696	3,058	5,960
Oct. 2, 1929	1,071	1,826	3,907	6,804
Oct. 1, 1930	1,834	602	627	3,063

Source: L. Haney, L. Logan, and H. Gavens, *Brokers' Loans* (New York, 1932), pp. 220-221.

Since these loans were not derived from banks, they were largely beyond the control of the Federal Reserve authorities. For example, Federal Reserve rediscount and open-market policies caused New York banks to decrease their loans on the call market in the late summer of 1929, but high interest rates only led the "others" to pour more funds into the call money market.¹⁶ No method had been devised to control these funds.

The perverse action of a big bank might neutralize Federal Reserve policies too. When the Board put its tight-money policy into effect early in 1929, call money rates advanced to 9, 12, 15, 17, and finally 20 percent. Some banks timidly withdrew funds from the call money market. Stock prices fell sharply. Presumably this halting of the speculative upsurge was just what the Board was seeking. Yet at this point

¹⁵ The publication of statistics on brokers' loans from February, 1926, on was intended to have a dampening effect on speculation. It did not. Board of Governors, *Federal Reserve Policy*, p. 67.

¹⁶ The "others" also contributed to the country's distress when the panic began in October, 1929, by withdrawing over \$2 billion in one week. Fortunately, the Federal Reserve System and the New York member banks were able to make up part of this. Without them the money panic would have been appalling.

President Charles Mitchell of the National City Bank of New York, the country's second-largest bank, placed \$25 million in the call money market at rates of 16 to 20 per cent. He later told a Congressional investigation committee, "We stepped in there to allay what was becoming a money panic, an inability of the legitimate borrower to borrow for his day's contracts the money that was essential if they should be maintained."¹⁷ The market recovered in the next few days, and brokers' loans advanced again.

We must remember that banks were within their legal rights in making loans to speculators provided the loans were well secured. Such loans were merely not eligible for rediscount. Some banks borrowed on eligible paper but used the funds to make loans to speculators. That was what the Board was inveighing against in February. Mitchell's excuse for his action in March was that his bank was not in debt to the Federal Reserve Bank at all. The fundamental difficulty lay in the fact that the Federal Reserve System was founded on the theory that bank credit should grow out of self-liquidating paper. But that was never written into the law for member banks, only for the Federal Reserve Banks. As a result, the Federal Reserve authorities were limited in what they could do about speculative loans.

If the Board had really wanted to stop the boom, they could, of course, have raised rediscount rates higher and engaged in open-market selling operations again. At least, so it might be argued. But that presumes agreement in the Federal Reserve councils, where apparently harmony and discipline did not prevail either. It was the general custom at this time that the Federal Reserve Banks, particularly the New York Federal Reserve Bank, should initiate proposals of change in credit policy. The Board would then approve or disapprove of them. The governor of the New York Federal Reserve Bank during most of the 1920's was Benjamin Strong, a man with a persuasive personality and a shrewd grasp of economic conditions. He had more influence

¹⁷ *Hearings before a Subcommittee of the Committee on Banking and Currency*, U. S. Senate, 72nd Congress, 2nd session, on Senate Resolutions 84 and 239, part 6, p. 1816. Mitchell was an A director of the New York Federal Reserve Bank in 1929. Senator Glass demanded his resignation from the position on the ground that he had acted in contempt of the Federal Reserve Board. *New York Times*, March 29, 1929, p. 1.

than the chairman of the Federal Reserve Board.¹⁸ No proposals were made all during the later part of 1928 while the "bull market" boom was gaining momentum.¹⁹ Perhaps the undue optimism of the period explains this failure of the Federal Reserve Banks; perhaps the illness of Governor Strong after February, 1928, and his death in October explain it.²⁰ Under the circumstances the action of the Board in February, 1929, was necessary but belated. It was also drastic and rather unprecedented. This does not clear the Board of blame for not acting sooner, but it does clarify the situation somewhat.

By the time the Board took action, they felt that mere raising of rediscount rates would be inadequate. Instead, they favored "moral suasion" and "direct pressure." By direct pressure they meant denying Federal Reserve credit to banks that were known to be speculating or helping speculators. The New York Federal Reserve Bank, however, was unsympathetic to the policy instituted by the Board early in 1929 and belatedly urged that the rediscount rates be raised instead. The Board objected to that, and a heated controversy over the two methods of dealing with the situation ensued. Meanwhile, the New York Federal Reserve Bank continued to rediscount for member banks even when it knew that those banks had large call loans outstanding. The rediscount rate was 5 percent; call loans were generally 8 percent or more. Such independent action by the New York Federal Reserve Bank, by far the largest of the twelve Federal Reserve Banks, made the Board's policy of direct pressure virtually impossible. The Board relaxed it that summer and let the New York Federal Reserve Bank raise its rediscount rate.²¹

¹⁸ R. Westerfield, *Money, Credit and Banking* (1938), p. 395.

¹⁹ A. C. Miller, "The Federal Reserve Policies, 1927-29," *American Economic Review*, September, 1935, pp. 452-453. Miller was a member of the Federal Reserve Board.

²⁰ Carl Snyder, statistician for the New York Federal Reserve Bank, states that it was Strong's plan to raise the rediscount rate steadily and head off the boom that was gathering. "If Governor Strong's plan of restricting credit had been followed, from early in 1928, the later phase of wild speculation could easily have been avoided." *Capitalism the Creator*, p. 228. The New York bank raised its rate from 3.5 to 4 percent on February 8, 1928, to 4.5 percent on May 18, to 5 percent on July 13, and finally to 6 percent over a year later, on August 9, 1929. Most of the other banks followed the lead of the New York bank except for the last increase mentioned.

²¹ *Ibid.*, pp. 454-456.

CONCLUSIONS

Open-market operations were a new device in the 1920's, and central bank control of the nation's credit was only a few years older. It would be an historical phenomenon if we could point to this as a case where men in a new position of great authority had exercised a new implement of control with courage and wisdom. The Federal Reserve authorities used open-market operations well in handling minor booms and recessions, in solving foreign currency stabilization problems, and in sparing the money markets from the severe stringencies they had experienced in most former panics. But they could not avert the major disaster of 1929. Indeed, by their policies of "too little and too late" credit restriction,²² some critics believe they made the panic worse.

Yet perhaps the Federal Reserve authorities have been unjustly blamed for not stopping the 1929 panic. Let us suppose they had been permitted to see, in the late 1920's, what the economic future would bring, and to devise policies to curb stock market speculation. Would they not have encountered strong opposition from the country and then been severely blamed when a depression followed the execution of their policy? They might have softened the depression somewhat, but they would hardly have prevented it. The depression was certainly the product of more than a serious stock market crash. Yet blame for the depression would then have attached largely to the Federal Reserve authorities. Criticism of them might have been so severe that their powers would have been greatly curtailed as a result. We shall never know. Once the Board chose its route at the crossroads, it could never know what dangers lay the other way. But it is sometimes healthy to conjecture.

The experience of 1929 did show, however, that the Board needed to have some more specific controls at its command. Since there was not enough self-liquidating paper in the 1920's, banks made speculative

²² The Board could have done more if they had dared to act boldly. From 1918 to 1932 member bank reserve balances never exceeded \$2.5 billion, and excess reserves were rarely over a few tens of millions. Between 1927 and 1929 Federal Reserve Banks held a total of \$1.5 to \$1.8 billion of bills and government securities which could have been offered on the open market.

and long-term loans.²³ To handle the speculative situation, the Board needed more power over the stock market. They needed more discipline among the Federal Reserve Banks in carrying out open-market operations. And they needed some additional credit curbs, for open-market operations were not the patent cure-all that they had originally been supposed. The 1920's and the first years of the depression also taught some other banking lessons. These will be discussed in the next chapter.

²³ To some extent the increase in long-term assets held by banks was offset by an increase in their time deposits. *Federal Reserve Bulletin*, 1940, p. 286.

Σ CHAPTER XI Σ

Bank Failures and the Great Depression of 1929-1933

THE Federal Reserve System had been founded in 1913-1914 to alleviate the worst pains of periodic panics and depressions and particularly to reduce the number of bank failures. During the 1920's it was even imagined by some that the system could virtually eliminate panics. Against such a background of high aims and hopes the Great Depression of 1929-1933 was disillusioning. It is small wonder that Congress gave our banking system almost as extensive an overhauling in 1933-1935 as it had some twenty years before. The story of that will be told in the next chapter. At present we need to examine one of the main reasons for these reforms, namely, the large number of bank failures that still occurred.

BANK FAILURES

Even during the prosperous years of the 1920's, hundreds of banks failed every year. The total number of failures during the years 1921-1928 inclusive came to 5214 banks, holding deposits of \$1,400 million. In only one of these eight years were there less than 500 bank failures (see Chart VIII), and in no year were the deposits of banks that failed less than \$91 million.¹ This disgraceful record was not equaled by any other country. The failures not only inflicted much hardship and undeserved loss on tens of thousands of innocent depositors; they also impeded the orderly functioning of the nation's economic life. In this connection it should always be borne in mind that something like 90 percent of the nation's business is transacted by means of bank checks.

The reasons for the bank failures were many and varied. Some of the most important were the unwise extension of mortgage credits on

¹ For detailed figures see *Federal Reserve Bulletin*, 1937, pp. 1204-1224.

farm land during the war and postwar boom;² the unhealthy competition between the national and state banking systems, leading to a leveling down of their respective banking standards; the small amount of capital required to start state banks in many sections of the country, and the consequent growth of excessive banking facilities; the diver-

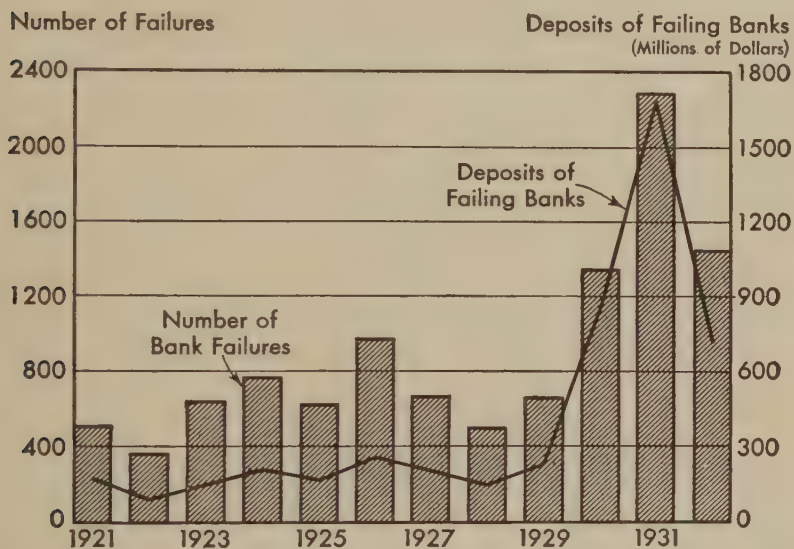


CHART VIII. Record of Bank Failures by Calendar Years, 1921-1932.

sion of increasing proportions of bank assets away from current business and into the securities market; and finally the incompetence of large numbers of those in charge of our banking institutions.

With the onset of the depression, there was a marked fall in the prices of securities, agricultural products, and real estate, which had

² During the period of World War I and for a short time immediately following, when prices of agricultural products reached spectacular heights under the pressure of European war demands and of inflation at home, the prices of agricultural lands in many parts of the United States were boosted to extravagant figures by large purchases of land on the part of farmers, who bought it largely on mortgage credit—in other words, “on margin.” Between 1910 and 1920 the farm mortgage debts of the United States increased from \$3,320,470,000 to \$7,857,700,000, an increase of 137 percent, most of which took place in the later years of the period. David L. Wickens, “Farm Mortgage Credit,” U. S. Department of Agriculture, *Technical Bulletin No. 288*, February, 1932, p. 4.

come to serve as the basis for a large part of the outstanding bank credit. To a banking system already in a weakened condition this decline in prices proved disastrous. In 1929, a prosperous year until the last few months, 659 banks failed with deposits of \$231 million. In 1930, 1350 banks with deposits of \$837 million were compelled to close their doors. In 1931, the number of failing banks rose to 2293, and the deposits thereby immobilized—much of which was permanently lost—totaled \$1,690 million. The number of failures was greatest in the fall of the year, when confidence throughout the world was shocked by England's departure from the gold standard. Between June of 1920 and the end of 1931 the number of banks in the country declined from 29,715 to 19,970, mostly through failures.³ The worst year, 1933, was yet to come, but record of over 4000 failures in 1929–1931 (see Chart VIII) was already so alarming that a variety of steps were taken to help the banks and to stabilize financial conditions. Let us see what some of them were.

HELPING THE BANKS

The government attempted to alleviate the situation in a number of ways. In October, 1931, it established the National Credit Corporation. That institution was financed by the banks themselves and was designed to extend credit on assets that were sound but which under existing law were not eligible for rediscount at the Federal Reserve Banks.

When the emergency became so acute that such assistance proved inadequate, the Reconstruction Finance Corporation was created by act of Congress and began to operate in February, 1932. Its primary function was to make sound loans to banks, insurance companies, and railroads in order to bolster up some of the weakest places in the credit structure of the country. Within the single year 1932, the Reconstruction Finance Corporation extended loans of \$850 million to approximately 5600 banks and trust companies. Largely because of its assistance, the number of failures was reduced to 1453 in 1932, as compared with a record high of 2293 the year before. The assistance would have

³ About a quarter of the \$8,500 million deposits involved in the 15,000 failures, 1921–1930, were permanently lost. Board of Governors, *Annual Report*, 1938, p. 7.

been more effective if the names of banks applying for loans had been kept secret.

Next came the Glass-Steagall Act of 1932. Following England's departure from the gold standard there was a heavy drain on our gold supplies. The outflow of gold normally tightens credit, for there is less in reserve behind Federal Reserve notes and bank credit. In 1931 Federal Reserve notes were backed 70 percent by gold. This was a time, however, when a loosening of credit, not a tightening of it, was desirable. More money was needed, not only to lift the country from the depression, but also because people were hoarding currency on account of the bank failures. There was fear in some quarters that the United States might be driven from the gold standard. Something needed to be done. The Glass-Steagall Act of February 27, 1932, was passed to meet the need for more Federal Reserve notes and for supplementary reserves to back them at a time when gold was becoming scarcer and there was a dearth of eligible commercial paper.

The Glass-Steagall Act temporarily authorized the use of United States government obligations as collateral security for Federal Reserve notes.⁴ This enabled the Federal Reserve Banks to increase their purchases of government securities substantially. That put additional Federal Reserve notes and deposits at the disposal of the member banks.

Total holdings of government securities had been about \$800 million at the end of 1931 and were little changed until the passage of the Glass-Steagall Act. From that time on, they were increased at a rapid rate, sometimes to the extent of \$100 million in a week, until they totaled approximately \$1,800 million at the end of June, 1932. (See Chart VII, page 99.) The effect upon the volume of Federal Reserve credit outstanding is shown in Table 14.

These consequences of the Glass-Steagall Act amounted to open-market buying operations. They represented an attempt to stop the de-

⁴ Another part of the Glass-Steagall Act added two new paragraphs to the Federal Reserve Act. These allowed a Federal Reserve Bank to extend credit to member banks which did not possess eligible paper, when the circumstances were unusual and exigent, against the pledge of any other assets that should be satisfactory to the Reserve Bank. This type of loan, however, could not be used by a Federal Reserve Bank as collateral for Federal Reserve notes. Sections 10a and 10b.

TABLE 14. Changes in Federal Reserve Credit Outstanding, 1932
(in millions)

	Feb. 24, 1932	June 29, 1932	Change
Bills rediscounted	\$ 835	\$ 470	-\$ 365
Bills bought	133	64	- 69
U. S. government securities owned	741	1,801	+ 1,060
Other Reserve Bank credit	25	11	- 14
Total Federal Reserve credit out- standing	\$1,734	\$2,346	+ \$612

cline in bank credit that had been proceeding at a rapid rate since 1929. The Federal Reserve authorities believed that the large balances put into the hands of the member banks by such operations would be used as the basis for new loans to their customers or for purchases of bond investments. Either use, it was reasoned, would tend to end the spiral of credit contraction that was carrying prices of commodities and securities continually downward. But the experiment failed in its primary purpose. Gold continued to flow out, partly because interest rates were higher and commodities were cheaper abroad, and partly because of inflationary talk in Congress, notably the cash payment of the soldiers' bonus. Accordingly, still other devices were tried to keep credit loose.

As a temporary measure, the Federal Home Loan Bank Act of July 22, 1932, granted the circulation privilege, for a period of three years, to all United States government bonds bearing an interest rate of not more than 3.375 percent.⁵ The importance of this privilege at this particular time was that it enabled national banks holding those securities to issue additional national bank notes instead of borrowing at the Reserve Banks to obtain Federal Reserve notes. It made possible an expansion of national bank note circulation by about \$917 million.⁶ In practice, however, little use was made of the privilege.

At this point the Federal Reserve Banks were instructed to help

⁵ For many years the circulation privilege had been enjoyed by only limited prewar issues of 2 percent bonds. Section 29 of the 1932 act.

⁶ It was then \$652 million.

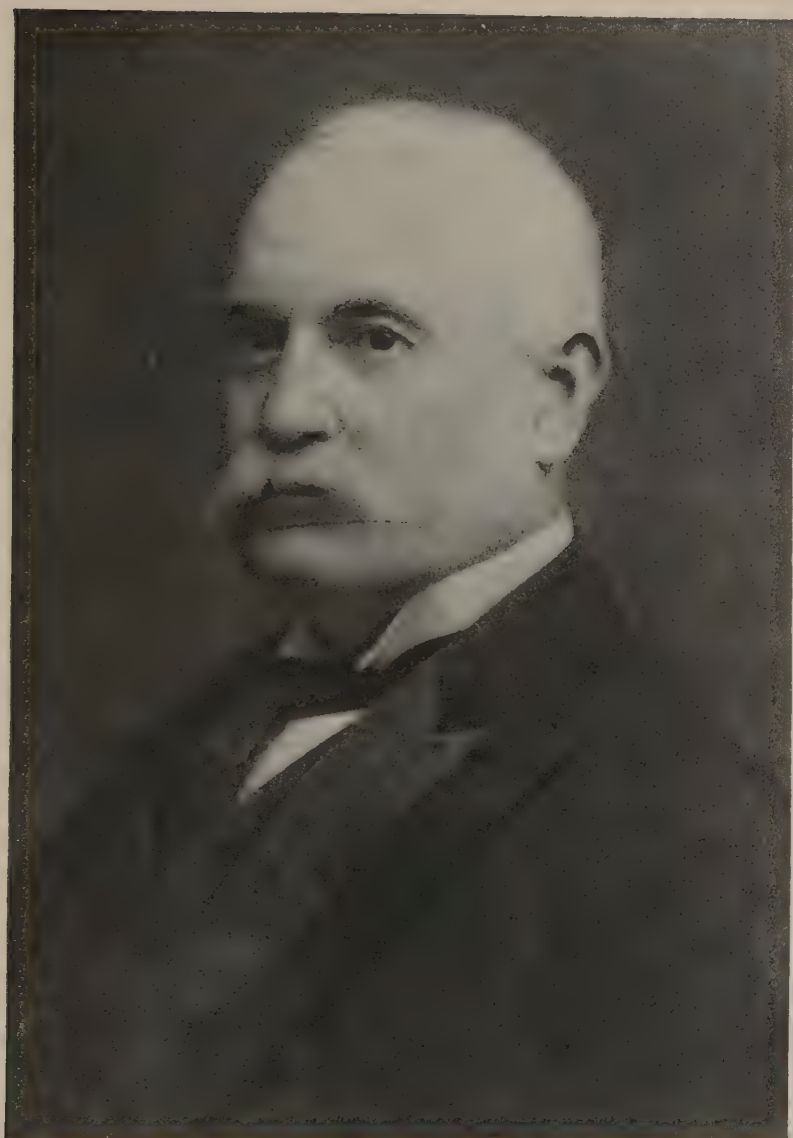


PLATE I. Nelson W. Aldrich (1841-1915). United States Senator and Chairman of the National Monetary Commission. (From *Nelson W. Aldrich* by N. W. Stephenson, by permission of Charles Scribner's Sons.)

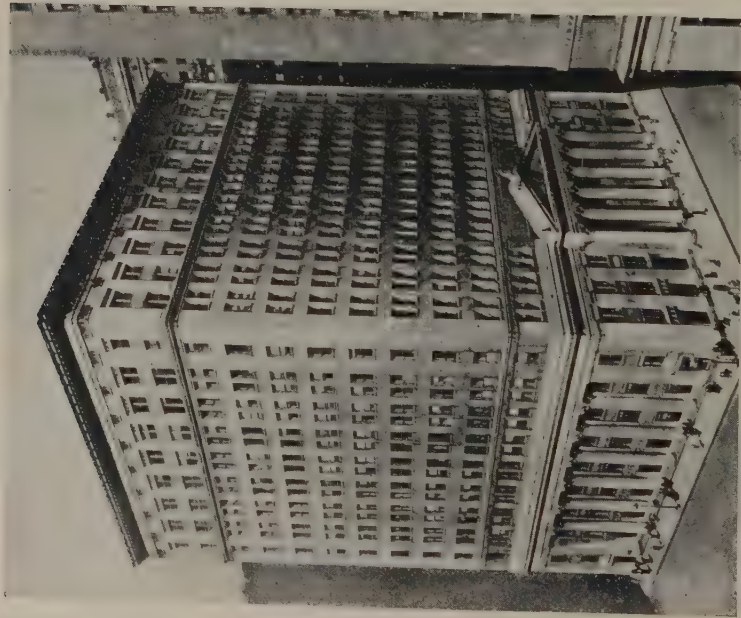


PLATE 2. The Federal Reserve Bank of Chicago.



PLATE 3. The Federal Reserve Bank of New York.



PLATE 4. The Federal Reserve Bank of San Francisco.



PLATE 5. The Federal Reserve Bank of Dallas.



Philadelphia Public Ledger, Dec. 21, 1912

PLATE 6. J. P. Morgan of the "Money Trust." Morgan to the Money Trust Committee: "I have not the slightest power."



Fabian Bachrach

PLATE 7. Carter Glass (1858-1946). United States Senator and Secretary of the Treasury.



Underwood & Underwood

PLATE 8. Benjamin Strong (1872-1928). Governor of the Federal Reserve Bank of New York.



PLATE 9. The Federal Reserve Bank of Minneapolis.



PLATE 10. The Telegraphic Transfer Room in the Federal Reserve Building, Washington, D. C.



PLATE II. The Board Room in the Federal Reserve Building, Washington, D. C.



PLATE I2. The Federal Reserve Building, Washington, D. C.



PLATE 13. Marriner S. Eccles, Chairman of the Board of Governors, 1934-1948.



PLATE 14. Thomas B. McCabe, Chairman of the Board of Governors, 1948-

Fabian Bachrach

out by being more than just "bankers' banks." People were complaining that banks would not make loans unless on exceptionally high grade collateral. As part of the Emergency Relief and Construction Act of July 21, 1932, Congress authorized the Federal Reserve Banks to make direct loans to individuals, partnerships, and corporations.⁷ The Federal Reserve Banks might, after obtaining the approval of not less than five members of the Board, discount short-term notes, drafts, and bills of exchange for any individual, partnership, or corporation unable to obtain the accommodation from other banking institutions. Although the first loan under this provision of the law was made on August 4, 1932, by the end of the year only twenty-three such advances had been made, totaling less than a million dollars.⁸

In summary, five efforts to help the banks and to keep credit loose had been made over a year's period. These were the National Credit Corporation, the Reconstruction Finance Corporation, the Glass-Steagall Act and the accompanying open-market buying operations, the addition of Federal Home Loan Bank bonds to those which might support national bank notes, and the provision making it possible to secure certain loans directly from Federal Reserve Banks. The success of all these was meager: perhaps the Reconstruction Finance Corporation helped most. But the situation was still critical.

EVENTS LEADING UP TO THE NATION-WIDE BANK HOLIDAY OF MARCH 6-9, 1933

Late in 1932 the number of bank failures began to increase again, and the trend continued through the first weeks of 1933. In certain places where banking difficulties were especially acute, moratoria on bank payments were introduced under the name of "bank holidays." The first of these was put into effect in Nevada in November, 1932, but escaped general notice in the eastern section of the country. A few weeks later local moratoria were declared in various cities in Illinois,

⁷ It amended Section 13 of the Federal Reserve Act.

⁸ Additional legislation to give the public direct access to the Federal Reserve Banks was included as part of the Emergency Banking Act of March 9, 1933. This act further amended Section 13 of the Federal Reserve Act to allow the Reserve Banks to make advances, for periods not exceeding ninety days, to individuals, partnerships, or corporations on their promissory notes when secured by the direct obligations of the United States government.

and on January 20, 1933, the legislature of Iowa declared a virtual moratorium by authorizing the state superintendent of banking to operate any bank that could not meet its obligation in full, without forcing it to go into receivership. A temporary banking holiday in Louisiana on February 4 added new fuel to the flames of public distrust and led to substantial withdrawals of currency from banks in other sections of the country. The condition of many banks, already seriously impaired, was further weakened by the shifting of funds for safety on the part of large business concerns from one part of the country to another in response to vague rumors and fears concerning conditions in various cities.

On February 14, 1933, the governor of Michigan declared a statewide bank holiday because of the financial situation in Detroit. The effects of this moratorium in an important industrial state were national in scope, for funds were withdrawn from numerous banks elsewhere to be sent to Michigan or to be used in meeting payments that would normally have been made out of balances in the Michigan banks. A few days later a bank holiday was declared in Maryland because of financial difficulties in Baltimore. Also, restrictions were placed on the withdrawal of bank deposits in Indiana, Arkansas, and Ohio. Several states passed laws to safeguard bank depositors or to readjust the liabilities of state banks without compelling them to go into receivership. These special powers given to the state banking authorities were frequently at variance with the powers possessed by the Comptroller of the Currency in respect to national banks. Where state banks were authorized to close or operate on a restricted basis, unusual demands were often made on the national banks remaining open. To meet this situation, Congress passed a joint resolution on February 25, authorizing the Comptroller to exercise the same powers in respect to national banks that state officials had with reference to state banks.⁹

Such temporary expedients, naturally, did not relieve the general distrust of the banking system on the part of the public. Altogether seventeen more states declared bank holidays between March 1 and 3, and the moratorium became practically complete when the governor

⁹ Federal Reserve Board, *Annual Report*, 1933, p. 10.

of New York, early in the morning of Saturday, March 4, proclaimed that day and the following Monday bank holidays. Similar action was taken at about the same time in Massachusetts, Illinois, New Jersey, Pennsylvania, and other important industrial and financial states. Thus, by March 4 practically every bank and trust company in the United States, and every Federal Reserve Bank, had been closed or severely restricted in its operation.

WHY THE FEDERAL RESERVE SYSTEM COULD NOT PREVENT THE PANIC

Why was the Federal Reserve System unable to prevent such a general breakdown of our banking system?

As we have already seen,¹⁰ one of the principal reasons for creating the Federal Reserve System was to mobilize the bank reserves of the country and make them available to the member banks at those times when unusual demands were made upon them. To obtain funds when needed, the member banks could rediscount their eligible paper with the Reserve Banks, sell their acceptances to them, or borrow from them on their fifteen-day notes secured by United States government obligations. As long as a member bank possessed an adequate supply of these kinds of paper, it had access to the Reserve Bank in its district and could obtain Federal Reserve notes to meet the demands of its depositors for money.

But there was one situation that the founders of the Reserve System had not provided for, and that the Reserve Banks were powerless to remedy. This was a general loss of confidence in the banks of the United States, and such a demand for repayment of deposits that many thousands of banks no longer possessed eligible assets adequate to obtain the required amount of Federal Reserve notes. When, in addition, the Reconstruction Finance Corporation had extended all the assistance it could to a bank, whether or not a member of the Reserve System, on its "sound" but ineligible assets, there was no further source of help. If the bank's creditors continued to demand their deposits, the closing of the bank became inevitable. The continuation of this process during the three preceding years of depres-

¹⁰ *Supra*, pp. 12-13 and 55-57.

sion took a toll of over 5000 banks and then culminated in the "bank holiday" of March, 1933.

Throughout the crisis the Federal Reserve System carried on with commendable courage and efficiency. The success of its efforts was reflected in the continued confidence in the nation's most important kind of currency—the Federal Reserve note—until the last weeks of the crisis, when there developed a substantial demand for gold.

The extent to which the Federal Reserve Banks went to the aid of the member banks and the money market during the weeks when the crisis was most acute is set forth in Table 15, showing changes in Federal Reserve credit outstanding.

TABLE 15. Changes in Federal Reserve Credit Outstanding, 1933

	Feb. 15, 1933	March 8, 1933	Change
Bills discounted	\$ 286	\$1,414	+\$1,128
Bills bought	31	417	+386
U. S. government securities owned	1,809	1,881	+72
Other Reserve Bank credit	10	-68	-78
Total Federal Reserve credit outstanding	\$2,136	\$3,644	+\$1,508

During the same period, money in circulation increased by \$1,684 million, of which \$1,324 million consisted of Federal Reserve notes and \$253 million of gold coin and gold certificates. Approximately two-thirds of these increases were concentrated in the week ending March 4.

The marked increase in the total of Federal Reserve notes in circulation coincided with the decline in the gold holdings of the system. By March 3 the reserve ratio had fallen to 45.3 percent. Although that was substantially above the legal minimum (of 35 percent gold and lawful money against deposits and 40 percent against notes), the Federal Reserve Board, acting under the emergency powers of the Federal Reserve Act, suspended the reserve requirements for thirty days and provided for the imposition of the penalty tax on the amounts by which reserves should become deficient.¹¹ This made the position of

¹¹ Section 11c.

the Reserve Banks impregnable and gave them freedom of action in meeting the crisis. The Reserve Banks, however, made little use of this suspension of reserve requirements. Following the bank holiday, Federal Reserve notes and gold were returned to the Reserve Banks in large volume, and there was a substantial improvement in the general banking situation. The suspension of the reserve requirements was therefore not renewed when the thirty-day period expired.

EMERGENCY BANKING LEGISLATION

Saturday, March 4, 1933, was Inauguration Day for President Franklin D. Roosevelt. Early in the morning of Monday, March 6, the new President, acting under the authority of a section of the almost forgotten "Trading with the Enemy Act" of October 6, 1917, as subsequently amended, proclaimed a nation-wide bank holiday from March 6 to 9 inclusive. The proclamation declared that there had been heavy and unwarranted withdrawals of gold and currency from the banks for hoarding and that foreign exchange speculation abroad had resulted in severe drains on the nation's stocks of gold, with the result that a national emergency had been created. To prevent the export, hoarding, or earmarking of gold or silver coin or bullion or currency, the President proclaimed that the bank holiday should be observed by all banking institutions in the United States, as well as in the territories and insular possessions. During the holiday, no bank could engage in any of the customary banking operations.¹² Subsequently, to prevent undue hardship, the banks were authorized to make limited payments that were necessary to provide their communities with food, medicine, and other necessities of life, to relieve distress, and to meet current payrolls. The purpose of this temporary suspension of almost all banking activity was to allow the public to regain its equilibrium and to give the authorities an opportunity to survey the situation and adopt comprehensive remedial measures.

On the same day as the proclamation calling for a national bank holiday, the President summoned a special session of Congress to meet on March 9. To that session he sent a message asking for the immediate passage of legislation "giving to the executive branch of the

¹² Except with the approval of the Secretary of the Treasury.

Government control over banks for the protection of depositors; authority forthwith to open such banks as have already been ascertained to be in sound condition and other such banks as rapidly as possible; and authority to reorganize and reopen such banks as may be found to require reorganization to put them on a sound basis."¹³

Congress responded with alacrity and in one day passed the Emergency Banking Act of March 9, 1933.¹⁴ This legislation contained six salient provisions.

(1) Approval was given to the emergency measures adopted by the President and the Secretary of the Treasury between March 4 and March 9 in dealing with the banking crisis.

(2) The President was empowered, during time of war or any other national emergency, to control foreign exchange transactions, gold and currency movements, and banking transactions.

(3) The Comptroller of the Currency was authorized to appoint conservators for national banks in all cases where it was necessary to protect the bank's assets. The functions of the conservator were somewhat similar to those of a receiver, but he was not required to place the bank in liquidation. Where reorganization was necessary, the conservator was allowed to follow a simplified procedure which required the approval of a smaller proportion of the depositors and stockholders than older methods.

(4) National banks were given permission to issue preferred stock in order to obtain new capital, and the Reconstruction Finance Corporation was authorized to purchase such preferred shares.

(5) To meet the widespread demands for currency, the Reserve Banks were authorized to issue Federal Reserve *Bank* notes of a character somewhat different from those previously issued and at this time constituting only a negligible part of our currency.¹⁵ These notes were to be obtained by depositing with the Treasurer of the United States the direct obligations of the government or any notes, drafts, bills of exchange, or bankers' acceptances acquired by the Reserve

¹³ Federal Reserve Board, *Annual Report*, 1933, pp. 12-13.

¹⁴ For the text of this act, *ibid.*, pp. 261-265.

¹⁵ *Supra*, pp. 46-47.

Banks in the course of their operations.¹⁶ A 5 percent redemption fund in lawful money was held against them. The circulation of these Federal Reserve Bank notes reached a peak of \$208 million at the end of December, 1933.¹⁷ After that they were gradually retired.

(6) The Federal Reserve Act was amended to allow the Federal Reserve Banks to extend loans, at a penalty rate of interest, on the time or demand notes of member banks, lacking eligible paper.¹⁸

The Emergency Banking Act was amended on March 24, 1933, to allow nonmember state banks to borrow from the Federal Reserve Banks during the period of the emergency. While thus indebted, the nonmember banks had to comply with the provisions of the Federal Reserve Act applicable to state member banks and the regulations of the Federal Reserve Board. The most important of these provisions was that requiring maintenance of the legal reserve with the Federal Reserve Banks. Nonmember banks were not expected, however, to purchase stock in the Reserve Banks.

The general purposes of this legislation are clear. First of all, it was designed to satisfy the panic demand for currency by making available almost unlimited amounts of Federal Reserve Bank notes. Second, the President and the Secretary of the Treasury were given practically complete control over banking, foreign exchange transactions, and gold movements, as well as the right to withdraw all gold from circulation. Third, the lending powers of the Federal Reserve Banks were increased so that they could render greater assistance to member and nonmember banks. And, finally, the way was cleared to reopen all sound banks, while conserving the assets of those banks that were unsound.

¹⁶ The Federal Reserve Bank notes could be issued up to 100 percent of the par value of the United States government obligations pledged as security, and up to 90 percent of the estimated value of the notes, drafts, bills of exchange, and bankers' acceptances used as collateral.

¹⁷ They were a simple asset currency. That was in conflict with the basic belief that Federal Reserve Bank loans should be backed by self-liquidating credit. Accordingly, the Federal Reserve Bank notes were sharply criticized and regarded as a dangerous and potentially inflationary sort of money.

¹⁸ The provisions that five members of the Board must approve and that only banks with capital of less than \$5 million were eligible were eliminated. The amendment remained in effect until March 3, 1935.

REOPENING THE BANKS

Following the passage of the Emergency Banking Act on March 9, the President, acting under its authority, extended the bank holiday indefinitely. Then, on March 10, he issued an executive order authorizing the Secretary of the Treasury to license member banks that were sound to resume their ordinary banking business, with the restrictions that gold payments were prohibited and that currency was not to be paid out for purposes of hoarding. State banking authorities were charged with the responsibility of examining and licensing non-member banks. In the work of receiving applications of member banks and issuing licenses to all that were found strong enough to reopen, the Federal Reserve Banks acted as agents of the Secretary of the Treasury. Finally, gold exports were prohibited except under government license.

The program for reopening the banks was put into effect almost immediately. On Saturday, March 11, the Treasury authorized the Federal Reserve Banks to reopen on the following Monday and to resume all normal banking operations, except that gold payments were prohibited. Also, a schedule was made public whereby sound banks in the twelve Federal Reserve Bank cities were likewise to be reopened on Monday, March 13, banks in the 250 cities with established clearing houses were to be opened on March 14, and banks in all other places on March 15.

These measures proved notably successful in restoring confidence in the banks which were opened according to schedule. Within three weeks about 12,800 of the 17,500 banks in existence before the bank holiday were operating on an unrestricted basis.¹⁹ The public almost immediately stopped demanding repayment of their deposits and soon began to return large amounts of currency to the banks. From the end

¹⁹ The number of banks licensed to resume operations had increased to 15,370 by December 31, 1934. Deposits of licensed banks on that date totaled \$39,900 million. The number of banks that were licensed to reopen and then subsequently failed was surprisingly small. Only 179 licensed banks, with deposits of \$146 million, suspended payment in 1933. The number of such suspensions fell to 57, with deposits of \$37 million, in 1934. Between March 16, 1933, and December 31, 1936, 2124 banks, with deposits of \$2,500 million, were liquidated or went into receivership.

of the bank holiday to April 1, 1933, the total of currency in circulation declined to approximately \$6,200 million after reaching a peak of \$7,500 million on March 8. An additional \$800 million was retired from circulation in the course of the ensuing five months. Reserves of the Federal Reserve Banks increased from \$2,900 million on March 8 to \$3,600 million on April 5. This increase raised the reserve ratio from 43.5 percent on March 8 to 56.1 percent on April 5.

Although the storm had passed, it had revealed serious weaknesses in the structure of our banking system. The next two Congresses took steps to repair these. They will be discussed in the next chapter.

Σ CHAPTER XII Σ

Banking Reforms of 1933-1935

THE banking reforms of 1931, 1932, and March, 1933, had been primarily emergency or stop-gap measures. The banking structure was due for a basic revision. This was provided by the Banking Act of June 16, 1933,¹ parts of the Securities Act of May 27, 1933, and of the Securities and Exchange Act of June 19, 1934, and the Banking Act of August 23, 1935. There seems no need to study them in their historical order. It matters little, now, what improvements the 1935 banking act made in the 1933 one. What we want to know is what the four acts together added up to when Congress had finished them and the President had signed them. These laws attempted to do four things, namely: (1) restore confidence in the banks, (2) strengthen the banks, (3) remove some of the temptations to speculate, and (4) increase the powers of the Federal Reserve System. In this chapter the main provisions of the 1933-1935 laws will be discussed under the above four basic headings. Some reforms, of course, fall under more than one of these headings.

RESTORING CONFIDENCE IN THE BANKS

Perhaps the prestige of the banking profession had never been higher than it was in the 1920's. Bankers were the pillars of respectability in almost every community. The best graduates of the leading colleges went into banking. Bankers were widely consulted on investment problems, and while prosperity lasted, trust in their judgment

¹ This is also called the Glass-Steagall Act sometimes, which causes it to be confused with the Glass-Steagall Act of 1932. We shall refer to it as the Banking Act of 1933 and speak only of the 1932 act as the Glass-Steagall Act. The other banking act in 1933 was the Emergency Banking Act of 1933, and we shall be careful always to refer to that by its full title.

seemed well placed. Possibly, if people's faith had not been so blind, their disillusionment would not have been so great.

By the early 1930's the prestige of bankers had reached its lowest ebb. The stock market crash and the thousands of bank failures were responsible. The worst suspicions of the public about financial men seemed confirmed by the criminal conviction of the head of the New York Stock Exchange and by the cross-examination before a Senate committee of the heads of the nation's two largest banks.² These gentlemen revealed an appalling lack of responsibility to public, depositors, or stockholders. And there was evidence in almost every community of the stupidity or even crookedness of some once-respected banker. All this does not prove that the bankers were less trustworthy than men of other professions, but it seemed to at the time. Bankers even became the butt of radio comedians, who revised old chestnuts to fit the new victims. One told of the poor but proud Southern planter who disowned his daughter for keeping company with a banker. Another brought many a wry smile when he remarked early in 1933 that he had often got his checks back marked "No funds" but for the first time the other day he got one back marked "No bank." President Roosevelt, in his March 4, 1933, inaugural address, said, "The money changers have fled from their high seats in the temple of our civilization," and he promised reforms that would emphasize social values instead of monetary profit. Many persons were afraid to leave their savings in banks any longer. This is evidenced by the fact that there was more currency in circulation in 1932-1933 than in 1929. Also, a tremendous increase in deposits was experienced by the postal savings system. This virtually amounted to a guaranteed savings bank in every post office. Founded in 1911, the system had had little popularity until the great depression. These various facts are mentioned to emphasize that the first problem to be solved was how to restore confidence in banks.

The closing of all banks on March 6, 1933, subjecting them to government inspection, and the reopening only of those which seemed

² U. S. Senate Committee on Banking and Currency, *Hearings* pursuant to Resolutions 56, 84, and 239, 72nd and 73rd Congresses, 1932-1934.

sound was calculated to restore some faith in banks. Over 2000 banks were not permitted to reopen, which indicates that the conservators were conscientious. But people still felt that although banks might be safe for a while, what had happened once could easily happen again. Since it took most people years to save much, they wanted to be very sure of long-run protection if they were going to trust those savings to a bank a second time. Federal insurance of bank deposits seemed the only convincing way to provide this protection.

② The Banking Act of 1933 provided for a temporary deposit insurance plan, but the system in operation today was extensively revised by Title I of the Banking Act of 1935. The two laws established the Federal Deposit Insurance Corporation, hereafter referred to as the F.D.I.C., with a capital of about \$300,000,000, of which the Treasury supplied \$150,000,000 and the Federal Reserve Banks \$139,300,000.³ The F.D.I.C. is administered by a board of three, consisting of the Comptroller of Currency and two others appointed by the President. The two may not belong to the same political party. One of them is the chairman. The F.D.I.C. insures demand and time deposits of all banks which belong to it. All members of the Federal Reserve System must belong to it, and others may do so by meeting its requirements. Assessments are one-twelfth of 1 percent per year of all deposits, payable in two installments each year. These funds are almost entirely invested in government securities. Depositors in insured banks are protected up to a total of \$5000 per depositor (not per deposit). Banks that are members of the F.D.I.C. are regularly inspected by the F.D.I.C.'s own bank examiners.

After the founding of the F.D.I.C., bank failures dropped sharply, as the accompanying table shows. While it would be giving the F.D.I.C. undue credit to contend that it was responsible for all this improvement, it must be conceded a large share of it, especially in recent years. As early as the middle of 1934, 87 percent of all banks were insured, and on May 13, 1936, 43 percent of all deposits were

³ The Federal Reserve Banks were required to put up one-quarter of their surplus as of January 1, 1933. They may be called upon to supply another quarter on ninety days' notice. This would be \$139,300,000 more.

insured. This much protection contributed greatly to a renewed confidence in banks.⁴

TABLE 16. Bank Suspensions, 1934-1948

Year	Insured Members F.R.S.	Insured Nonmembers F.R.S.	Uninsured Banks	Total
(1921-29 annual average, for purposes of comparison.....)				635)
1934	1	8	48	57
1935	4	22	8	34
1936	1	40	3	44
1937	6	47	6	59
1938	2	47	6	55
1939	7	25	10	42
1940	1	18	3	22
1941-45 total	6	12	4	22
1946	0	0	0	0
1947	0	0	1	1
1948	0	0	0	0
Total	28	219	89	336

The near perfection of the F.D.I.C.'s record in recent years is owing to prosperous times and to the fact that when a bank is found to be shaky, the F.D.I.C. either urges consolidation with a stronger bank or virtually forces liquidation of the weak bank before it reaches the point of bankruptcy. Admittedly this makes the failure statistics look unduly favorable, but the more important fact is that it is a sensible

⁴ The F.D.I.C. was sharply criticized, too. When it was first set up, financial historians pointed to the fact that deposit insurance had been tried out in various states on seven occasions and had failed each time. Insurance men objected to calling it deposit "insurance" since no attempt was made to charge weaker banks a higher rate than stronger banks. Conservative bankers complained that equal treatment would lead to competition among banks in slackness in the granting of loans. They said that the bank with the loose credit policy would get business and the bank with the cautious credit policy would lose business. Thus, the slack banker and his depositors would profit at the expense of the conservative banker and the public. Banks with big deposits pointed out that the system of equal premiums penalized them and their depositors. They paid according to total deposits, but their depositors got protection only up to \$5000 each. Some far-sighted persons wondered whether the F.D.I.C. could possibly weather a serious depression. Since the government could not let the F.D.I.C. fail, they foresaw a situation where the government might have to lend immense amounts to the F.D.I.C. to protect all depositors up to the promised \$5000.

procedure. Today the F.D.I.C. is in a strong condition financially. At the end of 1948 it had assets of over one billion dollars.⁵ About 95 percent of all commercial banks were insured, 98 percent of all depositors were protected, and nearly half of all deposits.

STRENGTHENING THE BANKS

During the 1920's, the depression, and the banking crisis of 1933, banks that were not members of the Federal Reserve System failed in far greater numbers than those which were members.⁶ Most of the failing banks were small banks. It seemed, therefore, that one good way to reduce bank failures would be to attract more of the nation's banks—and that meant the smaller banks—into the Federal Reserve System. Some reformers, in fact, wanted to force all banks to join the system.⁷ In 1933 nearly 60 percent of all banks were still not members. Why did they not join? One reason was the restriction on branch banking, another was the limitation on real estate loans, a third was the minimum capital requirement, and a fourth was the stricter examinations generally imposed by the Federal Reserve System. The authors of the Banking Acts of 1933 and 1935 were willing to make concessions to nonmember banks on some of these points in order to persuade them to come into the Federal Reserve System, where they would have to meet higher standards in other respects. While this might lower the standards required of members already in the system, the overall effect, it was felt, would be to raise standards where that was most needed. It would bring more banks under the watchful eye

⁵ On August 30, 1948, the F.D.I.C. repaid the last of the capital invested in it by the federal government. H. Hoover, *Task Force Report on Lending Agencies*, Appendix R, p. 52.

⁶ From 1921 to the end of 1933, 14,809 banks suspended; 11,503 were non-member banks, and 3,306 were member banks. In terms of bank failures the nonmembers' record is bad compared with that of the member banks. However, deposits tied up by the two groups were about \$4.2 billion each. (About one-quarter of this \$8.4 billion total was permanently lost.) Since member banks were less numerous than nonmember banks, their record is worse in this respect. See "Bank Suspensions, 1921-36" in *Federal Reserve Bulletin*, 1937, pp. 1202-1224. For further study of the subject consult C. B. Upham and E. Lamke, *Closed and Distressed Banks* (Brookings, Washington, 1934).

⁷ *Summary of Statements of Marriner S. Eccles* before a House committee, March 4-20, 1935, pp. 8-9.

of the Federal Reserve Banks, where they could be more satisfactorily controlled.

The concessions made to attract more banks into the Federal Reserve System, or to keep some of those already in from withdrawing, consisted of: (1) easing restrictions on branch banking,⁸ (2) allowing member banks greater latitude in the making of real estate loans, (3) giving prospective members more time to increase their capital to meet Federal Reserve standards, and (4) admitting certain kinds of savings banks which had been excluded. Let us look briefly at each of these.

(1) Branch banking has generally been more successful than unit banking because it permits greater diversification of loans. It was often pointed out that Canada had had no bank failures since 1923, while this country had had thousands. Banks with branches had avoided failure more successfully in this country too. The restriction against branch banking dates back to the founding of the National Banking System. A century ago some of the worst abuses by Western banks were committed through their branches. But dangers of that sort disappeared with the passing of the frontier. By the 1930's a relaxing of the old rules would strengthen not only member banks but commercial banking in the country as a whole.⁹ Accordingly, the Banking Act of 1933 authorized national banks, on the approval of the Comptroller of the Currency, and under certain capital requirements, to engage in branch banking in the various states on the same terms enjoyed by local state banks. This meant, of course, that member banks still could not have branches in states where branch banking

⁸ The McFadden-Pepper Act of February 25, 1927, had relaxed the rules a little by authorizing national banks located in states permitting branches to establish them in their own communities. Section 7c; see *Federal Reserve Bulletin*, 1927, for text, pp. 181-186.

⁹ Advocates of branch banking claim many advantages for the system. They point out that the various branches support one another. If one branch does not make money in the short run, it is helped by the others. In the long run, if it still loses money, it can be quietly closed without the pains of bankruptcy. Since branch banking corporations are larger, they can supply better-trained personnel. To those who doubt all such arguments the branch bank advocates say, "Look at the record both here and abroad." For a fuller account of branch banking see J. M. Chapman and R. B. Westerfield, *Branch Banking* (New York, 1942), Chap. X. For group banking see *Federal Reserve Bulletin*, 1938, pp. 97-101.

was forbidden. There were nine such states in 1936.¹⁰ Perhaps the restrictions against branch banking would have been relaxed even more had it not been for the deep-seated jealousy in many areas of out-of-town chain or branch corporations, whether they were in the banking, grocery, drug, shoe, or some other business.

(2) Relaxing the restrictions on real estate loans, also an old "taboo" of the national banking system, is harder to defend. Some loosening had already taken place in 1916 and 1927.¹¹ More important, frozen assets were a significant cause of bank failures throughout this entire period, and a few assets are harder to liquidate than real estate loans.¹² Some justification may be found, however, in the fact that

¹⁰ A study made by the Board of Governors and reported in the 1936 *Federal Reserve Bulletin* (p. 858) showed that eighteen states permitted branch banking, seventeen others did so in limited areas, nine prohibited it, and five had no law on the matter.

¹¹ Under the act of August 7, 1916, and the McFadden-Pepper Act of February 25, 1927. For the latter see *Federal Reserve Bulletin*, 1927, pp. 181-186.

¹² Testifying before the Subcommittee of the Senate Banking and Currency Committee on May 13, 1935, E. W. Kemmerer said, "Loans secured by equities in farm lands have been responsible for much of our banking trouble in agricultural communities. The volume of these loans has often been much larger than bank reports seem to indicate. The listed mortgage loans were often only a small proportion of the loans actually secured by equities in land, many of which were in form short-time business loans but in fact long-time capital commitments. Often the first mortgages were held by insurance companies and the bank's securities were little better than second or third liens on farm lands taken at inflated values." He had in mind particularly the years following World War I.

Marriner S. Eccles, chairman of the Board, contended, on the other hand, that "more banks became insolvent as a result of the depreciation of their bond accounts than as a result of their real estate loans" and "more bank failures occurred in federal reserve districts where real estate mortgages were the smallest percentage of bank assets." He also said that banks had to invest in real estate to be able to pay interest of 2.5 percent on their time deposits, for other loans were not profitable enough to permit that. Furthermore, he urged that twenty-year mortgages be permitted instead of the five-year ones, which he labeled as "the most unsound type of mortgage credit." *Summary of Statements of Mr. S. Eccles*, pp. 30-37.

The difficulty was that the two men were arguing from very different basic premises. E. W. Kemmerer believed that banks should, so far as possible, confine their loans to short-term self-liquidating paper. He saw many historical examples of banks failing because their money was tied up in frozen real estate loans. Eccles was thinking in terms of a new economic philosophy which stressed the need for more capital investment to pull the country out of the depression, and which emphasized the responsibility of the central bank and the government to make any assets liquid if necessary. In other words, E. W. Kemmerer feared new depressions, while Eccles assumed that the government would never permit another holocaust of banks to occur.

the easing of this restriction might bring into the Federal Reserve System the rural banks that needed their standards raised in other respects. Furthermore, the existence of the F.D.I.C. made runs on banks less likely, and a more liberal lending policy by the Federal Reserve Banks made frozen assets less of a hazard. By the Banking Act of 1935 it therefore became possible for national banks to make loans secured by first liens upon improved real estate, including improved farm land and business and residential properties, regardless of their location. The amount of such loans may be 60 percent of the appraised value of the property, and the maturity may be ten years if the loan is secured by an amortized mortgage or deed of trust and installment payments are sufficient to pay off 40 percent of the principal within ten years.¹³ The real estate loans made by a national bank must not exceed, in total amount, its combined capital and surplus, or 60 percent of its time and savings deposits combined, whichever is greater.¹⁴

(3) Under the terms of the establishment of the F.D.I.C. all banks with deposits of over \$1 million in 1941 were to be obliged to join the Federal Reserve System by July 1, 1942, or forfeit the privilege of belonging to the F.D.I.C. It was expected that this would bring strong pressure on many medium-small banks to join the Federal Reserve System. In order to facilitate their admission, the Board of Governors was authorized to waive all or part of the requirements for admission. However, this drastic provision, aimed at forcing more banks into the Federal Reserve System, was repealed in June, 1939.

(4) Congress also decided to admit mutual savings banks and Morris Plan banks to the F.D.I.C. and the Federal Reserve System. The average mutual savings bank was bigger and stronger than the average commercial bank, and these banks competed with commercial banks for time deposits. The mutual savings banks and Morris Plan banks¹⁵ were offered admission on the same terms as those enjoyed by

¹³ Most loans are made on this ten-year basis. If the loan does not meet the above requirements, it may not run for more than five years or exceed 50 percent of the value of the real estate.

¹⁴ These limitations and restrictions do not apply to loans insured under the National Housing Act. Pratt's *Federal Banking Law Service*, II, p. 43.

¹⁵ Morris Plan banking, originated in 1910, permits a wage earner in an industrial area to borrow on his note if it is endorsed by one or two other persons.

state banks and trust companies except that they were to subscribe to the capital stock of the Federal Reserve Bank of their district in an amount equal to 0.6 percent of their total deposit liabilities. The attempt to draw these banks into the F.D.I.C. has been moderately successful. A third of the mutual savings banks belong to the F.D.I.C., and these hold two-thirds of all mutual savings bank deposits. But the attempt to draw them into the Federal Reserve System has failed. Only three mutual savings banks belong to it, and the Morris Plan banks have shown an equal lack of interest.

All in all, the efforts made to force or attract more banks to join the Federal Reserve System were not especially successful. In 1935, 40 percent of all banks belonged to the Federal Reserve System, and in 1941 the percentage was 45.

At the same time that some member bank requirements were eased to lure nonmember banks into the Federal Reserve System, other requirements were slightly stiffened. Bank stockholders were required to make a larger investment in their institutions. It was felt that if they invested more of their own money, they might insist on greater protection for other people's money which they were handling along with it. Capital requirements were altered in two ways. Formally, in towns of under 3000, a minimum capital of \$25,000 for a national bank had been permitted with the approval of the Secretary of the Treasury. This exception was now withdrawn, leaving \$50,000 as the minimum capital allowed in any town of less than 6000. Also formerly, national banks had been required to begin with, or to build up, a surplus of 20 percent of capital, and the stockholders had been subject to "double liability" on their stock in event of the bank's failure. Double liability in the case of national banks meant that the owner of a share of bank stock, say \$100 par, stood to lose his investment and might be assessed up to \$100 more to meet the bank's debts. Many holders of stock in failed national banks were unaware of this double liability feature and were shocked during the depression when an assessment was levied on them. The 20 percent surplus requirement and the double liability provision were both repealed. In their place Congress required

Thus, the wage earner is able to avoid paying usurious rates to loan sharks. There were sixty-two Morris Plan banks in existence at the end of 1935.

every national bank to plow back a tenth of its profits every time it declared a dividend on common stock until surplus equaled capital.

This last change may be an improvement in the long run, but it cannot yet be said that stockholders of national banks have a large equity in their institutions. In June, 1948, for example, total deposits in national banks were \$78,700 million, whereas the total of capital, surplus, and undivided profits was \$5,500 million. Thus the stockholders' equity in these banks was 7 percent. This stands in contrast with a figure of 16 percent for June, 1928, twenty years before. The Federal Reserve authorities, however, believe that banks are just as safe today as they were then because such a large part of bank assets are government securities, which are virtually cash.¹⁶

The Banking Act of 1935 also made it somewhat easier for member banks to borrow from Federal Reserve Banks in time of need. From the banks' and depositors' point of view, at least, this seemed another way of strengthening the banks. Federal Reserve Banks were permitted, under rules and regulations prescribed by the Board of Governors, to make advances to member banks on their time and demand notes secured to the satisfaction of the Federal Reserve Bank.¹⁷ Such loans must have a maturity of not more than four months and are to bear a rate of interest at least 0.5 percent higher than the highest prevailing discount rate of the reserve bank extending the accommodation.¹⁸

Commenting on the reasons for this change, the *Federal Reserve Bulletin* said: "Incorporation of this provision into permanent law

¹⁶ They maintain that the ratio of capital accounts to "risk assets" was about the same in 1945 as it was in 1929. By "risk assets" they mean total assets minus cash and government securities. The ratio was about 25 percent in both years, but small banks are safer now than they were in 1929 because they have more invested in government securities. Board of Governors, *Federal Reserve Policy*, pp. 58-59.

¹⁷ In August, 1936, the Board ruled that a bank might obtain an advance even though it still had paper eligible for rediscount in its portfolio. *Federal Reserve Bulletin*, 1936, p. 624.

¹⁸ This amendment was in some respects a continuation of one of the emergency provisions of the Glass-Steagall Act of 1932, which had lapsed March 3, 1935, but the important requirement in the earlier act, that member banks must have exhausted their supply of eligible paper before obtaining such loans, was omitted in the 1935 law, and the penalty rate of discount was reduced from 1 to 0.5 percent.

constitutes a recognition of the fact that the federal reserve banks, in order properly to perform their functions, must be in a position to lend to member banks on any satisfactory assets regardless of their origin. . . . The broadened provision for borrowing at the reserve banks is also a recognition of the fact that the scope of operations of member banks has changed. Since the passage of the federal reserve act, paper that qualified under the eligibility requirements of that act has constituted a decreasing proportion of the loans and investments of member banks. As late as 1929 such paper comprised 12 percent of the total and it now represents 8 percent. Changes in business practices, which have resulted in a decline in the extent of commercial and industrial borrowing from banks, have been partly responsible for this development. Another major factor has been the increase in the amount of savings deposited in member banks. With member banks holding \$10,000,000,000 of savings and other time deposits, as compared with about \$1,000,000,000 in 1914, they are in the position where both in their own interest and in that of the country they must make a considerably larger volume of long-time investments. Such investment is an essential part of the economic process of capital formation. It seems reasonable, therefore, that these assets be given a status which will permit member banks to borrow on them from the reserve banks when the need arises."¹⁹

This more liberal credit policy marked a definite departure from the philosophy of self-liquidating credit on which the Federal Reserve System was founded a third of a century ago. Then the definition of what was eligible paper for rediscount purposes was rigidly circumscribed to include only "notes, drafts, and bills of exchange of short maturities issued or drawn for agricultural, industrial, or commercial purposes." Paper used for capital expenditures or to facilitate carrying or trading in stocks or bonds, except bonds of the United States government, was specifically excluded. The Board was now adopting a new economic philosophy.²⁰ Capital formation was the key to recovery and to preventing depressions. Since banks could encourage it, they should not bother with a worn-out criterion like liquidity, which

¹⁹ *Federal Reserve Bulletin*, 1935, pp. 560-561.

²⁰ See the next chapter for a fuller discussion of this new economics.

had not worked in 1929-1933. Besides, in any future emergency, the Federal Reserve Banks would lend to them on collateral that would have been unacceptable in the 1920's and early 1930's.²¹ That was the line of thought the Board was following.

There were other legislative changes that strengthened the banks. The F.D.I.C. did so by diminishing the danger of runs. Removing some of the temptations to speculate and giving the Federal Reserve authorities more control over member banks helped also.

REMOVING THE TEMPTATIONS TO SPECULATE

Three provisions in the new laws reduced the temptations of banks to speculate or to lend to speculators. They were: (1) prohibiting interest payments on demand deposits, (2) forbidding banks to use Federal Reserve credit for speculative purposes, and (3) divorcing commercial banking from investment banking. Let us look at each of these more closely.

(1) Member banks were prohibited from paying interest on demand deposits, and the Federal Reserve Board was empowered to regulate the interest that might be paid by member banks on time deposits. The object was to prevent a recurrence of the destructive competition that had formerly existed among banks seeking to attract deposits. High rates of interest to their customers had often led banks into dangerous ventures in the hope of large returns.²² The savings

²¹ Eccles contended that in the 1929-1932 period of the depression, when banks could only borrow from the Federal Reserve Banks if they had eligible assets, many banks had failed only because of lack of eligible paper; that the depression had been prolonged because banks would lend only on paper that would be eligible; and that the government had finally had to relax the rules and help the banks out anyway. When some banks were liquidated, "many of the assets considered eligible and held to be liquid were less sound than other assets held by banks which could not qualify for rediscount or as security for borrowing from the reserve banks." He concluded, "The only liquidity that really exists in a serious depression is the liquidity that is provided through the money-issuing agency, the Federal Reserve Banks." *Summary of Statements of M. S. Eccles*, pp. 18-25.

²² It was objected by some that prohibiting interest payments on demand deposits would merely cause many deposits to be shifted into the time deposit category where they would receive interest. As a result, the reserves behind them would be smaller, and the bank would be weakened by the change. In member banks, time deposit customers did increase from \$8.3 billion in 1933 to \$12.3 billion in 1941, but demand deposits increased even more, the ratio of time to demand deposits being 2 to 3 in 1933 and 1 to 3 in 1941.

accruing to the banks from this discontinuance of interest payments on demand deposits were expected to be applied to the writing off of doubtful assets and the restoration of impaired capital. It would also release funds to meet the F.D.I.C. assessments.

(2) The Banking Act of 1935 increased the control of the Board and of the Federal Reserve Banks over the purposes to which Federal Reserve credit might be devoted and clarified the right to exercise that control beyond any further doubt. It represented an effort to prevent the excessive use of Federal Reserve credit in security, commodity, and real estate speculation. Henceforth, the Federal Reserve System was expected to control the quality of credit outstanding as well as the quantity. Previously, member banks presenting eligible paper were generally permitted to have it rediscounted. Now the rediscounting of eligible paper was a privilege that could be readily withdrawn.²³ Each Federal Reserve Bank was instructed to keep itself informed concerning the loans and investments of the member banks in its district "with a view to ascertaining whether undue use is being made of bank credit for the speculative carrying of or trading in securities, real estate, or commodities, or for any other purpose inconsistent with the maintenance of sound credit conditions."²⁴ The Federal Reserve Board is to be informed whenever a member bank is devoting an "undue" amount of credit to such speculative uses, and the Board may, in its discretion, deny the offending member bank access to the credit facilities of the Federal Reserve System. These provisions give the Reserve authorities far greater powers of credit control than those previously held, but they also place responsibility for any speculative booms and collapses that occur directly upon the Federal Reserve System.

It is instructive to compare the lending powers of the Federal Reserve Banks in the 1920's and after 1935. The speculative excesses of the 1920's demonstrated that a bank sometimes should not be granted Federal Reserve credit even though it had eligible and acceptable pa-

²³ From the beginning, Federal Reserve Banks were forbidden to rediscount paper drawn for trading in stocks, but that was an easy prohibition for banks to evade. They simply did not offer such paper for rediscount but offered instead eligible paper. The effect was the same: funds were obtained to loan to stock speculators.

²⁴ Section 3a, Banking Act of 1933, *Federal Reserve Bulletin*, 1933, p. 385.

per. The depressed early 1930's suggested that public interest might require that a bank be able to get Federal Reserve credit even though it had no eligible paper. The new banking legislation gave the Federal Reserve System greater flexibility in meeting such unusual conditions.

(3) In the third place, the Banking Act of 1933 required the complete separation of the distinctive functions of investment and commercial banking by June 16, 1934, one year after it was passed. Member banks were compelled to sever connections with their security affiliates. No member bank was allowed to underwrite or sell investment securities. No bank engaged in the issue, underwriting, or sale of securities was allowed to receive deposits. Interlocking directorates between member banks and securities organizations were unlawful.²⁵ Through these measures it was hoped to correct many of the abuses that had developed in the commercial banking system. For example, the investment affiliate of one of the biggest and most trusted New York banks had virtually unloaded weak securities on the customers of the bank with the connivance of the bank's officers.²⁶ It was such betrayals of the bankers' sacred trust that had caused a widespread revulsion of feeling against bankers and led to the suspicious attitudes and severe measures of the New Deal era.

Other deterrents to speculation by banks were the disillusioning experiences of 1929-1933 themselves, the Securities Act of 1933, and the Securities and Exchange Act of 1934. This legislation was a sort of pure food and drug law for securities: the seller had to state the nature of the ingredients. He had to set forth in the prospectus all the facts that any investor should know about the company. If the venture failed and a buyer could show that information had been withheld from him that would have discouraged him from buying the investment, then the seller was subject to stiff penalties. The old adage "Let the buyer beware" had been changed to a new one, "Let the seller beware." This eliminated unsound securities to some extent, and it

²⁵ Unless special permission was obtained from the Federal Reserve Board.

²⁶ See Ferdinand Pecora, *Wall Street under Oath* (New York, 1939), p. 93. This is based on the hearings before the Senate Banking Committee in February, 1933. Pecora conducted the hearings. He later became a judge on the New York Supreme Court.

made it easier for banks and their customers to be more prudent in their selection of investments.

INCREASING THE POWERS OF THE FEDERAL RESERVE SYSTEM

The banking legislation of 1932-1935 was intended to increase the power of the Board over the Reserve Banks and the member banks and through these over the banking system of the country. In some respects this intention was realized. In others it was not, for reasons that could not well have been foreseen. We are interested in how the new legislation attempted to increase the Board's powers. (1) The Board was reorganized, renamed, and given more control over banking. (2) The boards of the Reserve Banks were given a more subordinate role. (3) Open-market operation decisions were placed to a larger degree in the Board's hands. (4) The Board got other important new powers. It might raise or lower margin requirements and member bank reserve requirements. The Board was apparently in a stronger position than before to influence the nation's supply of credit, its price level, and its economic welfare. Let us examine these changes.

(1) The name of the Federal Reserve Board was changed to the more cumbersome title of the Board of Governors of the Federal Reserve System. Like many a bank that had failed, the Board started over again with a new but similar name. Each Board member now held the title of governor. Governors serve for fourteen years but are not eligible for reappointment.²⁷ The Board still had seven members, but the Secretary of the Treasury and the Comptroller of the Currency were no longer members *ex officio*. The President chose a chairman and a vice-chairman for four-year terms which coincided with his own.²⁸ The chairman was the key man on the Board and, being selected

²⁷ The first appointees were given terms varying from two to fourteen years. All were eligible for reappointment. Thus a new governor is appointed every two years, and at any one time most of the governors have had considerable experience on the Board.

²⁸ An early version of the 1935 banking bill made all members of the Board removable at the will of the President. Eccles believed that the President should have the right to appoint his own chairman. When Roosevelt died in 1945, Eccles offered to resign so that President Truman could choose his own chairman. In 1948 Truman belatedly accepted that offer and appointed Thomas McCabe (*infra*, p. 191). The Hoover Commission recently recommended that the Board chairman be removable at the President's will.

by the President, was likely to follow his wishes. Thus the Board was in a weaker position to act independently of the President and the Secretary of the Treasury.²⁹ President Roosevelt selected Marriner S. Eccles of Utah, a banker of twenty-two years' experience, as his first chairman.

(2) A minor reorganization also took place in the make-up of the boards of the twelve Federal Reserve Banks. The original law had contained no provision for an executive head of each of these banks. It had become the practice of their boards to select a head, who was known as the "governor."³⁰ He should not be confused with the chairman of the regional board, who was provided for in the original law. The new law authorized the regional boards to appoint a president and a vice-president and define their duties, but these appointments were subject to the approval of the Board of Governors in Washington.

The chain of command that was now set up is significant. Officers of each Federal Reserve Bank were selected by the bank's president, this regional executive had to be acceptable to the national Board, and the head of that Board was chosen by the President. There was little chance that any action would be taken by a Federal Reserve officer that was politically displeasing to his superiors or to the President.³¹ This represented a marked change from the ideal that prevailed when the Federal Reserve System was founded, namely, that the Federal Reserve officials would serve the nation best if they were freed of political considerations.³² There was fear that the Federal Reserve Sys-

²⁹ Eccles remarked to the House Committee on Banking, "I see no reason to expect the Federal Reserve System, under this bill, to be any more subject to political control than has been the case in the past." *Summary of Statements of M. S. Eccles*, p. 13. See also pp. 56-57. He was wrong in this prophecy. *Infra*, pp. 188 ff.

³⁰ The title of governor, having been preëmpted for the seven members of the national Board, the executive heads of the twelve Federal Reserve Banks were assigned the title of president.

³¹ Furthermore, under the Banking Act of 1933, any director or officer of a national bank might be removed on complaint of the Federal Reserve agent or the Comptroller of the Currency if he violated a banking law or "shall have continued unsafe or unsound practices in conducting the business of such bank or trust company, after having been warned by the Comptroller of Currency or the Federal Reserve Agent." The Federal Reserve Board made the decision as to whether the officer should be removed. Section 30 of Banking Act of 1933.

³² Testifying before a subcommittee of the Senate Banking and Currency Committee on May 13, 1935, E. W. Kemmerer protested vigorously against this

tem would become the tool of the government. Subsequent events have shown that this fear was well founded.³³

(3) Greatly increased powers of credit control were lodged in the hands of a newly created Federal Open Market Committee consisting of the seven members of the Board of Governors and of five representatives of the Federal Reserve Banks. At present, one representative on this Committee is elected annually by the New York bank, one

shift of power. Drawing upon his wide experience as financial adviser to fourteen nations, he pointed out that central banks have been subject to two major dangers. One is undue government influence, and the other is undue control by the banking interests of the country. He pointed out that before 1913 we had been in danger of undue control by the banking interests of the country. To escape that we had gone somewhat too far in the direction of political control when a presidentially appointed Board was put at the head of the Federal Reserve System. Now we were going even farther in the direction of undue government influence. The new Board was getting vast new powers. Moreover, already all the members of the Board were adherents of the party in power, and 99 percent of the Federal Reserve Banks' earning assets were government securities. He added:

"A policy determining Board possessing autocratic powers over the discount rate, the size of the country's bank reserves, the types of paper eligible for loans, the expansion and contraction of bank credit, and the absorption by the banks of government securities, a Board comprised entirely of Presidential appointees—will exercise a tremendous influence upon our economic life under conditions in which political considerations are likely to dominate. By political considerations I mean vote-attracting power in the near future for the political party in office.

"This political pressure most of the time will be predominantly in the direction of what is popularly called 'liberalizing bank credit,' holding down interest rates, and of resulting monetary and credit expansion. . . . The opinion of the masses is almost never in favor of deflation or even in favor of restricting a dangerous boom while it is yet in a stage in which it can be controlled. In boom times the advocates of restraining measures such as advancing rediscount rates, substantial open-market sales, increased reserves, and more exacting loan requirements are usually very unpopular. The Administration and members of Congress feel the pressure of this inflationary public opinion. Both directly and indirectly it will be felt by the Federal Reserve Board. This situation will be particularly true if an important election is approaching."

³³ See Chapters XIV and XV particularly, and see Eccles' remark quoted on p. 182, n. Perhaps the most complete evidence of the new attitude is found in the Hoover report of January, 1949. The *Task Force Report on Regulatory Commissions*, Appendix N, p. 110, has this to say: "Over all it is obvious that effective Government economic policy requires close cooperation between the monetary and fiscal authorities. It is equally clear that the Government (the Executive and Congress) will not and should not tolerate obstructionist action by the central bank against Government policies. A truly independent central bank, free to control the Nation's money supply counter to the wishes of the President and Congress is unrealistic in the modern world."

by the Boston, Philadelphia, and Richmond banks, one by the Chicago and Cleveland banks, one by the St. Louis, Atlanta, and Dallas banks, and one by the Minneapolis, Kansas City, and San Francisco banks.³⁴ A compromise on determination of open-market policy was thus reached between the group advocating complete centralization of control in Washington and the group in favor of control by the representatives of the twelve Federal Reserve Banks without interference by the Board.

The Federal Open Market Committee must meet in Washington at least four times a year upon the call of the chairman of the Board of Governors or at the request of any three members of the Committee. This proved so cumbersome in practice that an executive committee of three Board members and two representatives of the twelve Banks was later authorized to act on short notice.³⁵ The function of the Federal Open Market Committee is to consider, adopt, and transmit to the several Federal Reserve Banks regulations relating to the open-market operations of those banks.³⁶ Such regulations are fully binding on all Federal Reserve Banks, which were now prohibited from engaging in, or refusing to engage in, open-market operations except as the Committee dictates.³⁷

³⁴ The grouping in the 1935 law was as follows: (1) Boston and New York; (2) Philadelphia and Cleveland; (3) Chicago and St. Louis; (4) Richmond, Atlanta, and Dallas; and (5) Minneapolis, Kansas City, and San Francisco. This was changed by act of Congress in 1942. *Federal Reserve Bulletin*, 1942, pp. 739, 748. The new grouping gave the big Banks more representation.

³⁵ *Federal Reserve Bulletin*, September, 1946, p. 1012. The executive committee in turn sometimes delegates its powers to the Chairman of the Board and the President of the New York Federal Reserve Bank, who decide what to do in consultation with the Secretary of the Treasury. H. Hoover, *Task Force Report on Regulatory Commissions*, Appendix N, p. 113.

³⁶ It was further stipulated that purchases or sales of government securities could be made only in the open market. This clause evidently repealed that part of the Thomas amendment of May 12, 1933, to the Agricultural Adjustment Act, authorizing the President to direct the Secretary of the Treasury to enter into agreement with the Federal Reserve Banks to purchase \$3 billion in United States obligations directly from the Treasury.

³⁷ The character of the Federal Open Market Committee and its functions were thus greatly altered, as compared with what they were under the provisions of the Banking Act of 1933. The earlier legislation established a committee, composed of one representative from each Federal Reserve Bank, as an advisory body which would make recommendations to the Federal Reserve Board in respect of open-market operations. Individual Reserve Banks were allowed to re-

The Board of Governors is required to keep a complete record of the action taken by the Board and by the Federal Open Market Committee upon all questions of policy. This record is to include the votes taken in connection with the determination of open-market and other policies and the reasons for them. The information must be included in the annual report made by the Board to Congress.

Together with the authority to direct open-market operations went a corollary provision requiring Federal Reserve Banks to submit their rediscount rates to the Board for approval every two weeks. According to the *Federal Reserve Bulletin*, this brought "the discount rate policy of the Reserve Banks more effectively under the control of the Board."³⁸

(4) The Board got several other important new powers of credit control. It will be remembered that in 1929 the Federal Reserve System's credit contraction policy was nullified by the fact that sometimes half of the funds making up brokers' loans were being supplied by private persons or nonbanking institutions. To give the Federal Reserve authorities fuller control, the Securities and Exchange Act of June 19, 1934, gave the Board the power to fix margin requirements.³⁹ The Board first made use of this power on April 1, 1936, and has used it on several occasions since then.⁴⁰

The most important new instrument of credit control granted the Board, however, was that over member bank reserve requirements against time and demand deposits.⁴¹ The Board was authorized to increase these up to a doubling of the previous reserve requirements, or

frain from participating in the operations recommended by the committee and approved by the Board by filing written notice of their decision with the chairman of the committee within thirty days, and transmitting a copy thereof to the Board. Complete authority to carry into effect a specific credit policy was therefore lacking until the 1935 law passed.

³⁸ *Federal Reserve Bulletin*, 1935, p. 560.

³⁹ A vote to forbid margin operations altogether was lost in the Senate in 1934 by only a few votes. Board of Governors, *Federal Reserve Policy*, p. 85.

⁴⁰ *Infra*, pp. 152, 186, 196.

⁴¹ The Thomas amendment to the Agricultural Adjustment Act (May 12, 1933) had provided that the Board, "with the approval of the President," may declare "that an emergency exists by reason of credit expansion, and may by regulation during such an emergency increase or decrease, from time to time, in its discretion, the reserve balances required to be maintained against either demand or time deposits." Section 46. This power was now made more permanent, specific, and usable.

to lower them again to as much as the pre-1935 reserve requirements.⁴² Within these limits the Board was free to change them at any time and in any amount "in order to prevent injurious credit expansion or contraction." It was expected that this new authority would give the Board an instrument to eliminate a large part of the excess reserves then in existence. How this problem was handled and what its implications were will be discussed in the next chapter.

Some critics of the new law doubted whether it was advisable to give the Board such a powerful instrument of control. They argued that it would introduce another serious element of uncertainty into the credit structure. Sharp or sudden increases in reserve requirements could easily provoke a panic and result in extremely extensive liquidations of bank credit. They further claimed that the reserve positions of no two banks were the same, and that a uniform increase in reserve requirements would affect different banks very unevenly. The events leading to the panic of 1937 suggest that there may have been some validity to these fears. That will be discussed in the next chapter. On the other hand, the Board's past inability to control the credit situation by changes in rediscount rates, open-market operations, moral suasion, appeals through the press, and refusal to rediscount speculative paper all indicated that the Board needed additional powers. The one over reserves was the most important of them.

CONCLUSIONS

The legislation of 1932-1935 marks a turning point in the history of the Federal Reserve System and of American banking. This legislation was intended to do four things, namely, to restore confidence in banks, to strengthen the banks, to remove some of the temptations of banks to speculate which had brought on panics like that of 1929, and to increase the authority of the Federal Reserve Board over banks. The legislation that was expected to accomplish these ends was to have marked effects on the nation's economy in the years to come. Three provisions in particular may be mentioned at this point, for they will bear watching.

The first is the provision in the Glass-Steagall Act of 1932 and sub-

⁴² For a complete list of changes in reserve requirements to 1949, see p. 38 n. For recent changes, see your latest *Federal Reserve Bulletin*.

sequent acts permitting the use of government bonds as backing for Federal Reserve notes. The second is the supposedly increased power of the Board over the banking system and the supply of bank credit. That would appear to give the Board greater responsibility for the economic stability of the nation. The third is the greater degree to which the Board is now subject to the political control of the President and his Secretary of the Treasury. In other words, in dealing with banks the Board had more power, but in dealing with the government it had less independence.

Σ CHAPTER XIII Σ

The Federal Reserve System Under the New Deal, 1935-1940

BEFORE the Federal Reserve System was founded, banking policy was determined largely by the heads of the nation's largest banks. This placed enormous power in the hands of a few men. The public believed that they did not measure up to their responsibilities. The Federal Reserve System was established to guide bankers towards sound policies and to provide banks and public with better protection in any panics that might develop. From 1914 to 1933 the big bankers and the Federal Reserve Board both took a hand in shaping banking policy. The panic of 1929 and the ensuing depression seemed to show that the nation's financiers were incapable of carrying their part of the responsibility and that the Board lacked sufficient authority to carry their part. You may differ with that interpretation, but that was essentially the one that Congress accepted in framing the legislation described in the last chapter. The legislation of 1933-1935 therefore gave greater powers to the Board to determine and direct banking policies. The Board were expected to play a large part in bringing about recovery, creating economic stability, and avoiding serious depressions. Now that the Board had more powers and the bankers fewer powers, it followed that economic instability would be blamed to a greater degree on the Federal Reserve System. Of course, if the Board had to share their authority with someone else, then the responsibility for failure or success would be shared too. As will be seen, it was not long before the Board found that they had to coöperate with several governmental agencies in trying to accomplish their aims. They were not always pleased about this, but they were glad there were others to share the blame for any failures. But that is getting ahead of our story. The Board's first job in 1935 was to decide what to do with their new powers.

NEW THEORIES ON A STABLE ECONOMY

Those who would create a stable economy must have some fundamental ideas of what is needed to produce that stability. They must know what makes an economy unstable. Careful examination of the "late unpleasantness of 1929-1933" yielded many suggestions as to what made our economy unstable. Among those who came forward with a theory and a plan of action was Marriner Eccles before he became a member of the Federal Reserve Board. He appeared before the Senate Committee on Finance on February 24, 1933, while they were conducting an "investigation of economic problems." Eccles proposed a five-point program, the core of which was the expenditure of \$2,500 million through the Reconstruction Finance Corporation to finance state and local projects of a self-liquidating nature "at unprecedentedly low interest rates" and an allotment plan for cotton and wheat farmers. The whole was intended to stimulate consumer demand and bring the country out of the depression. Eccles believed that government action was essential to start recovery, that once recovery was achieved, taxes would pay the cost of the program, and that thereafter a national planning board would be necessary to keep the country from falling into another depression.¹ The program which the Roosevelt administration eventually adopted bore a strong resemblance to Eccles' proposals. His ideas, by chance, also resembled the well-worked-out theories of the English economist John Maynard Keynes. It is not surprising, therefore, to find that an administration that appointed Eccles to a key post because they liked his thinking should shortly find the persuasive writings of Keynes even more to their liking. Soon these were being consulted for fundamental ideas as to what would restore prosperity and maintain it.

Whether you are an admirer of Keynesian economics or a great skeptic, or whether you hold some middle view, is beside the point. The significant fact is that the economic philosophies of Keynes and his American disciples,² or even of those with similar viewpoints, such

¹ Senate Committee on Finance, 72nd Congress, 2nd session, *Hearings* pursuant to S. Res. 315, pp. 705-731.

² The chief of these disciples was Professor Alvin Hansen of Harvard, but there were many others. Keynes himself did not always agree with the interpre-

as Eccles at first,³ were increasingly accepted at top policy-making levels in the government from this time on. Late in 1934 Marriner Eccles became chairman of the Board. About the same time Lauchlin Currie became, officially, Assistant Director of the Division of Research and Statistics and, unofficially, economic adviser to Eccles.⁴ Currie's monetary and banking outlook was essentially that of Keynes.⁵ Therefore, Keynesian theories influenced important economic decisions of the Board from this time on. Let us see, briefly, what the gist of the "new economics" was.

Keynesians believed that full employment should be the country's economic goal. This, of course, made a strong appeal to Roosevelt and his advisers and indeed to most people. A high national income was necessary to achieve full employment. To produce and maintain such a national income, a high rate of capital formation was necessary. Continuous investment must be encouraged. Investment, or capital formation, was the chief instrument in this thinking. The Keynesians preferred it to be private. But in a highly developed, "mature" economy, such as they assumed this country to have, two factors discouraged the growth of private investment. One was that the more prosperous people became, the more they were inclined to save. The

tations of his American followers. It was their economics based on his, not his alone, which was used in formulating policies. We therefore refer to this economics as Keynesian.

³ Eccles was drawing from the writings of William T. Foster in his Senate testimony referred to above. See W. Foster and W. Catchings, *Profits* (New York, 1925), Chap. XXXI, for a summary of these views, which resemble Keynesian economics to a striking degree on some points such as the importance of stimulating consumer buying. Senator Gore remarked to Eccles, "You have got Foster in the back of your head?" And Eccles replied, "I only wish there were more who had." p. 718.

⁴ Eccles became chairman November 15, 1934. Currie became Assistant Director November 24, 1934. Federal Reserve Board, *Annual Report*, pp. 62-63.

⁵ Currie differed from Keynes on matters of secondary importance. Born in Nova Scotia in 1902, Currie graduated from the London School of Economics in 1925, got his Ph.D. at Harvard in 1931, and was for a time on the Harvard faculty. His book *The Supply and Control of Money in the United States*, published in 1934, was critical of recent Federal Reserve policies and urged making bank credit more available and giving the central banking system more authority. Because of the position Currie held, the book was widely read, often reviewed, and frequently criticized. See, for example, the address of Benjamin M. Anderson before the New York chapter of the American Statistical Association, April 26, 1935.

other was that profit opportunities were not as numerous, at least in their opinion, as they had once been. Thus, rather than invest their savings at what seemed abnormally low returns, some people did one of two things. Either they hoarded their savings—why risk them at 3 percent when they were safe as cash? Or they directed their savings into the stock market, with its promise of handsome returns. This served to inflate security prices but not to add to actual investment.

Hoarding and its stock-gambling companion⁶ are the villains in Keynesian theories. They were regarded as the causes of depressions, especially the one that began in 1929.⁷ How did the Keynesians reach this conclusion? They believed that everyone's income should be spent either for consumer goods or for investment in capital goods. The latter would enlarge the national income. As long as this continued, all would probably be well. Trouble began when people oversaved, that is, saved more than they invested, and hoarded or gambled the difference. In that event, less was available to buy consumer goods and producer goods than before. That meant a decline in business earnings, in employment, in prices, and in national income. The decline would discourage investment and consumption still further. Once this downward cycle began, it was likely to become steadily worse. The depression of 1929-1933 was pointed to as proof.

What will bring a nation out of a depression? Since a depression is caused by oversaving, steps must be taken to compensate for the money withdrawn from the flow of income. The government alone can provide what private investors are afraid to provide.⁸ More money must be put into the hands of consumers. Since their income is now low, they will spend virtually all of it. Their increased expenditures

⁶ Stock gambling is looked upon as second-hand hoarding. The theory is that the funds realized from each sale of stock are simply put into other stock, and the seller of that puts those funds into other stock, and so on, with no actual capital formation resulting.

⁷ Marriner Eccles referred to a Brookings Institution study, *Too Much Thrift Held Slump Cause*, in his testimony before the House Banking Committee in 1935. He said this study found "that the excessive savings went into speculation." Eccles was thinking along the general lines outlined here. *Summary of Statements of M. S. Eccles*, pp. 38 ff.

⁸ "The Government must be the compensatory agent in our economy through the money system, through the tax system, and through a public works system." *Ibid.*, p. 40.

will start an upward cycle in earnings, investment, employment, and prices. It does not matter to Keynesians how these additional funds are first introduced except that spenders should receive them. This explains their interest in public works, in "boondoggles,"⁹ and in other government handouts, and their lack of concern as to whether the government got its money's worth in services performed. To them the important thing was to stop the downward trend of the cycle and to get investment increasing again. Invested funds augment national income by an amount several times larger than themselves. This is called the "multiplier" and is an important part of Keynesian national income theory.

Since increased investment leading to capital formation is so important, producers must be encouraged in every way. The Keynesians' attitude towards interest rates is significant in this connection. They believe that people will save regardless of the interest rate prevailing. Thus a high interest rate will not induce more saving, but it may discourage those wishing to borrow to expand their plants. On the other hand, a low rate will not discourage saving but will encourage borrowing for investment. The argument is all in favor of low interest rates. Because of government influence, low interest rates have prevailed since the later 1930's.

Once a country has achieved prosperity again (and remember that means full employment), particular attention must be paid to maintaining investment. The flow of funds must not be diverted into speculative activities. Increases in margin requirements can be used to stop that. If investment seems to lag, with resulting discouragement to further business expansion, the government must step in and provide funds at low interest rates or start spending again. Thus the government always keeps a weather eye on employment and investment, or capital formation. It is the government through its fiscal policy which keeps the economy on an even keel.¹⁰

⁹ A familiar expression in the later 1930's, meaning near-useless projects financed by the government to provide jobs for unemployed.

¹⁰ For a more complete summary of a moderate Keynesian approach see Paul A. Samuelson, *Economics: An Introductory Analysis* (1948), Chaps. XI and XII. Two good critiques of the Keynesian approach are B. M. Anderson, Jr., "Equilibrium Creates Purchasing Power," *Commercial and Financial Chronicle*,

The Federal Reserve System was expected to play a significant part in keeping the economy stable. What did it actually do in these first years of increased responsibilities? It kept interest rates low to encourage capital growth. It helped the government finance large deficits at low cost. It took steps to curb a renewal of speculation. But what were the specific problems that led it to do these things?

FEDERAL RESERVE BANK PROBLEMS, 1933-1940

The Federal Reserve authorities' problems all revolved around this central issue of promoting recovery and maintaining it. There were four of these problems. (1) Where should interest rates be set to continue recovery and yet not invite another orgy of speculation? (2) What could be done, if anything, to keep down the service charges of the mounting public debt? (3) How could member banks' excess reserves be reduced so as to make the banks dependent on the Federal Reserve Banks again? This was perhaps the biggest of the problems. (4) How should the country be rescued from the depression of 1937-1939? Before looking closely at these four problems, we should also have some idea of how the country fared economically during the years 1933-1940.

RECOVERY, RECESSION, AND RECOVERY. The Federal Reserve Board's index of industrial production appears on Chart IX. This is a con-

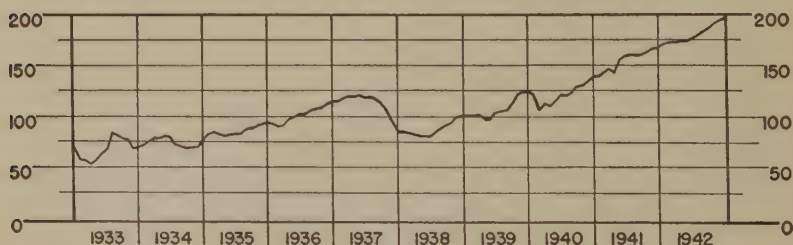


CHART IX. Index of Industrial Production, 1933-1942.

tinuation of Chart VI (page 99), which was used to show the causes and effects of open-market operations in the 1920's. Chart X, January 25, 1945, and Kenneth Boulding, "Professor Tarshis and the State of Economics," *American Economic Review*, March, 1948, pp. 92-99.

below, entitled "Federal Reserve Bank Holdings of U. S. Government Securities," likewise continues its counterpart chart from page 99.¹¹ That was used to show the changes in federal reserve credit or, in other words, the extent of open-market operations. There was a correlation between the two charts for the 1920's; there is none here.

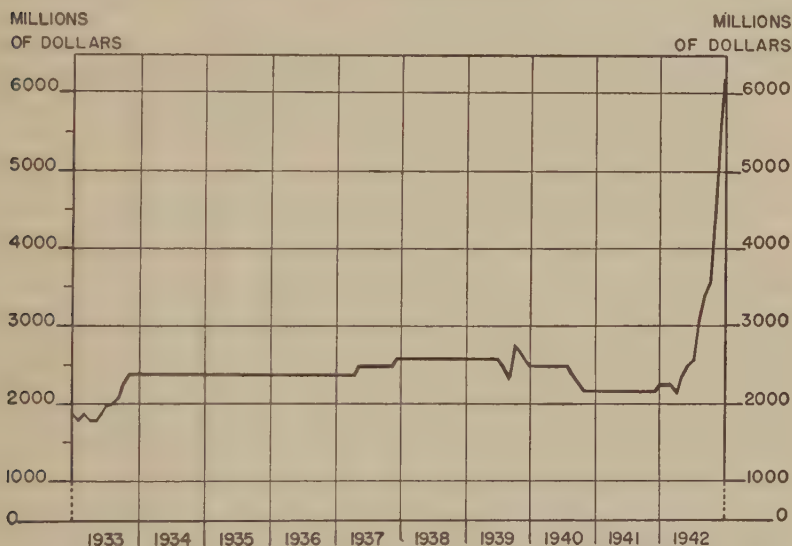


CHART X. Federal Reserve Bank Holdings of U.S. Government Securities, 1933-1942.

The index of industrial production shows that recovery was almost uninterrupted from the spring of 1933 to that of 1937; in fact, it was quite rapid in mid-1933, in late 1934, and in late 1936. With the onset of the depression in 1937, the index declined for a year but then turned about and rose in mid-1938 and, despite two minor interruptions, continued upward from then on. Unlike the period of the 1920's, open-market operations played no significant part in effecting these changes. Bankers' bills were no longer of any consequence. Federal Reserve holdings of government securities remained the same—about \$2,400 million—from the end of 1933 until early in World War II.

¹¹ Bills discounted and bills bought are omitted because they were of no consequence in this period.

In other words, if Federal Reserve policy affected the economy of the country, it was no longer through the once favorite device of open-market operations.¹²

Instead, the Federal Reserve System made its influence felt through new instruments of credit control, margin requirement changes and reserve requirement changes. It, of course, employed changes in rediscount rates too. The changes in the new instruments of control are shown on Tables 17 and 18. There is a correlation between the changes in these and the shifts in industrial production. We shall have more to say about that later in the chapter.

TABLE 17. Changes in Member Bank Reserve Requirements (percentages)

Date	Demand Deposits			Time Deposits All
	C. Res. Cities	Res. Cities	Country	
1917 to Aug. 15, 1936	13	10	7	3
Aug. 16, '36, to Feb. 28, '37	19.5	15	10.5	4.5
Mar. 1, '37, to Apr. 30, '37	22.75	17.5	12.25	5.25
May 1, '37, to Apr. 15, '38	26	20	14	6
Apr. 16, '37, to Oct. 31, '41	22.75	17.5	12	5

Source: *Federal Reserve Bulletins*, passim.

TABLE 18. Changes in Margin Requirements (percentages)

Date	By Brokers	Short Sales	Loans by Banks
Apr. 1, '36, to Oct. 31, '37	55		55
Nov. 1, '37, to Feb. 5, '45	40	50	40

Source: *Federal Reserve Bulletins*, passim.

TWO REASONS FOR LOW INTEREST RATES. Followers both of classical economics and of Keynesian economics agree that low interest rates may help lift a country out of a depression.¹³ Rediscount rates were steadily reduced during the later 1930's. Between 1929 and 1933 re-

¹² All that was done with open-market operations between 1936 and 1939 was to maintain an orderly market for high-grade government bonds. This was done by buying long-term government securities and selling short-terms. Board of Governors, *Annual Report*, 1939, pp. 1-3, 10; *Federal Reserve Bulletin*, 1940, pp. 280, 289.

¹³ Eccles remarked in 1935 that the continuance of the depression was attributable to the heavy load of debt the country's business was carrying. "There are

discount rates fell from 5 or 6 percent to 3.5 percent in most Federal Reserve Districts and to 2.5 percent in New York. When this seemed to invite little borrowing, the New York Federal Reserve Bank, in the autumn of 1933, lowered its rate to 2 percent, and then in February, 1934, to 1.5 percent. The other Federal Reserve Banks followed New York's lead down, but except for Cleveland they kept their rates a little higher. In the summer of 1937 New York lowered her rate to 1 percent, and the others followed to 1.5. Although this did not lead to any appreciable expansion in Federal Reserve credit, it did influence interest rates downward in the government security and call money markets.

The Treasury, of course, had reason to be pleased with the decline in interest rates, for the national debt was increasing at the rate of about \$2,500 million a year owing to chronic budgetary deficits. The interest-bearing debt grew from \$16 billion in 1930 to \$42 billion in 1940. If interest rates had remained near 4 percent, as they did in the 1920's, this would have produced a burdensome service charge at a time when tax receipts were meager. Thanks to the declining interest rates, the total charge on the public debt increased from \$660 million in 1930 to only \$1,041 million in 1940. In other words, the debt increased about 160 percent, but the interest charge grew only about 60 percent. The average interest rate on government securities dropped from about 4 percent to 2.5 in the course of the ten years. The Federal Reserve System's policy of falling rediscount rates helped the Treasury finance this public debt at unusually low cost.¹⁴

THE PROBLEM OF MEMBER BANKS' EXCESS RESERVES. As early as 1935 some of the Federal Reserve authorities began to wonder

two ways by which the burden of debt may be adjusted during a depression. One way is through deflation which wipes out a large part of existing debts through the processes of bankruptcy. . . . The only other way to get recovery that I can think of is by a process of reflation." He favored this second method. Thus a policy of low interest rates was desirable, as he saw it, even if it led to some inflation, for that, too, would promote recovery. *Summary of Statements of M. S. Eccles*, p. 42.

¹⁴ This had to be at someone's expense. Low interest rates raised the cost of life insurance, reduced the incomes from endowments of colleges and universities and other such institutions, and hurt those whose savings were in bonds and other forms of indebtedness.

whether reducing interest rates was altogether desirable. On the one hand, the country was still short of recovery, and the Federal Reserve System wanted to "lend its efforts to a furtherance of recovery." But, on the other hand, the Board was becoming seriously worried over the problem of excess bank reserves, which were "far beyond the present

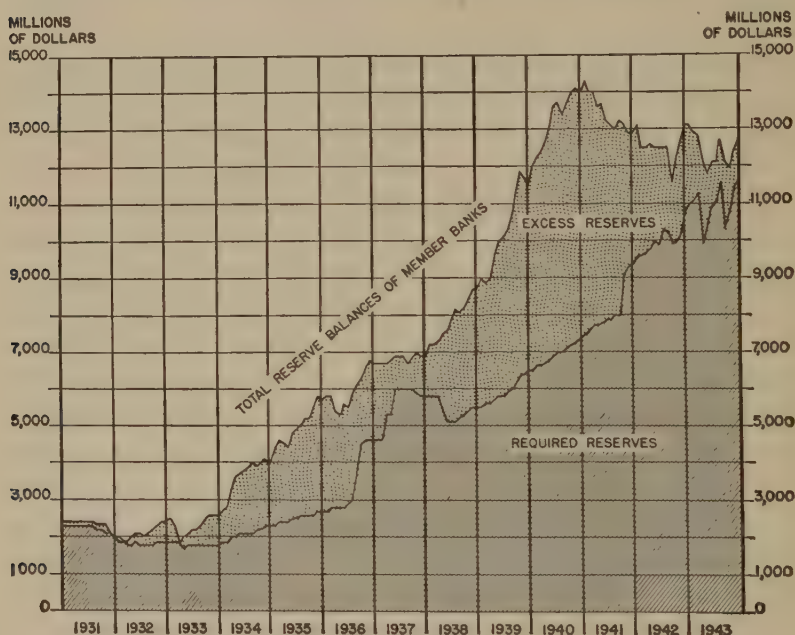


CHART XI. Excess Reserves, 1931-1943.

or prospective requirements of credit for sound business expansion." Unless something was done to reduce them, member banks would be in a position to ignore any Federal Reserve attempts to control the supply of credit.

The Federal Reserve authorities had made member banks feel the effects of open-market selling operations promptly in the 1920's. Then member banks carried little more than the minimum reserves required against deposits. Conditions had changed since then. Excess reserves for all banks totaled only about \$50 million in 1929-1930. In 1932 excess reserves of \$120 million were considered large. After that, as can

be seen from Chart XI, they began to accumulate rapidly, reaching \$1,000 million in 1934 and \$3,000 million in 1936.

There were two main causes for this unprecedented growth in the volume of bank reserves. First there were the open-market operations of the Federal Reserve Banks effected with the purpose of expanding the basis of bank credit. These operations substantially increased Federal Reserve Bank holdings of government securities during the early years of the depression.¹⁵ They grew, with occasional interruptions, from about \$511 million at the end of 1929 to \$740 million at the end of February, 1932. The passage of the Glass-Steagall Act at that time allowed the Federal Reserve Banks to increase their purchases of government securities by an additional \$1,600 million by the end of 1933. After that no important changes were made in Federal Reserve holdings, which remained in the neighborhood of \$2,400 million until World War II. The funds paid for these government securities found their way into the hands of the member banks, which used the first proceeds to pay their indebtedness to the Federal Reserve Banks. They allowed the remainder to accumulate in the form of excess reserve balances because they considered it impossible to use them in making safe loans and investments.

In the second place, the reduction in the gold content of the dollar in January, 1934, started an unprecedented gold flow to the United States.¹⁶ (See Table 19.) The gold coming to this country was almost entirely for private account. Individuals or groups would ship gold to a bank in the United States and receive a deposit credit for the dollar value of the shipment. The gold, in turn, would be handed over to the Treasury, and the member bank would receive a check on its Federal Reserve Bank. Thus the gold imports of this period, coming at a time when most member banks were out of debt to the Reserve Banks, had the effect of swelling ever higher the total excess reserves of the member banks. By July, 1936, total member bank reserve balances held with the Federal Reserve Banks amounted to \$5,900 million, while the reserves legally required of such member banks, on the basis of their

¹⁵ Chart X, *supra*, p. 151.

¹⁶ Most of the \$2,800 million devaluation "profit" was not used to swell bank reserves but was held in the Treasury or in the Treasury account with the Federal Reserve Banks.

TABLE 19. Gold Imports and Gold Reserves, 1920-1948

Year	Gold Imports (current)	Gold Reserves (23.22 gr. \$)	Gold Reserves (13.71 gr. \$)
1920	\$-.05 billion	\$2.5 billion	
1925	-.1 "	4.0 "	
1929	.1 "	3.9 "	
1931	-.2 "	4.1 "	
1932		4.0 "	
1933	-.2 "	4.0 "	
1934	1.2 "	4.8 "	\$ 8.2 billion
1935	1.7 "		10.1 "
1936	1.1 "		11.3 "
1937	1.3 "		12.8 "
1938	1.7 "		14.5 "
1939	3.0 "		17.6 "
1940	4.1 "		22.0 "
1941	1.0 "		22.7 "
1945	-.1 "		20.1 "
1948	1.7 "	14.3 "	24.2 "

Source: *Federal Reserve Bulletins*, passim.

demand and time deposits, came to only \$2,900 million. In other words, the amount of excess reserves was \$3,000 million, or about 103.4 per cent of the total of required reserves.¹⁷ Such a situation was unprecedented and as recently as five years before would have been considered impossible.¹⁸

Why did these \$3,000 million of excess reserves loom so large in the discussions of the Federal Reserve System? The answer to this question lies in the great powers of credit expansion that were inherent in them. The average reserve required against demand deposits in the United States throughout most of the life of the Federal Reserve System prior to the late summer of 1936 was approximately 10 percent. This means that for the country as a whole demand deposits could legally be expanded by the member banks to the extent of ten times the

¹⁷ *Federal Reserve Bulletin*, 1936, p. 613.

¹⁸ At this point it might be well to clear up a common misunderstanding. The chronic government deficits were not a cause of the excess reserves. On the contrary, the sale of government securities to banks enlarged total deposits to some extent, and this tended to reduce the ratio of legal reserves to deposits. *Ibid.*, 1940, p. 126. If the Federal Reserve Banks had bought government securities from the banks as a result of these deficits, or directly from the Treasury, that would have increased reserves; but they did not.

amount of their reserves held with the Federal Reserve Banks. Therefore, if various qualifications¹⁹ are omitted for the sake of the clarity of the argument, the member banks of the United States in July, 1936, for example, were legally in position to increase their demand deposits by approximately \$30,000 million on the basis of the excess reserves available. The magnitude of this possible increase and of its potential inflationary effect on prices is indicated by the fact that total adjusted demand deposits of member banks, which amounted to \$20,300 million at the end of June, 1936, were at that time \$3,600 million greater than at the end of 1929. Furthermore, as Dr. B. M. Anderson, Jr., pointed out, the great inflation of security and real estate prices during the 1920's resulted from an increase of only about \$13,500 million in the time and demand deposits of our banks.²⁰

There were two schools of thought on how to reduce the excess reserves. One favored the now familiar open-market selling operations;²¹ the other advocated using the Board's new power to raise reserve requirements. Let us look at these two proposals.

The argument for open-market selling operations is by now familiar²² and need not be repeated again. Opponents advanced several arguments against them at this time. They said that open-market operations would result in declining prices for government securities and higher interest rates on the federal debt—both long- and short-term—as well as in a reversal of the easy money policy that was held by some to be primarily responsible for the degree of recovery already achieved. Furthermore, the total of all excess reserves was \$3,000 million and was still rising, whereas the total of government securities in the hands of Federal Reserve Banks was only \$2,400 million. The Federal Reserve Banks could theoretically sell all they had, and the

¹⁹ Banks would have to expand their loans more or less in unison, as in 1919–1920 or 1927–1929. *Supra*, p. 59.

²⁰ B. M. Anderson, Jr., "The Gold Standard and the Administration's General Economic Program," *Chase Economic Bulletin*, May 6, 1933, p. 5.

²¹ See on this subject the recommendations of the Federal Advisory Council to the Board of Governors of the Federal Reserve System, November 21, 1935, *Federal Reserve Bulletin*, January, 1936, pp. 5–6; also J. H. Riddle, "The Problem of Excess Reserves," *Bulletin No. 5 of the Association of Reserve City Bankers*, p. 6.

²² *Supra*, pp. 96–98.

member banks would have \$600 million of excess reserves left, which was still an abnormally large amount.

Advocates of raising reserve requirements were likewise cautioned on several counts. S. Parker Gilbert, former Undersecretary of the Treasury, warned that much of the gold coming from Europe was seeking only temporary refuge in this country.²³ Such gold should not be incorporated in our reserve base, for a renewal of confidence in the European political situation might cause it to be called back. That would necessitate deflation here. Some urged that frequent changes in reserve requirements should be avoided in the interests of banking stability. They feared that a new element of uncertainty would be brought into the credit situation that might result in periods of sharp liquidation and deflation from time to time if unexpected increases in requirements should be made. Still others pointed out that although the banks of the country as a whole had reserves over 100 percent in excess of what they legally needed in early July, 1936, these reserves were unevenly divided among individual banks, and some banks had scarcely any excess reserves. A general increase in reserve requirements would affect these banks adversely.

The final outcome of the discussion, however, was that the advocates of increasing member bank reserve requirements won, and beginning August 15, 1936, reserve requirements were raised 50 percent. (See Table 17.) This had the effect of reducing excess reserves to \$1,800 million, which was less than the Federal Reserve holdings of government securities of \$2,400 million. It put the Board in a position to use open-market operations again if they wished. The Board took care to state, however, that this increase in reserve requirements should not be construed as a reversal of the easy money policy they had been pursuing for some time to bring about recovery.²⁴

The benefits of the new reserve requirements were short-lived. By December another half billion dollars of gold had come into the country, raising excess reserves to \$2,200 million. At this point the Treasury stepped in and announced a policy of gold sterilization. That

²³ Letter to the *New York Times*, December 18, 1935.

²⁴ Money rates were far below what they had been in the 1920's, as the table below shows. Interest on Treasury bills went to zero in 1939.

Money Rates, 1929 and 1937 (July)

Item	1929	1937
Treasury bills or notes* (3-6 months)	4.5 %	.125 %
90-day bills, open market	5.125	.1875
Commercial paper (4-6 months)	6	.75
Rediscounts, New York Fed. Res. Bk.	5	1.5
Call money (renewals)	9.25	1
Customers' loans	6	4.5

Federal Reserve Bulletins, passim. Supra, p. 00, for 1926 rates.

* Only bills in 1937, only notes in 1929.

amounted to a purchase of gold by the Treasury with government securities instead of with gold certificates and had the effect of keeping the gold so purchased out of the reserve base.²⁵ In the next fifteen months \$1,700 million of incoming gold was sterilized. To get rid of more of the excess reserves, the Board announced on January 30, 1937, that reserve requirements would be raised another third on March 1 and a final sixth on May 1.²⁶ This made requirements double the 1935 rate, or as high as they could go under the Banking Act of 1935. It reduced excess reserves to less than \$1 billion. Country banks held most of them. The Board said that they wanted to make the change while excess reserves were fairly evenly distributed among banks. It renounced any intention of asking Congress for further powers over reserve requirements and repeated the statement of the previous summer: "The maintenance of an adequate supply of funds at favorable rates for capital purposes, including mortgages, is an important factor in bringing about and sustaining a lasting recovery."²⁷

The announcement of proposed increases in reserve requirements was followed within a few months by a fair-sized depression. Some

²⁵ The normal manner in which incoming gold got into the reserve base was explained on page 155 above. The sterilizing method changed the procedure chiefly in the last stages, where the Treasury dealt with the Federal Reserve Banks. To quote the *Bulletin*, "Under the newly adopted Treasury policy the Treasury will segregate the gold and will replenish its balances at the Reserve banks by the sale of Treasury bills in the market. This operation will diminish member bank reserves, thus offsetting the previous increase." *Federal Reserve Bulletin*, 1937, p. 2.

²⁶ *Ibid.*, 1938, p. 972.

²⁷ *Federal Reserve Bulletin*, 1938, p. 97. Note the emphasis on capital formation. *Supra*, p. 149.

people believed that the Board's action was a significant cause.²⁸ The Board were criticized for using a pound weight to tip back the rising scale of recovery when an ounce weight would have been more satisfactory. In 1919 and 1929 the criticisms had been that mild measures were used when strong ones were needed. A similar criticism of timidity has been leveled again at the Board recently. Perhaps the critics were always right, but a fair-minded onlooker must at least concede that the Board's task is a delicate, difficult, and thankless one. Let us look at the depression and see what they tried to do about it.

Recovery had been progressing nicely since the end of 1934, as Table 20 shows. The index of industrial production and factory employment had risen sharply. Corporate earnings were good once more, and corporations were beginning to seek new capital. But "the rate of advance in business activity was, in fact, so fast that there were evidences of unsound developments."²⁹ At least, so the Board said later. There were the disturbing facts that loans to brokers and dealers were the highest since 1931 and that stock prices had doubled and were still rising fast. These, viewed against a background of the 1929 crash and the mounting excess reserves, caused the Board real concern and were strong motives for raising reserve requirements.

TABLE 20. Indexes of Business Activity, 1934-1939

Items	Sept. 1934	Feb. 1937	Nov. 1937	Aug. 1938	Dec. 1939
Index of indus. prod.	69	116	88	88	130
Factory employment (adj.)	76	100	101	85	104.4
419 common stocks	67	130	83	90	92
New dom. corp. issues (millions)	\$7	\$130	\$26	\$127	\$27
Wholesale price level	73	86.3	83.3	78.1	79.2

Source: *Federal Reserve Bulletins*, *passim*.

The stock market fell sharply, and the price of government securities dropped noticeably at the time of the March increase in reserve

²⁸ B. M. Anderson, Jr., believes that it was caused by a "curtailment of business profits," which in turn was caused "by the great increase in wage rates which came after the election of 1936." Recovery, he adds, was hampered by the inquisitorial practices of the Securities and Exchange Commission, which discouraged private investments. Also, high margin requirements made stock prices volatile. *Commercial and Financial Chronicle*, Feb. 24, March 3, 1949.

²⁹ Board of Governors, *Annual Report*, 1937, p. 2.

requirements. To ease the situation, the Board engaged in mild open-market buying operations for the first time in years. (See Chart X and Table 17.) Business activity remained uncertain for a while, and then, late in the summer of 1937, industrial production and other indices began to fall off. (See Chart IX.) The Board ceased worrying about excess reserves causing inflation and announced that their main objective was not price stability but economic stability for the nation.³⁰ In August they engaged in further minor open-market buying operations. Rediscount rates were cut 0.5 percent everywhere. In September the Treasury desterilized \$300 million of gold, with a resultant swelling in member bank reserves. Easier requirements for loans from Federal Reserve Banks were announced in October, and margin requirements were reduced November 1.³¹ That was still not enough. In December the *Bulletin* first mentioned that there was a recession.³² In February the further sterilization of gold was limited; in April it was discontinued altogether, and \$1,400 million of gold was reactivated. Also in April reserve requirements were reduced. The *Bulletin* commented that "loans by banks to customers in 1937 carried the lowest interest rates ever reported."³³ They were to be lower yet in 1938. The Board came to the sad conclusion that it was easier to start a depression than to reverse one once it had begun.

WHAT DID THE BOARD ACCOMPLISH?

What was the result of all this? Perhaps another major "boom and bust" had been reduced in size, perhaps not. The Board temporarily laid aside their worries over excess reserves, although that situation was worse now than before. Excess reserves were nearly \$3 billion in August, 1938, just what they had been two years before, when the Board first attacked the problem, but reserve requirements were about 75 percent higher.

Looking at things over a somewhat longer period, 1935-1939, after five years there were still some nine million persons unemployed. Net capital formation for those years was at the rate of \$3 billion a year

³⁰ *Federal Reserve Bulletin*, 1937, p. 827.

³¹ Margin requirements for short sales were now imposed for the first time.

³² *Ibid.*, p. 1180.

³³ *Ibid.*, 1938, p. 184.

and never more than \$4,600 million. This was less than half of what it had been in the 1920's.³⁴ To fill this void, the government was operating at a deficit every year. The Board, despite their new powers and new economic philosophy, had not accomplished much.

The Board felt that too much was expected of them. They were continually criticized and rarely praised. Few realized the great power that the Treasury had acquired in recent years and how fully the Board were obliged to coöperate with it. Not enough people sensed that the new economic philosophy contemplated more than price stability through manipulation of the money supply.³⁵ This was evidenced by the fact that the Board were receiving a variety of schemes for increasing the money supply in order to stabilize the price level and produce economic prosperity. The Board expressed themselves on these matters on several occasions, but in May, 1939, they issued a particularly emphatic statement. It was to answer their many critics, to stop the flow of panaceas, and to make the public and the Congress realize what they might and might not expect. In short, it was to explain why the Federal Reserve authorities had not produced the millennium that some had anticipated after 1935, and to ask for more clearly defined powers. If these were not granted, the Board would have a good alibi in the future. The Board's statement is worth repeating.

"In earlier statements the Board has pointed out that there are many phases of economic life that are not susceptible of control through monetary means alone; it has taken the position that stability in production and employment is a more satisfactory objective of public policy than price stability alone, and that concerted action by many agencies within and outside the Government, which have an influence on economic activity, is essential for the achievement of recovery and an adequate national income. Notwithstanding the inherent limitations upon the influence of monetary and credit action on economic condi-

³⁴ National Industrial Conference Board, *Economic Almanac*, 1949, p. 89.

³⁵ Woodlief Thomas, Assistant Director of the Division of Research and Statistics, wrote an article, "The Banks and Idle Money," in the March, 1940, *Federal Reserve Bulletin* (pp. 192 ff.), in which he asked what the banks' major functions were, to protect depositors' money or to help provide jobs for idle men. He decided they could do more than they had been doing if they would lower interest rates, make more long-term loans, and loan more to small business enterprises.

tions, the Board is convinced of the importance of such action at certain times, and feels strongly the necessity of having the mechanism of monetary and banking control and supervision at all times in condition to function effectively in the public interest. . . . While it appears to have been the intent of Congress that the Federal Reserve System have responsibility for regulating the supply and cost of money, including currency and bank deposits, the powers over this supply possessed by the Treasury now outweigh those of the System. . . .³⁶ Recognition by Congress of the limits within which monetary and credit action can be effective and determination of the mechanism and policies that would contribute most to its effectiveness will clear the way for consideration of broader aspects of a constructive program for further economic recovery and stability.³⁷

The Board unquestionably had a case. Considering the dominant position of the Treasury after 1935, they had handled the excess reserves problem reasonably well. Unfortunately, the public had expected more. If the Board could have gazed into a crystal ball, they would have been even less happy, for the Treasury's power was destined to grow. War began in Europe in September, 1939, and in this country in December, 1941. Unemployment melted and with it probably the chief safeguard against inflation. War generally brings inflation. By 1940 there were \$6 billion of excess reserves in member banks, which meant that inflation would be more difficult to handle. Helping to finance the war and yet curbing inflation was the Board's next major problem.

³⁶ In the 1938 *Annual Report* the Board complained particularly of the great powers of the Treasury over money, pp. 2-7.

³⁷ *Federal Reserve Bulletin*, May, 1939, pp. 363-364. Quoted again in italics, *ibid.*, 1940, p. 289. See also *Annual Report*, 1943, p. 10.

Σ CHAPTER XIV Σ

The Federal Reserve System in World War II, 1941-1945

DURING its generation of existence the Federal Reserve System has participated in an era of overblown prosperity, two wars, and a great depression. There has hardly been a dull moment. In peacetime the system has been expected primarily to maintain healthy credit conditions and economic stability. In wartime it has been expected, like everyone else, to help win the war. How may it best do that? Should it provide ample credit and thus keep the interest rates down,¹ or should it restrict the supply of money and credit with the idea of keeping the price level down? It might be argued that holding prices down would be the most effective contribution the Federal Reserve System could make towards winning the war and also towards preparing for the peace afterwards. In both wars, however, the Federal Reserve System has regarded the supplying of ample credit as its first duty and the curbing of inflation as secondary. Let us compare some of the financial aspects of the two wars, and then examine the part played by the Federal Reserve System in World War II.

Between 1914 and 1920 demand deposits and currency outside banks approximately doubled from \$11,600 million to \$23,700 million. Between 1939 and 1945 these same items almost tripled from \$33,400 million to \$102,400 million. Financial operations were on a much grander scale in the second war.

In the first war a doubling of money had led to a doubling of the price level. Some people anticipated that the price level would at least triple in World War II as a result of the greater increases in demand deposits and currency. Yet the price level rose but little during the war, less than one-third. Why did demand deposits and currency increase

¹ In the long run ample credit may lead to inflation and rising interest rates.

so fast in World War II? Why did prices not rise any more than they did? What did the Federal Reserve System do to curb or promote inflation? These are the questions which will be answered in this chapter.

TABLE 21. World War I and II Money Supply, Price Level, and Other Statistics
(in billions of dollars)

Item	June, 1914	June, 1916	June, 1920	June, 1939	June, 1941	Dec., 1945
Currency	1.5	1.9	4.1	6.0	9.6	26.5
Demand deposits	10.1	12.0	19.6	27.4	39.0	75.9
Total	11.6	13.9	23.7	33.4	48.6	102.4
Time deposits	8.4	10.3	15.8	26.8	27.7	45.8
Gov. secs. in bks.	.8	.8	4.6	18.8	25.5	100.7
Same in F.R. Bks.	—	.1	.3	2.6	2.5	24.3
Public debt	1.2	1.2	24.3	40.4	57.9	278.0
Nat'l income (1939 \$)	45.8	54.0	43.2	70.8	90.6	130.4 ^b
Price level ^a (consumers' index)	73.2	78.0	141.2	99.8	105.8	127.4

Source: Board of Governors, *Monetary and Banking Statistics*; *Federal Reserve Bulletins*, *passim*; National Industrial Conference Board, *Economic Almanac*, 1949, pp. 77, 82.

^a 1935-1939 is 100, B.L.S.

^b Author's estimate.

FINANCING WORLD WAR II

There are three basic ways of financing a modern war, namely, by taxation, by borrowing (selling bonds), and by creating money. They are economically desirable in the order given, but they are politically painful in that same order. As a result, all three are generally used. The government created money in the Revolution by printing it. To a certain extent, it did the same thing in the Civil War. In modern times we have become more subtle in our methods. In World War I the government produced money by increasing bank deposits. These were created as a result of purchases of government bonds by banks or by their customers with the aid of bank loans.² Substantially the same methods characterized the financing of World War II. True, at first glance, it might appear that this war was financed entirely by taxation and by borrowing and not by the creation of money at all. But again some of the borrowing was from banks, and again it resulted in increased demand deposits. In World War II the increase of demand deposits and

² *Federal Reserve Bulletin*, 1945, p. 300; *supra*, p. 79 n.

currency outside banks roughly paralleled the increase of government securities held by the banks. These securities may be considered the outstanding cause of the increased money supply. The public debt grew from about \$40,000 million in 1939 to a peak of \$278,000 million in 1945. Nearly 40 percent of this debt was held by the commercial banks, and 9 percent by the Federal Reserve Banks.

There were eight war loan drives from 1942 through 1945. In the course of these \$157,000 millions of securities were sold. Table 22 shows the magnitude of these drives, every one of which was larger than the biggest World War I Liberty Loan drive. In fact, most of them were larger than all of the Liberty Loan drives combined.³ In

TABLE 22. Eight War Loan Drives, 1942-1945

Drive	Total Sales
First War Loan drive	\$12,947 million
Second War Loan drive	18,555 "
Third War Loan drive	18,944 "
Fourth War Loan drive	16,730 "
Fifth War Loan drive	20,639 "
Sixth War Loan drive	21,621 "
Seventh War Loan drive	26,313 "
Victory Loan drive	21,144 "
Total	\$156,893 "

Source: *Federal Reserve Bulletin*, 1946, p. 120.

addition, government securities were being sold all the time through post offices and banks and by wage-deduction plans in plants and offices.

At this point we shall make a brief but important digression. To understand Federal Reserve Policy during the last war, you must know the extent to which taxes and borrowing of existing savings financed the war. What these did not provide had to be supplied by the creation of currency and credit, and it was the Federal Reserve System that had to provide those. Total expenditures between 1940 and 1945 were nearly \$400,000 million. For the period as a whole taxes provided 40 percent of this enormous amount; borrowings from non-

³ The four Liberty Loan drives totaled about \$17 billion, the Victory Loan drive \$4.5 billion more.

bank sources provided 33 percent; and banks provided the remaining 27 percent. Not all of that last 27 percent was savings: a considerable part was credit created by the banks or was Federal Reserve notes created at the request of the banks. As we shall see, the Federal Reserve System encouraged the creation of this credit. It had little choice, although the Board might have protested more vigorously.

Expenditures and taxes rose as the war progressed, but taxes always lagged behind. Both were meager in 1940-1941. In 1942-1943 taxes were particularly inadequate, providing only about a third of the needed revenues. It was in these two years, especially, that the banks and the Federal Reserve System were called upon for help. Not until the last two years, 1944 and 1945, did taxes yield about as much as they do today. By then expenditures were in the neighborhood of \$100 billion, so that even these large taxes provided only half the needed revenue. All this reveals a background of a weak fiscal policy during most of the war. That must be realized to understand the behavior of the Federal Reserve authorities and to understand the pressure they were under. Let us return now to the Federal Reserve System's credit-creating activities during the war period.

The tremendous expansion of demand deposits was made easier because of the excess reserves which had accumulated in the 1930's. In fact, this expansion of deposits was just the sort of thing that the Board had formerly feared would take place. But since the occasion was a war and not a 1929 speculative boom, the Board soon persuaded themselves that it was just as well that the excess reserves were there. The war had to be financed anyway. If there had not been excess reserves at the outset, the Board believed that they would simply have had to reduce reserve requirements more than they did. Between 1940 and 1945 total member bank reserves rose from \$14,000 million to \$15,000 million, and excess reserves dropped from \$7,000 million to \$1,500 million.⁴ Yet in 1946 member bank loans and holdings of other than government securities were no more than they had been in 1929.⁵ This is but another way of demonstrating that demand deposit expansion was chiefly caused by the war. The increase was backed by what

⁴ *Federal Reserve Bulletin*, 1942, pp. 741, 744.

⁵ Board of Governors, *Federal Reserve Policy*, p. 30.

had been excess reserves. Did the Board try to curb the inflation they knew this must produce? Or did others provide the best restraints on inflation? Let us see first what the Federal Reserve System did.

WHAT THE FEDERAL RESERVE SYSTEM DID TO CURB INFLATION

Before we entered the war, the Board and other government agencies worried considerably about inflation. They told themselves and the public that we had never fought a major war without experiencing at least a doubling of the price level. Economic history had taught that inflation increases the cost of war, creates dissatisfactions that interfere with the conduct of war, and leaves a legacy of economic disturbances afterwards. The Board believed, and properly, that they had considerable responsibility for limiting inflation as much as possible. Their intentions were good and their resolutions were admirable, but there was little they were able to do. Let us see, however, what the Board actually did to curb inflation.

As early as December, 1940, the Board and the Federal Advisory Council and the presidents of all the Federal Reserve Banks joined together in an unprecedented and urgent appeal to the President and to the Congress to take strong measures to hold prices down in the face of pressures growing out of the costly defense program. They presented a five-point anti-inflationary program.⁶

(1) They asked for an increase in reserve requirements beyond the maximum limit set in 1935, together with the right to fix reserve requirements for banks not in the Federal Reserve System.

(2) They urged that Congress repeal the Thomas amendment to the Agricultural Adjustment Act of 1933, which gave the President authority to issue \$3,000 million of greenbacks or to devalue the dollar.

(3) They urged a renewed sterilizing of gold to prevent further increases in excess reserves.

(4) They advocated that banks not be eligible to buy bonds and that the defense program be financed as much as possible out of existing savings.

(5) They urged that so far as possible defense costs be met out of taxes rather than by borrowing.

⁶ *Federal Reserve Bulletin*, 1941, p. 1.

The President and Congress paid amazingly little attention to this program, considering its origin and the forcefulness of its phrasing. Indeed, one wonders at the quickness with which members of the Board themselves tired of the program. Although reserve requirements were below the statutory maximum, the Board did not increase them to that for almost another year.⁷ They could have done that themselves. Banks bought half the bonds sold in the first two war loan drives in 1942.⁸ Not until the third drive, early in 1943, did the Treasury forbid banks to buy most classes of bonds.⁹

The Federal Reserve authorities did not use normal credit control devices to any appreciable degree. They received, however, a new selective credit control—on consumer buying—which they employed with some success. One way to keep prices down is to curtail the demand for products. While it is difficult to prevent people with cash from buying what they wish, at least those who buy on the installment plan or on some other form of credit can be discouraged. On August 9, 1941, the President issued an executive order authorizing the Board to regulate the terms and conditions of installment buying of consumers' goods other than housing. This the Board proceeded to do by Regulation W, which went into effect September 1. The following spring certain "soft" goods were added as well. Almost every issue of the *Federal Reserve Bulletin* since then has carried amendments and interpretations of Regulation W. Most of this is detailed and technical and need not concern us. We are interested in the main outline and the accomplishment of Regulation W.

The basic requirements were that all charge accounts should be paid within sixty days, installment credit should not run for more than one year, and customers should make a down payment of one-third of the purchase price. There were, of course, numerous exceptions to these general rules, and after the war the terms were relaxed somewhat. Regulation W was enforced against the lenders of credit, not the buyers. The lenders were forbidden to make loans on more favorable terms than Regulation W permitted, or to buy paper growing out of such loans, or to accept it as collateral for other loans.

⁷ *Federal Reserve Bulletin*, 1941, pp. 963, 974.

⁸ *Ibid.*, 1942, p. 1191; 1943, p. 4; *Annual Report*, 1942, p. 11.

⁹ *Federal Reserve Bulletin*, 1943, p. 707.

Regulation W was fairly successful. The amount of consumer credit had been increasing rapidly for three years before 1941. Between 1941 and 1944, with Regulation W in force, consumer credit declined from \$10 billion to \$5 billion.¹⁰ Precisely how responsible Regulation W was for this it would be difficult to say. The manufacture of automobiles, washing machines, and many other durable commodities was curtailed during the war. It may be argued that these would not have been available in great quantity anyway. But the demand for what was available might have been greater if longer credit terms had been permitted. Black market prices might have gone higher. People would certainly have incurred larger debts. There seems little doubt that Regulation W contributed something to preventing undue extension of credit and to holding down prices.¹¹

Conceivably the most significant contribution of the Federal Reserve Banks to curbing inflation was mechanical. They did an enormous job of selling and redeeming bonds and of serving the Treasury in other ways. In 1943 alone the Federal Reserve Banks handled 267,000,000 government checks.¹² During the latter half of 1942, eight thousand officers and employees, 40 percent of the personnel of the Federal Reserve System, were engaged in serving various government agencies and departments.¹³

The Federal Reserve System kept the funds needed for the war flowing steadily without unduly disturbing the money market or upsetting the nation's economic equilibrium. To prevent the periodic bond drives from contracting the normal flow of money, substantially the same devices were used as in World War I.¹⁴ Treasury bills were constantly bought by the banks to keep the government in funds. As some of these matured, they were paid out of the proceeds of the longer-

¹⁰ *Federal Reserve Bulletin*, 1941, pp. 825-828, 837-850; 1946, p. 570; Board of Governors, *Federal Reserve Policy*, p. 75.

¹¹ The Board also imposed some restrictions on nonessential loans by banks. Bank examiners were asked to curtail the volume of single-payment loans for nonproductive purposes and of loans for the accumulation of inventories of consumers' goods. Finally, there were limitation orders which limited private demand for credit with which to finance capital construction.

¹² Board of Governors, *Annual Report*, 1943, p. 38.

¹³ *Ibid.*, 1942, p. 35.

¹⁴ *Supra*, p. 76; also *Federal Reserve Bulletin*, p. 300; Board of Governors, *Federal Reserve Policy*, p. 21.

term loans. Also, the funds paid for government securities were generally left on deposit in local banks, most of which were special government depositories. In December, 1945, 10,870 banks held such "war loan accounts" totaling \$22,600 million.¹⁵ Sometimes these funds were spent in the same areas. In any event, the depository banks were notified every so often that a certain percentage of their government deposits would shortly be withdrawn. Thus, abnormal expansion and contraction of credit was avoided, and the borrowing of the Treasury caused no undue disturbances.

WHAT OTHERS DID TO CURB INFLATION

Developments outside the range of the Federal Reserve System's activities unquestionably did more to hold down the price level than the Federal Reserve System itself did. Chief among these were the price-fixing program, the country's greatly increased production, the sharp rise in taxes, extensive purchases of bonds by individuals, and the great increase in savings in other forms. These are of sufficient importance to warrant a few short paragraphs, if for no other reason than to indicate how much they overshadowed the Federal Reserve System's contributions.

The Office of Price Administration, or O.P.A., was probably the best-advertised curb on the rising price level. It was first set up in January, 1942, by the Emergency Price Control Act. On April 28, O.P.A. ordered that all prices except those of combat items and farm products should be frozen at the March, 1942, level. Rationing of scarce goods and rent controls were also begun, so that about 80 percent of the items entering the average family's cost of living were covered. From August, 1939, until May, 1942, when O.P.A. began, prices had risen 32 percent. From then until the end of the war they rose another 9 percent. True, some critics contend that this 9 percent presents a falsely favorable picture. The quality of some goods declined, people went without others or bought high-priced substitutes, and black markets flourished. But even if allowance is made for these factors, O.P.A. did an extraordinarily effective job of holding the price level down.

¹⁵ There were 2348 such depositories at the end of 1939 and 8475 in April, 1943. Secretary of the Treasury, *Annual Report*, 1939, p. 100; 1945, p. 134.

After the war, businessmen and the public became more impatient with its restraints; it lost its effectiveness, and was finally repealed in November, 1946.¹⁶

Between 1939 and 1945 current national income grew from \$72,500 million to \$181,700 million. The 1945 dollars were, of course, less valuable. Physical goods and services increased almost 80 percent. By 1943 and 1944 we were devoting about half of our national income to war production, yet we were miraculously able to create these war supplies without greatly reducing normal production of civilian goods. In other words, we doubled national income by adding war output to peacetime civilian output. As a consequence, there were more goods available for the increased currency and credit available. This was a significant factor in holding down prices.

The increased money was also drawn off into higher taxes and increased savings. Taxes rose from \$5,000 million in 1939 to \$44,000 million in 1945. Individuals and nonbanking institutions bought only \$3,000 million of bonds in 1941 compared with \$33,000 million in 1945.¹⁷ Time deposits doubled between 1939 and 1945. All these factors tended to keep the price level from rising. Most of them were more important in holding down prices than anything the Federal Reserve System itself did. In fact, the Federal Reserve System may have done more to push prices up than to hold them down.

WHAT THE FEDERAL RESERVE SYSTEM DID THAT PROMOTED INFLATION

There are striking contrasts between the government's methods of borrowing in World War I and in World War II. In the first war, the government paid a higher rate of interest each time it sold bonds to the public, the rates rising from 3.5 percent on the First Liberty Loan to 4.75 percent on the Victory Loan.¹⁸ In the second war, rates on bonds ranged from 1.5 to 2.5 percent, depending on their maturity, and were the same throughout the war.¹⁹ A "pattern of rates" was established

¹⁶ E. L. Bogart and D. Kemmerer, *Economic History of the American People* (1947), p. 758.

¹⁷ *Federal Reserve Bulletin*, 1945, p. 721.

¹⁸ These rates were considered fairly low at the time.

¹⁹ Treasury notes, of 3-5 years, in the fifth and sixth war drives paid 1.25 percent. Savings, or E, bonds, if held to maturity, paid 2.9 percent.

early and maintained. Another contrast was in the opportunities people had for selling bonds when they wished to get cash. They had to sell World War I Liberty Bonds for whatever the market would pay. In 1920 it paid as low as \$82 for a \$100, 4.25 percent, tax-exempt bond. But World War II bonds were supported by the Federal Reserve System at the request of the Treasury. They could always be redeemed at par or better. In fact, they rose in price during the war and remained high after the war.

The government soon announced that buyers of government securities could get cash for their securities any time they wanted to. This had inflationary consequences. Acting in coöperation with the Treasury, the Board announced on April 30, 1942, that the Federal Reserve Banks would buy unlimited ninety-day 0.375 percent Treasury bills with no loss to the customer.²⁰ The 0.875 percent certificates were also supported. On August 3, 1942, the Board said the banks might have an option to buy back their bills at the same rate at which they sold them.²¹ About the same time the Federal Reserve Banks reduced their rediscount rates to 1 percent and allowed a special rate of 0.5 percent on advances secured by government obligations of one year or less.²² Advances were also possible for ninety days instead of fifteen.²³ The support of the Treasury bills and certificates was accompanied by a similar agreement between the Treasury and the Federal Reserve System, putting floor prices under notes and bonds as well. Since new issues were always made at the same rates, a "pattern of rates" was established. The following were some of the more important rates in the pattern.

²⁰ Board of Governors, *Federal Reserve Policy*, p. 19.

²¹ Board of Governors, *Annual Report*, 1942, p. 107. "In the event it became necessary for a bank or other holder of bills temporarily to adjust his cash position, he could sell the bills to a Federal Reserve Bank under the repurchase option and reacquire them after the need for funds had passed, thus avoiding the necessity of selling the bills in the market to meet a temporary situation. It was believed that this arrangement would encourage fuller investment of idle short-term funds and thereby bring about a wider distribution of bills."

²² Since most banks had plenty of bills and certificates, this was the controlling rate.

²³ *Ibid.*, 1946, p. 93.

TABLE 23. "Pattern of Rates" in World War II

90-day Treasury bills	.375 percent
1-year Treasury certificates	.875 "
8-to-10-year bonds	2 "
Long bonds	2.5 "

One purpose of these established low interest rates was to encourage people to buy securities promptly. Everyone was assured that higher rates would not be available later on. Banks were urged to buy Treasury bills at all times and especially to invest their excess reserves in them. Excess reserves began to melt away after 1942. (See Chart XI, page 154.) In addition, low rates assured strong markets for all bonds. Finally, they kept down the cost of the war.²⁴ But there were disadvantages to the plan, too.

Although the rates were low, it is notable that the spread between the short-term Treasury bills and the long-term bonds was relatively wide. This was what caused the difficulties. All government securities, both short and long, were virtually as good as money, for they all had a guaranteed floor price. There was every inducement for banks to prefer the longer-term securities which paid the higher rates. However, the banks were not ordinarily permitted, after the second war loan drive, to buy bonds directly from the Treasury. In fact, they were allowed to hold only bonds with ten years or less to maturity. Despite these restrictions, it was not difficult for the banks to turn the situation to their advantage. They learned to play the "pattern of the rates," as the game came to be called. They sold Treasury bills and certificates to the Federal Reserve Banks and bought eligible long-term bonds from any private investors who were willing to sell them. Since the supply of such bonds was limited, their price soon went up.²⁵ Switching securities in this way was known as a "roll-over" operation. This type of operation was frequent during war loan drives. At such times savings banks and other institutions were glad to sell their bonds at a premium to banks and buy new ones at par, holding these in turn for a rise and profitable resale at a later date.²⁶ Roll-over operations were not illegal,

²⁴ *Federal Reserve Bulletin*, 1942, p. 207.

²⁵ *Federal Reserve Bulletin*, 1946, pp. 461, 467.

²⁶ Board of Governors, *Federal Reserve Policy*, pp. 20-23, 92.

but at the time of the seventh war loan drive, the Treasury requested nonbank investors not to participate in them.²⁷

The harm in roll-over operations lay in the fact that they indirectly increased bank deposits. In a roundabout way, they amounted to government borrowing from banks. When the banks sold their Treasury bills to the Federal Reserve System, they increased their reserves. Many banks were doing this. They could now expand their deposits several times the amount of the new reserves. They expanded them partly by buying eligible old bonds. The institutions selling the old bonds used the funds to buy new bonds. These funds were generally deposited in the government's "war loan accounts" in the bank. In short, the Federal Reserve Banks were engaged essentially in open-market buying operations, which, of course, increased the supply of bank credit.

The Federal Reserve authorities took pride in the fact that bank buying of government securities was not hampered by lack of reserves. For example, in 1942, the Board reported, "in view of the fact, however, that all the necessary funds could not be raised in time by taxation and borrowing from non-banking investors, the Federal Reserve authorities endeavored to induce banks to make more complete use of their existing reserves and also supplied them with such reserve funds as they needed from time to time to purchase the government securities offered to them."²⁸ That was the year that the banks bought half of the bonds which the Treasury offered. And a year later the Board boasted that they had supplied reserves so that banks could buy more Treasury bills, that they had protected the government security markets, that they had kept the "pattern of rates," and that they had rec-

²⁷ There were, however, some questionable practices which the Treasury repeatedly asked the Federal Reserve Banks to try to eliminate. For example, banks would loan money to customers on a 4 percent or even 2 percent "margin" so that they might buy bonds. The bonds nearly always went up in price after the drive; so it was almost a "sure thing" for the customer. This was a not uncommon practice. Also, banks sometimes loaned customers the money to buy bonds, promising to buy the bonds in later on. The customer meanwhile paid the interest that he received on the bond to the bank in the guise of interest on the loan. For other practices that were discouraged, see the *Federal Reserve Bulletin*, 1944, pp. 744-745; *ibid.*, 1945, pp. 107, 297.

²⁸ Board of Governors, *Annual Report*, 1942, p. 9. See also *Federal Reserve Bulletin*, 1942, p. 633.

ommended that the reserve requirement for government deposits be withdrawn.²⁹

Federal Reserve Banks supplied reserves by buying government securities, notably Treasury bills, in the open market. This they did almost continually during the war, with the result that the Federal Reserve Banks' holdings of government obligations increased from \$2.5 billion at the end of 1939, mostly notes and bonds, to \$24 billion at the end of 1949, mostly Treasury bills and certificates. To help the banks still further, from April 3, 1943, to June 30, 1947, the Board did not require them to carry reserves on "war loan accounts."³⁰ Because central reserve city banks quickly invested their excess reserves in Treasury bills, they were soon in danger of overdrawing their accounts at the Federal Reserve Bank; so, in 1942, their reserve requirements were cut from 26 percent to 20 percent.³¹ Gold certificate reserves of the Federal Reserve Banks declined also, reaching about 50 percent by 1945. Accordingly, Congress, on June 12, 1945, cut the traditional Federal Reserve Bank reserve requirements of 40 percent against Federal Reserve notes and 35 percent against member bank deposits to a blanket 25 percent.³² Loosening reserve requirements in these various ways was perhaps necessary, but it had the effect of promoting credit expansion and of stimulating inflation.

Three other activities of the Federal Reserve Banks may also have been inflationary to a minor degree. One was securing permission from Congress to make very short-term loans to the Treasury up to a total of \$5 billion. These were chiefly to cover temporary Treasury overdrafts.³³ A second was the guaranteeing of loans to war industry. The third was the issuance of \$660 million of Federal Reserve Bank notes in 1942. Let us look further at the second and third of these.

The Federal Reserve Banks, under Regulation V, guaranteed war

²⁹ *Annual Report*, 1943, pp. 12, 31. See also *Federal Reserve Bulletin*, 1943, pp. 111, 1056.

³⁰ *Federal Reserve Bulletin*, 1943, pp. 373, 378. The banks did not have to pay F.D.I.C. assessments on them either.

³¹ *Federal Reserve Bulletin*, 1942, pp. 739, 749, 878, 989. First the Board had to get Congress to grant them power to alter central reserve city requirements without altering reserve city requirements.

³² *Ibid.*, 1945, pp. 215, 644.

³³ Board of Governors, *Annual Report*, 1942, p. 2. *Supra*, p. 78.

loans which were too risky or too large for local banks to handle with safety. Early in the defense program, the War and Navy departments made loans to prime contractors up to 30 percent of the contract price. This was not enough and was of no help at all to subcontractors. On March 26, 1942, the President signed Executive Order No. 9112, authorizing the Federal Reserve Banks to act as fiscal agents for the government in guaranteeing loans. Under the new plan a contractor would apply to his local bank for a loan. The bank would, in turn, ask the nearest Federal Reserve Bank to guarantee part of it. Special officers at each Federal Reserve Bank passed on these loans and reported to a central office under the Board in Washington. The guarantee was a promise that on ten days' notice the Federal Reserve Bank would buy the paper from the local bank regardless of whether a default had occurred. Later in the war other variations of guaranteed loans were devised so that firms would not have their working capital or even their production capital all tied up in government work at the end of the war and be unable to compete for peacetime business. From April, 1942, to December 31, 1945, 1400 banks participated in the Regulation V program. Altogether 8000 loans, aggregating \$9,900 million, were guaranteed and executed. They varied in size from \$400 to \$1,000 million, but three-quarters of them were less than \$500,000. The largest aggregate outstanding at any one time was \$2,000 million in October, 1944. Guaranteeing the loans made more credit available to the firms than would have been possible without the guarantee. But Regulation V contributed significantly to the successful prosecution of the war and was undoubtedly necessary.³⁴

The issuance of Federal Reserve Bank notes in December, 1942, reflected little credit on either the Treasury or the Board. Under the Emergency Banking Act of 1933, which was still in force, further issues of Federal Reserve Bank notes were possible if backed by government bonds. In December, 1942, on the excuse of saving \$300,000 of paper and printing costs,³⁵ the Board, after consulting with the Treasury, authorized the Federal Reserve Banks to use \$660 million of these

³⁴ Board of Governors, *Annual Report*, 1945, pp. 31 ff.; *Federal Reserve Bulletin*, 1946, pp. 240 ff.

³⁵ Board of Governors, *Annual Report*, 1942, p. 50.

notes that had been stored away since 1933. The objectionable feature of the transaction was that the notes were turned over to the Federal Reserve Banks as if they were a government deposit, say of greenbacks. But Federal Reserve Bank notes, by their very nature, are Federal Reserve liabilities, not assets. Thus what this transaction amounted to was that the Treasury was creating \$660 million of paper money with the connivance of the Federal Reserve System. It must be admitted that this money would have been created through the Federal Reserve System in one way or another. The evil was not so much the actual issuance of this \$660 million more of bills as the manner in which it was done. If left unchallenged, it might have established a dangerous precedent. Such a method of issuing paper money could have inflationary consequences in the postwar period. Protests were heard both in and out of Congress.³⁶ In 1945, Congress repealed the power to issue Federal Reserve Bank notes. The Board should have known better than to become involved in this dubious affair.

Incidentally, Congress gave the Board in 1945 the permanent right to back Federal Reserve notes with government bonds. Up to then that had been an emergency privilege, extended every two years.³⁷ This was the final break with the tradition that Federal Reserve notes should be backed by gold and self-liquidating paper. It made monetization of the public debt easier and was also inflationary.

OTHER FACTORS THAT PROMOTED INFLATION

Just as the Federal Reserve System's activities in curbing inflation were unimportant compared with developments beyond its control, so likewise its part in promoting inflation was small compared with a development beyond its control. This was the expenditure of \$383,000 million between 1940 and 1945 to finance the most costly war in all history. Much of this expenditure represented shot and shell, engines of destruction, billions of hours of soldiering, and masses of equipment with little peacetime value. The producers of these goods wanted to use their wages to buy civilian goods and services. Likewise, the producers

³⁶ Walter E. Spahr, "The Manipulation of Our Federal Reserve Bank Notes" (Economists National Committee on Monetary Policy, 1 Madison Avenue, New York City, May, 1944).

³⁷ *Federal Reserve Bulletin*, 1945, pp. 563, 644.

of civilian goods and services wished to buy civilian goods and services. The bidding of both groups for civilian goods tended to push up prices.

Or let us look at it another way. Someone had to pay for the war. In the final analysis, some form of taxation is the only method of paying for a war. In this war immediate taxation took \$153,000 million. Borrowing represents delayed payment of taxes. Some \$126,000 million was borrowed from nonbank sources. That left \$104,000 million to be borrowed from banks, only a part of which represented the investment of existing savings.³⁸ This borrowing from banks gave rise to inflation, or disguised taxation.

CONCLUSION

On balance, then, did the activities of the Federal Reserve System in World War II promote or curb inflation? On the one hand, the Federal Reserve Banks helped hold down the cost of the war in relatively minor ways by their operation of Regulation W, dealing with consumer credit, and by various helpful services. On the other hand, they promoted inflation somewhat by their reduction of reserve requirements, by their unashamed part in the issuance of \$660 million of Federal Reserve Bank notes, and most of all by their great pride in seeing to it that banks always had plenty of reserves to buy Treasury bills or to help customers finance purchases of government securities. It must, of course, be borne in mind that the Federal Reserve Banks, like everyone else, were primarily interested in winning the war. Still, it would appear that they did more to stimulate inflation than to curb it. Their influence in both respects was secondary, however. Other factors were more potent in curbing and promoting inflation.

The war showed that the Board were not any longer an institution formulating major policies. They could do little more than advise. Most of the time they took their orders from the Treasury without much protest, like good soldiers. Would they recover some of their independence after World War II as they had eventually after World War I? That will be discussed in the next chapter.

³⁸ Board of Governors, *Federal Reserve Policy*, p. 95; *Federal Reserve Bulletin*, 1945, p. 721.

Σ CHAPTER XV Σ

Recent Problems of the Federal Reserve System

"The duties of the reserve authorities fall into two main groups. One group includes duties which relate primarily to the maintenance of monetary and credit conditions favorable to sound business activity in all fields. . . . They call for policy decisions from time to time . . . open market operations, fixing reserve requirements. . . . The other group includes duties which relate primarily to the maintenance of regular services for the member banks . . . the Government and the public." This quotation is from a small book entitled *The Federal Reserve System: Its Purposes and Its Functions*,¹ which is published by the Board to acquaint the public with Federal Reserve activities.

The period of World War II saw a great growth in the service functions of the Federal Reserve System but a definite decline in the independence the Board was able to maintain in making policy decisions. Three reasons may be assigned for this decline, namely, the greater independence of banks, the growing power of the Treasury, and the new economic philosophy prevailing. All three tended to reduce the authority and independence of the Federal Reserve System. Let us look at them in more detail.

Commercial banking was changing in character in the 1930's, but it altered even more in the course of the war. Table 24 shows a skeleton bank statement for all member banks with the figures representing percentages. This reveals the chief changes that had occurred. Banks were changing from lending institutions to investment trusts. Loans declined during most of this period, although they increased somewhat after World War II. In contrast, investments were rising. The bulk of banks' earning assets were in government securities. Banks liked them because they could be turned into cash readily. At the end of 1945 the member banks held about \$80 billion of government securities. The

¹ Pp. 23-24.

Treasury "encouraged" the Board to support the government security market. The New York Federal Reserve Bank was the Federal Reserve System's agent, buying government securities that found no other buyers at the pegged prices. As a result of this situation, government securities were as good as excess reserves. This meant that the member banks could be independent of Federal Reserve restraints.

TABLE 24. The Changing Character of Commercial Banking
(percentage figures for member banks)

Item	Dec. 31, 1926	Dec. 31, 1939	Dec. 31, 1945	June 30, 1948
<i>Resources:</i>				
Loans	54	24	16	27
Investments	22	36	61	48
(Gov't secs.)	(8)	(25)	(56)	(43)
(Others)	(13)	(11)	(4)	(6)
Reserves	5	21	11	14
Other assets	19	18	11	10
	100	100	100	100
<i>Liabilities:</i>				
Deposits	82	89	94	92
(Government)	(1.5)	(1.5)	(16)	(1)
(Other demand)	(44)	(49)	(49)	(59)
(Other time)	(27)	(21)	(18)	(22)
(Interbank, etc.)	(10)	(17)	(12)	(10)
Capital accounts	12	10	5	7
Other liabilities	6	1	1	1
	100	100	100	100

Source: Board of Governors, *Banking and Monetary Statistics*, pp. 72-75, and *Member Bank Call Reports* Nos. 104 and 109. The calculations are mine. Since the percentages are rounded off, they do not always add up exactly to 100.

There was little the Board could do to curb credit expansion as long as the Treasury pursued its support policy.

It may be asked why the Board could not assert their independence and defy the Treasury. If the Board believe that it is for the good of the nation that the support policy be stopped, should they not say so and order the New York Federal Reserve Bank to cease buying government securities? The answer is that even in a vast government organization where departments often work at cross-purposes, this would be an appalling act of rebellion. It would arouse the ire of the President and Congress and ruin the public careers of the top Federal Re-

serve officials involved.² Furthermore, the Treasury has tremendous powers of its own over the money and credit supply. For example, the Treasury can decrease its deposits with the Federal Reserve Banks and increase them with thousands of member bank depositaries. It still has the power to license banks which it got in 1933. It can increase its rate of spending. It can release gold from its stabilization fund, and this would have the same expansionary effect as gold imports. Under the Gold Reserve Act of 1934 it can sell gold at a price above \$35 an ounce if it deems this to be in the public interest. That amounts to further devaluing the dollar. And it can buy more silver. In short, the Treasury's powers over money and credit are perhaps greater than are those of the Federal Reserve System.³ A duel between them is unthinkable. Marriner Eccles, while chairman of the Board in 1946, wrote, "The Federal Reserve has worked and will continue to work in close cooperation with the Treasury. The public interest requires the closest teamwork. The Federal Reserve is in complete agreement with the Treasury's debt-management program, as well as the general fiscal policy, as outlined on several occasions by Secretary Snyder."⁴

² Testifying before the House Banking Committee, August 3, 1948, Marriner Eccles said, "if the Congress felt that we should withdraw support from the market, if they would want to indicate that and take the responsibility for it, then certainly we would do it" (p. 23 of Board reprint entitled "Means of Combating Inflation"). The Hoover Commission reported in January, 1949, "Today the Federal Reserve is by law completely independent of the Treasury and only indirectly responsible to the President. . . . Yet as a practical matter, on virtually every major issue where Federal Reserve-Treasury differences have arisen, the Federal Reserve has gone along with the Treasury—for example in the handling of wartime and postwar financing. The reason is that the Federal Reserve officials, as responsible government servants, would never be willing to flatly disrupt or destroy the Government fiscal policy on important matters. Ultimately the central bank must go along, whatever its formal legal status, and ultimately it is the Chief Executive, who, within the limits imposed by Congress, establishes the Government's monetary and fiscal policy. The Secretary of the Treasury is almost invariably an intimate adviser of the President. By his very semi-isolated legal status the Chairman of the Federal Reserve Board almost certainly will not be." *Task Force Report on Regulatory Commissions*, Appendix N, p. 110.

³ Board of Governors, *Annual Report*, 1938, pp. 3, 5; 1939, p. 364.

⁴ *Federal Reserve Bulletin*, 1946, p. 1233. Eccles told the House Banking Committee in August, 1948, "In most countries the central banking system is owned by the government and is a mechanism of the treasury. It has little independence. In this country there has been a strong feeling that there should be a political independence on the part of the Federal Reserve System. Yet there must be an

Finally, the independence and prestige of the Federal Reserve authorities are weakened by the new economic philosophy of the 1930's and 1940's, which emphasizes national planning. The Keynesian, or national income, approach to economic problems took deep root in Washington in this era.⁵ This approach minimizes the importance of merely manipulating the currency and credit supply to keep the economy stable. The Board repeatedly emphasized the fact: "Economic stability depends on a complex of forces, of which credit policy is only one. In order to be effective in bringing about stability the regulation of the availability and cost of money must be integrated with a flexible fiscal policy and at critical times reinforced by direct controls over prices, wages and supplies."⁶ Harvard's Professor John H. Williams, who was also vice-president of the New York Federal Reserve Bank, told the American Economic Association in 1941, "One of the most striking facts about the development of fiscal policy in the past decade is that, while it grew out of monetary policy and was designed to supplement and strengthen it, fiscal policy has ended up by threatening to supplant monetary policy altogether."⁷

The Board began to lose their independence as a policy-making agency after 1935. The war emergency only made the government's control more apparent. After the war the Board found themselves in a world where the member banks were more independent, where the Treasury was more dominant, and where the new economic philosophy

effort at liaison with any government in power. I do not believe that a central banking system can be in a position where, if the Congress appropriates the money, they can then say to the Treasury—which is part of the Government—'You cannot go out and raise the money except under our dictation, and at such a price as we may determine.' That is something that has just never been done. . . ." He added that all the Board was entitled to do was to give advice. Board reprint, p. 23.

Some time later the new chairman, Thomas McCabe, said in his report for the Board before the Joint Economic Committee, "I think the System's support of the Government securities market has been wise and necessary. It is one of the outstanding accomplishments of the postwar period." *Federal Reserve Bulletin*, Feb., 1949, insert.

⁵ *Supra*, pp. 146 ff.

⁶ Board of Governors, *Annual Report*, 1943, p. 10. For similar statements before this, see *Federal Reserve Bulletin*, 1939, pp. 363-364; 1940, p. 289.

⁷ *American Economic Review*, Supplement, March, 1942, p. 234.

assigned them only a minor role. Yet the public still expected them to deal firmly with major economic problems.⁸ How well have they lived up to this expectation?

DEPRESSION OR INFLATION?

Economists generally agreed that the end of the war would be followed by a trying period during which the nation would convert its industries back to the production of civilian goods. They disagreed as to whether this would lead to inflation or deflation. One group prophesied that the easing of war tensions would cause the public to spend a good part of their war-accumulated savings, and that this, under conditions of slackened economic controls and a continued dearth of goods, would bring on a serious postwar inflation.⁹ These economists were unduly pessimistic but not too far wrong. Another group, many of them holding important advisory positions in Washington, feared that the laying off of war workers would induce less spending, thus less investment, growing unemployment, and depression. Believers in Keynesian economic philosophies were especially inclined towards this view. Their belief was further supported by the fact that past wars had been followed by depressions.

Those who feared a depression was imminent had a variety of remedies. Among them were increased wages, guaranteed living standards, extensive public works, regulations to prevent monopolies, and low interest rates. The whole was intended to achieve a national income of about \$170 billion, which was regarded as the minimum needed to provide jobs for sixty million persons.¹⁰

After V-E day in May and V-J day in August, 1945, the indexes of industrial production, factory payrolls, and employment declined no-

⁸ The chairman of the Senate Banking Committee, on July 29, 1948, asked Marriner Eccles two questions which he called "\$64 questions." They were: "Where should the American people place responsibility for the Federal Reserve Board not getting the credit controls it asked for?" and "Who is responsible for the inflationary development in this country which has taken place since the war?" Hearings pursuant to S. J. Res. 157, p. 1 of Board reprint.

⁹ Board of Governors, *Annual Report*, 1945, p. 16; *Federal Reserve Bulletin*, 1945, p. 533, 1101.

¹⁰ See, for example, E. A. Goldenweiser, "Postwar Problems and Policies," *Federal Reserve Bulletin*, 1945, pp. 112 ff. Goldenweiser was the economist for the Board.

ticeably.¹¹ Prices rose, however, and the overall effect was in no sense as bad as the depression prophets had forecast. The happier result can hardly be attributed to Federal Reserve actions, for the Board took no important steps at this time. Their most significant action was to raise the basic time limit for installment purchases under Regulation W from twelve to eighteen months in October, 1945.¹² In the end, most of the programs of the pessimistic government planners had to be laid away until the "inevitable" postwar depression materialized. Meanwhile, policy makers and public became increasingly concerned over the rising price level.

INFLATION THREATENS

Between August, 1945, and November, 1946, prices rose more than they had since the outbreak of the war in Europe. Some blamed this rise on the large number of strikes—more man-days were lost in 1946 than in any previous five years. Some blamed the rise on the continuance of O.P.A., alleging that it discouraged increased production. Some blamed it on the removal of the excess profits tax and other controls. Some blamed it on greedy businessmen. Some recognized that it was the inevitable result of a war which had been partly paid for by creating money. Regardless of diagnosis, most people agreed that the mounting inflation should be curbed. They expected that the Federal Reserve Banks would have a major part in doing that. Few realized that the Federal Reserve authorities did not have sufficient independence or political power to do the job well. Even if they had, the dilemma they faced was a difficult one to solve. Let us examine it: it was the Federal Reserve System's major postwar problem.

When faced with expanding credit and rising prices, the Federal Reserve authorities are expected to take such steps as stiffening margin requirements, increasing consumer credit requirements, raising reserve requirements, increasing rediscount and other interest rates, and engaging in open-market selling operations. Why did the Board not do

¹¹ The figures from February, 1945, to February, 1946, were as follows: adjusted industrial production dropped from 236 to 152, adjusted factory employment from 168 to 122, and factory payrolls from 345 to 211. *Federal Reserve Bulletin*, 1946, "Business Indexes."

¹² *Federal Reserve Bulletin*, 1945, p. 10.

all of these things without further delay? They did do a few of them, and the Treasury, probably at their urging, did others. The Board advanced margin requirements from 75 to 100 percent in February, 1946. They stiffened Regulation W again in the fall of 1946.¹³ Reserve requirements were at their maximum already, except in the case of the central reserve city banks, and these banks were not expanding their loans. Raising rediscount rates could only be a gesture, since no appreciable amount of eligible paper had been rediscounted for years. The Board urged the Treasury to raise the rates on Treasury bills and certificates, but the Treasury was reluctant to do so.¹⁴ The Board, however, discontinued their own 0.5 percent preferential rate on advances secured by government obligations of under one year. The discontinuance was begun at three Federal Reserve Banks on April 24, 1946.¹⁵ This encouraged banks to sell their government securities to the Federal Reserve Banks instead of borrowing from them when their reserves were low. It had some restrictive effects because it was combined with the Treasury's debt retirement program. Let us see how that operated.

The most effective contraction of credit was accomplished by the Treasury, which had large balances in some 10,000 depository banks when the war ended. From the end of 1945 to June of 1947 it used these balances to reduce the public debt by \$23 billion. The Treasury owed the debt to three groups: people and nonbanking corporations, banks, and Federal Reserve Banks. It mattered considerably whose securities the Treasury elected to pay off.

To the extent that the Treasury retired those held by people or nonbanking corporations, the results were meager. Funds were transferred from an account requiring no reserves to one requiring reserves. The only consequence was that the banking system had to have slightly larger reserves.

To the extent that the Treasury paid off commercial banks, it and

¹³ Consumer installment loans had almost doubled between May, 1945, and October, 1946.

¹⁴ Eccles' testimony before the House Banking Committee, August 3, 1948. Board reprint, p. 23.

¹⁵ In New York, Philadelphia, and San Francisco. *Federal Reserve Bulletin*, 1946, p. 462.

the banks canceled their debts to one another, and total demand deposits were reduced that much. Most of the debt being redeemed belonged to banks. This contracted credit noticeably.

But to the extent that the Treasury redeemed securities held by Federal Reserve Banks, its action was most effective, for it worked like an open-market selling operation. The Treasury paid the Federal Reserve Banks by drawing on its accounts with commercial banks. This reduced their reserves in the Federal Reserve Banks and curbed credit expansion by several times the amount of reserves so eliminated. If unresisted by the banks, it was the most effective way of discouraging credit expansion and thus of fighting inflation. But commercial banks resisted when their reserves began to dwindle as a result of this action. All they had to do to replenish their reserves was to sell some of their Treasury bills and certificates to the Federal Reserve Bank of New York. Thus, although the Treasury redeemed \$6,600 million of government securities held by the Federal Reserve Banks between March, 1946, and June, 1947, Federal Reserve holdings of government securities declined by only \$2 billion.

Bank deposits and loans continued to increase despite all the above efforts of the Treasury and the Board.

On July 2, 1947, the Federal Reserve authorities announced that, having consulted with the Treasury, they were going to end their unlimited support of the 0.375 percent Treasury bills.¹⁶ The yield on these rose to 1 percent early in 1948. The rate on Treasury certificates was supported for a short time longer, and then it likewise rose. This increased the cost to banks of converting short-term government securities into reserves to make more loans. Yet despite these credit restriction measures, total demand deposits increased to \$9 billion in the last three quarters of prosperous 1947. Congress let Regulation W expire on November 1.¹⁷ Business loans and consumer credit continued to advance sharply.

By the middle of 1947, also, the Treasury had used up its wartime surplus deposits in commercial banks. Any further open-market selling operations would have to come either as a result of a budgetary sur-

¹⁶ Effective July 10. *Federal Reserve Bulletin*, 1947, pp. 776-777.

¹⁷ Board of Governors, *Annual Report*, 1947, p. 45.

plus accruing to the Treasury and used to redeem more Federal Reserve debt, or as a result of normal open-market selling operations by the Federal Reserve Banks themselves. Fortunately, the Treasury had a cash surplus of \$6 billion in 1947 and of \$8 billion more in 1948.¹⁸ It used much of this in 1948 to redeem more securities from Federal Reserve Banks.¹⁹ All these activities helped to restrain the threatening inflation but did not stop it. Deposits fell off slightly during 1948, and loans increased at a slower pace. Why, it may be asked, did the Federal Reserve authorities leave themselves at the mercy of some 15,000 banks which could increase their reserves and expand credit almost at will by selling more of their government securities? Why did the Board not order outright open-market selling operations? Because the Treasury did not wish it. Why not?

OBJECTIONS TO OPEN-MARKET SELLING OPERATIONS

If the Board ordered government securities sold to contract member bank reserves, the member banks could replenish their reserves by selling some of their own government securities right back to the New York Federal Reserve Bank. That would look ridiculous and accomplish little or nothing. For such a restrictive policy to make sense, the New York Federal Reserve Bank would have to cease altogether supporting the government bond market.

Let us suppose that the Board and the Treasury agreed to that, and that the Federal Reserve Banks initiated selling operations under such conditions. What would be the consequences? Various objectionable ones were foreseen.

One was that such sales would lower security prices and thereby raise interest rates. A 1 percent rise in interest rates, it was alleged, would eventually add \$2.5 billion to the annual cost of carrying the \$250 billion public debt, not to mention \$1.5 billion more on total private debts of about \$150 billion. This would not happen immediately, of course, but as the securities came due they would have to be re-

¹⁸ Board of Governors, *Annual Report*, 1949, February, inserted report of Chairman McCabe, p. 5.

¹⁹ Banks sold securities to replenish their reserves; the Federal Reserve Banks bought them, and their holdings of government securities stayed high.

financed at the higher rates.²⁰ The supporters of open-market sales replied that it was far more important to the government to prevent inflation and all the increased governmental costs which higher prices would entail than merely to hold down the interest rate on the public debt. Service on the debt, after all, was just one-eighth of total governmental costs.

A second objection was that a drop in bond prices would seriously reduce the value of the assets of the country's 15,000 banks. After the war more than half of their total assets were in government securities, half of these being long-term bonds. A 1 percent rise in interest on a bond maturing in ten years would reduce the value of that bond from, say, 100 to 93; and this, in turn, for all the banks in the country, would wipe out a third of the stockholders' equities. For individual banks it might mean insolvency. Marriner Eccles asked, "If Government bonds totally tax exempt, yielding a rate of 4.5 per cent, without any support by the Federal Reserve System, could go to 82 or 83, when our national debt was \$25,000,000,000 only, where would a 2.5 per cent fully taxed bond go, if the Federal Reserve withdrew its support when there was a debt of \$250,000,000,000?"²¹ Advocates of open-market selling operations replied that bonds would not go as low as was feared. The bonds had been much sought after for years, had risen in price, and were still above par. Besides, all the banks needed to do was to hold them until maturity and stop treating them as excess reserves.²²

²⁰ *Federal Reserve Bulletin*, 1946, p. 1231. Mr. Eccles felt that the higher interest rates would only bring added costs without any added benefits. If opportunities to make loans were good, the banks would still dispose of their securities to replenish their reserves.

²¹ "Means of Combating Inflation," p. 33 (Board reprint of statement of M. S. Eccles before House Banking Committee on S. J. Res. 157, Aug. 3, 1948).

When the Federal Reserve authorities lowered their support prices of bonds in December, 1947, these bonds dropped precipitously, creating a mild panic in the dealers' market.

It may or may not be significant that in August, 1948, the bond market would pay only 82.5 for Panama 3.25 percent bonds of 1994. The servicing and final payment of these bonds were virtually guaranteed by the United States government, but they were not "pegged" on the market. That price gave those bonds a yield of 4.125 percent. If these bonds had been 2.5 percents instead of 3.25 percents, they would presumably be selling for 74. Robert E. Bedingfield, article in *Barron's*, August 16, 1948, p. 7.

²² Others said that the market could be allowed to fall part of the way down and then by means of supports again be encouraged to stabilize. Eccles asked,

A third objection was that the problem was not properly stated. It was too much money that was found undesirable. These critics denied that so much money was undesirable. They could not see that it mattered whether the debt was monetized or not, whether people were more or less "liquid."²³ They denied that a higher interest rate would cure the situation. Supporters of open-market selling operations replied that anything that made banks replenish their reserves would lessen the money supply, raise interest rates, discourage borrowing, and hamper inflation. If there seems little meeting of minds in this reply, it is because a conflict of basic economic philosophies was involved. The economic planners, generally Keynesians, wanted the Treasury's low interest rate policy continued.²⁴ They still feared depression, not inflation. They saw little inflationary danger in low interest rates and doubted if high interest rates would discourage inflation much anyway.

A fourth objection was that higher interest rates would discourage businessmen from expanding their plants and thus reduce the rate of private investment. It would also lower the value of real estate and of bonds and thereby, it was alleged, precipitate a depression. With elections looming, the administration hesitated to take this chance. When a depression strikes, the incumbent administration is generally ousted. This may have been a significant consideration in top political councils.²⁵

Finally, it was argued that all was going reasonably well and this was no time to "rock the boat." To this it was answered that it was better to stop the inflation while it was mild than wait until it became more serious later on. Past experience indicated that rising prices were generally accompanied by rising interest rates. The more marked the

"But how can you price a refunding issue of securities when the public has no knowledge or confidence or feeling as to what the market is going to be? . . . What happens to all these savings bonds if the public can get rates very substantially higher? It is certainly a possibility that they may all be cashed in." Board reprint of Eccles' testimony before the Senate Banking Committee, 1948, p. 16.

²³ P. A. Samuelson, *Economics*, pp. 352-353. Eccles and Goldenweiser took this view.

²⁴ Professor Lester Chandler of Amherst remarks, "We are now on what may be called 'a low yield government security standard.'" "Federal Reserve Policy and Federal Debt," *American Economic Review*, March, 1949, p. 419.

²⁵ "Means of Combating Inflation," Board reprint of Eccles' testimony before the Senate Banking Committee on S. J. Res. 157, July 29, 1948, pp. 4-6, 11-14, 20.

inflation, the greater the rise in interest. This would tend to force bond prices down. Supporting the market for government securities would only delay the day of reckoning and make matters worse. It would monetize the debts. More money would just feed the fires of inflation and make prices flame that much higher.

THREE COMPROMISE PROPOSALS

More needed to be done to curtail credit expansion early in 1948 than the Treasury had done and than the Board had been permitted to do. Federal Reserve authorities talked of needing more powers to control credit. Marriner Eccles said that they had "worn out their brake bands and needed a new set." Unkind critics said that the system was not using the brakes it had. This was true partly because the Treasury would not permit the Board to use them. Eccles kept urging stronger measures than the Treasury and administration thought desirable. Possibly his importunities were one reason for President Truman's request for his resignation as Chairman of the Board and for the appointment of Thomas B. McCabe in his place.²⁶ What the Board really sought was powers which the Treasury would let them use. Three types of compromise plans were put forward and discussed.²⁷ Let us look at them.

One plan was aimed directly at primary reserves. It would necessitate an act of Congress empowering the Board to raise banks' legal reserves. This would obviously cause a shifting of some government securities from the portfolios of banks to those of Federal Reserve

²⁶ When Truman became President in 1945, Eccles offered to resign on the ground that "the Chairman, who is designated by the President, should serve at his pleasure." This had been his viewpoint when the Banking Act of 1935 was being drafted. Truman did not then accept his resignation, saying that there was no one he desired in his place. On January 28, 1948, he wrote Eccles that he now wanted to accept his resignation and appoint Eccles to the vice-chairmanship, vacated by the death of Ronald Ransom. Eccles accepted the change, and a new appointee, Thomas McCabe, was appointed to the chairmanship of the Board. *Federal Reserve Bulletin*, 1948, p. 168. When Truman delayed several months in appointing Eccles to the vice-chairmanship, Eccles asked that his name be withdrawn for consideration for that position. *Ibid.*, p. 667. His term on the Board expires in 1958.

²⁷ Good discussions of these programs will be found in Board of Governors, *Federal Reserve Policy*, pp. 1112 ff.; *Annual Report*, 1945, pp. 7 ff.; *Federal Reserve Bulletin*, 1947, pp. 1455 ff.

Banks. Essentially, it would repeat the process employed in 1937 when legal reserves were raised to eliminate excess reserves. This time the excess reserves were disguised as government securities.

A second plan, to which Eccles was especially partial, would require all banks to keep an extra reserve of short-term government securities equal to 10 or 20 percent of their net demand deposits. This was in addition to their normal legal reserves. The plan would produce the same effect as the first plan except that the banks would be able to keep their government securities and get interest on them. It would also tend to stabilize interest rates on short-term government securities.²⁸

The third plan would place a limit on the percentage of demand deposits that a commercial bank might invest in long-term securities, either government or private. It might even include real estate loans. This would keep banks from shifting out of low-interest short-term securities into higher-interest long-term securities. It represented a partial return to the liquidity concept of a generation earlier. The plan would restrict credit expansion by making it more expensive for banks to lend. To get more reserves, they would have to sell their higher-interest rate long-term securities.

All these plans aimed to reduce the banks' supply of government securities available for sale to provide additional reserves. Incidentally, they were expected to apply to all banks, not just member banks.²⁹ The plans were intended to make it possible for the Board to deal with bank reserve and credit supply problems without seriously interfering with the Treasury's ability to handle public debt problems. Treasury and Board would be able to solve their problems more independently of one another than before. Interest rates, except for short-term governments, would become more flexible.

Strong opposition to the plans came from the banks. For years they had had meager opportunities to make good private loans. They be-

²⁸ *Federal Reserve Bulletin*, 1948, pp. 14-23.

²⁹ Otherwise, nonmember banks would have such a competitive advantage that it was feared that many member banks would withdraw from the Federal Reserve System. Eccles told the banking committees of both houses in 1948 that he preferred no legislation to a law affecting only member banks. To the objection that the federal government could not constitutionally regulate state banks, the answer was made that it already regulated them in numerous ways. They were subject to the wage and hour act, the labor relations board act, Regulation U on margin requirements, and Regulation W on consumer credit.

lieved that the loans they were now making were safe.³⁰ Bankers represented the Board's threat to reduce their opportunities to make a profit. They believed that they had done their part during the war, serving the government well. Now they wanted to be left alone. They wanted no more regulations of their operations, no more limitations on their profits. Their opposition, together with the coolness of the Treasury and others in the administration, so watered down the plan that was finally chosen as to amount to defeat of the Board.³¹ Let us see what happened.

THE SOLUTION CHOSEN

Discussion of the three plans, together with rising rates for short-term government securities, uncertainties in the long-term securities market, and better opportunities to make private loans, made banks less desirous of holding long-term government securities, and they proceeded to market some of them. When the Federal Reserve Bank of New York bought many of these bonds to support the market, it amounted to an open-market buying operation. That encourages credit expansion unless offset in some other way. But the Federal Reserve Banks offset their purchase of bonds by equivalent sales of Treasury bills and certificates. That was a counterbalancing open-market selling operation. Thus, as long as the Federal Reserve Banks had plenty of Treasury bills and certificates to sell, they could support the long-term securities market and yet avoid the undesirable consequences of open-market buying operations. At the speed, however, with which they

³⁰ Eccles said in 1948, "We had very formidable opposition from the banking fraternity, since nobody likes to be controlled." The Federal Advisory Council also opposed the plans. "Means of Combating Inflation," Board reprint of Eccles' testimony before the Senate Banking Committee on S. J. Res. 157, July 29, 1948, p. 5. See also *Federal Reserve Bulletin*, 1947, pp. 1455 ff.; and article by R. Fleming, *American Banker*, March 1, 1948.

Eccles was a little bitter against the banks for this opposition, pointing out that in 1940, when interest rates were very low and excess reserves were large, the bankers had favored a doubling of reserves. There was danger of inflation then and now, but opportunities for loans were poor then instead of good as now. Board reprint of Eccles' testimony before the House Banking Committee, p. 32.

³¹ Eccles felt that he and the Board had been misled by the administration, which had promised to recommend the government security reserve plan and then had not done so unless in the vaguest terms. He said, "it seemed to me that the President's program was more political than it was economic." Board reprints of Eccles' testimony: before House, p. 28; before Senate, pp. 4-6, 13 ff., 20.

were buying bonds and selling bills and certificates, they could rely on this makeshift device for only a little over a year before their supply of short-term government securities would be gone.³²

All in all, the Board were handling the situation well, considering how their hands were tied, but they needed assistance. They could not "muddle through" forever. Accordingly, Congress finally accepted a watered-down version of the first compromise plan. At the extra session in August, 1948, Congress gave the Board authority for about one year to raise reserve requirements of member banks only and to resume consumer credit controls (Regulation W). The Board made partial use of the new powers in September. Requirements against demand deposit were advanced from 24, 20, and 14 percent to 26, 22, and 16 percent, and those against time deposits were raised from 6 percent to 7.5 percent. This reduced excess reserves slightly and of course held the threat of a further moderate reduction over the heads of the banks.³³ The Board also exercised their consumer credit controls again. All this was a move in the right direction at the time, but it fell far short of the Board's hopes that the 10 percent government security reserve plan³⁴ would be enacted into law and would apply to all banks.³⁵

As the year 1948 ended, the situation was improved on the whole. Short-term government securities now yielded from 1.125 to almost 1.5 percent. Rediscount rates were at 1.5 percent. Long-term rates had risen too, but the spread between shorts and longs had narrowed.³⁶ Admittedly, if some interest rates had to be maintained at artificially low

³² At the end of 1947 they had \$18.2 billion of bills and certificates, \$4.4 billion of notes and bonds. A year later they had \$11.8 billion of the long-term securities and \$11.5 billion of the short-terms. They had been selling the short-terms at the rate of \$200,000,000 a week during much of the year. *Federal Reserve Bulletins*, 1948 and 1949, *passim*.

³³ *Federal Reserve Bulletin*, 1948, p. 1104. The new maximum rates were 30, 24, and 18 percent for demand deposits, 7.5 percent for time deposits.

³⁴ The second plan mentioned above, on page 192.

³⁵ Eccles even spent a long time emphasizing to the House Banking Committee that "There is not much use talking about controlling inflation unless the fiscal policy calls for a budgetary surplus." "Means of Combating Inflation," Board reprint, pp. 3 ff.

³⁶ While the "pattern of rates" was in force at the end of 1945, bills yielded .375 percent and taxable bonds of fifteen years and more averaged 2.3 percent, a difference of about 2 percentage points. At the end of 1948 the rates were 1.16 percent and 2.4 percent respectively, a difference of a little over 1 percentage point.

levels (and the Board and the Treasury seemed determined that that was inevitable), then concentrating on the long-term rates was a mild improvement over the wartime "pattern of rates" method. At least it reduced the supply of pegged government securities in the hands of the banks. For the time being banks were not tempted to play the "pattern of rates" and thereby force uncompensated open-market buying operations as they had done during the war. Another improvement was that bank holdings of the public debt had declined from \$101.3 billion at the end of 1945 to \$74,000 million. Getting so much of the public debt out of the hands of the banks was a real accomplishment. Only thus could the Federal Reserve authorities hope eventually to regain some of their former control over member bank credit. Wartime favors to banks, such as preferential rates on advances secured by bills and certificates, and no reserves against government deposits, had been withdrawn.³⁷ Reserve requirements had been raised, and a tempered Regulation W remained in force, at least until June 30, 1949. Although 1948 was a good business year, deposits dropped slightly, and loans were leveling off. All these were favorable developments if undue expansion was feared.

There were, of course, some bad signs too. Banks might no longer be tempted to play the "pattern of rates," but they were still free to shift from low-paying government securities to higher-paying private loans.³⁸ The basic problem of artificially low long-term interest rates, and therefore of inadequate Federal Reserve credit controls, remained. Also, gold imports had added \$4,000 million to our gold stocks since the end of 1945, thus increasing bank reserves.³⁹ Only optimists expected a Treasury surplus in 1949. Federal Reserve Banks had permission until 1950 to buy \$5 billion of government bonds directly from the Treasury.⁴⁰ The raised reserve requirements provision expired in June, as did also authority for Regulation W. The Board's plea for a

³⁷ *Supra*, p. 186.

³⁸ There was always the danger, too, that a further rise in yields on short-term issues would jeopardize the 2.5 percent long-term rate and necessitate renewed supports for the short-term issues.

³⁹ United States gold reserves grew from \$20.1 billion to \$24.2 billion between the end of 1945 and 1948. Federal Reserve Banks' sales of bills in effect sterilized some of these gold imports.

⁴⁰ *Federal Reserve Bulletin*, 1947, p. 694.

continuance of these, and for a requirement that all banks, member and nonmember, hold a 10 percent government security reserve, was apparently shelved.

A RECESSION THREATENS

By early 1949, people were not worrying any more about inflation. Between August and March the cost of living index fell five percentage points.⁴¹ Bank loans to customers fell off appreciably. The public began to ask whether the long-feared postwar depression might not be developing. Government officials and some economists talked knowingly of the "disinflation" that had been produced and wondered how long it was desirable to encourage it. Chairman McCabe of the Board discussed publicly the many ways the Board might stimulate expansion. In March and again in April the Board relaxed Regulation W on consumers' durable goods. They also lowered margin requirements from 75 to 50 percent, cut reserve requirements slightly and bought long-term government bonds on the open market in considerable quantity. On June 30, Regulation W expired along with the authority for extra high reserve requirements. In August the Board cut reserve requirements still further. Temporarily, at least, they also abandoned their policy of maintaining a "relatively fixed pattern of rates," although they said that they would "continue the policy of maintaining orderly conditions in the government security market."⁴²

Notice, however, that this changed policy took place in a recession and applied to the sale, not the purchase, of government bonds by the Federal Reserve Banks. In the event of a new boom, a return to the former support policy should be expected. But the fact that the Board were attempting to deal with this 1949 depression, if it were one, in its early stages is significant. By early autumn, it was obvious that the danger had passed, perhaps owing to prompt Board action, perhaps owing to stronger underlying inflationary forces.

PLANS FOR THE FUTURE

The Board believe that they need stronger controls to handle any future inflation and they believe they must exercise more authority over nonmember banks. Recently, Chairman Thomas McCabe asked

⁴¹ *Federal Reserve Bulletin*, 1949, p. 570.

⁴² *Federal Reserve Bulletin*, 1949, p. 776.

Congress for the following major new powers: (1) authority to set reserve requirements for nonmember banks; (2) alteration of reserve requirements so that they depend on the type of deposits a bank holds rather than on the size of the city the bank is in; (3) permanent control over installment credit (Regulation W); and (4) authority over most of the business loan functions now exercised by the RFC.

CONCLUSION

When the war ended, the Federal Reserve Banks were in a weak position in dealing with member banks and the Treasury. Yet they were expected to cushion a postwar depression or prevent a postwar inflation, whichever developed. The inflation proved the greater danger as prices rose sharply in 1946 and 1947. Treasury opposition and member bank independence prevented the Board's employing traditional open-market selling operations. Congress was reluctant to grant the Board new controls. Accordingly, deposits and loans expanded. They might have expanded more had not the Board and the Treasury found some makeshift controls. The Treasury used its deposit surplus in member banks to buy government securities from the Federal Reserve Banks. This acted like an open-market selling operation. Of course, the banks offset it by selling their own governments and replenishing their reserves. The Treasury also used a budgetary cash surplus of \$14 billion in 1947 and 1948 to retire other securities held by the Federal Reserve Banks. The Board used their minor credit controls and abolished wartime favors to banks. They removed the peg on short-term governments in 1947. This closed the wide spread between short- and long-term governments. During 1948 they bought long-term governments but sold short-term governments. Thus they offset their open-market buying operations by open-market selling operations. This also reduced the supply of pegged securities in the hands of banks. Temporarily, at least, the fear of inflation had subsided by the end of 1948. It must be admitted that the Board had made the most of the powers they could actually use. Yet some of them were very worried. Their vigorous former chairman, Marriner Eccles, remarked to the Senate Banking Committee on July 29, 1948, "I say that under the circumstances that now exist the Federal Reserve System is the greatest potential agent of inflation that man could possibly contrive."

≡ CHAPTER XVI ≡

The Trend of Banking

FOR centuries kings jealously guarded the right to coin and regulate the money of their realm. Control over money was one of the attributes of sovereignty. Then in a subtle way some of this control slipped from their hands in the seventeenth and eighteenth centuries. That was the Age of Mercantilism, which glorified merchants and businessmen. Parliament bowed to the will of this new class in England. It is not surprising, therefore, that they were allowed to share the sovereign power of creating money. They developed a new money, called bank credit, which differed from governmental money but did the same job. Governments, however, did not give up their control over money without a struggle. In the United States the Constitution had to be interpreted broadly to provide justification for the First and Second Banks of the United States. But by the early nineteenth century, money in the form of bank credit was far more important in this country than government coin.

Perhaps the decline in government control over money was also typical of *laissez faire*, with its emphasis on a minimum of government regulations. But when those responsible for creating the new kind of money took their responsibility lightly by overissuing bank notes, the question arose of how the money supply should be regulated. In England and this country that issue was endlessly debated with arguments over the relative merits of the "banking principle" and the "currency principle." Bankers advocated the banking principle, saying that honest banks would make only sound loans, that they would not overlend lest their reserves be exhausted, and that this method would give the country an adequate and flexible money supply. The currency principle advocates answered that in fact banks did overlend, that the banking principle caused bankruptcy, inflation, and panic, and that it was better for the country to be restricted to a definite supply of money.

Government, being impartial, was best qualified to set the amount and, if need be, to change it. Observe that at this time the government was looked to for protection from inflation. In the ensuing century the banking and currency principles were synthesized. More important, the government regained its place as regulator of the money supply, deposit credit as well as currency. Let us look at the broad outlines of government's recovery of this sovereign power and of the implications of that recovery.

A century ago bank credit was subject only to state regulations, and many states treated banks leniently. Most of our money was bank notes, and many of those were unreliable. Congress passed the National Banking Act in 1863 to provide trustworthy banks and a dependable currency. Only banks chartered by the federal government might issue bank notes. This step by the federal government produced better banking and better money.

When these banks showed themselves unable to weather periodic panics and failed with painful losses to their depositors, another reform was called for. Again the federal government stepped forward, this time setting up a system of bankers' banks to help the banks survive a depression. The government assumed greater power over banking and bank notes. It made the Federal Reserve notes the chief bank note. Also, the top board of the Federal Reserve Banks was appointed by the President of the United States, that is, by the government. Notice that the government assumes more authority with each major change.

In the 1920's the Federal Reserve Board began to think that they could not only soften the impact of depressions on banks but, through open-market operations, even prevent depressions. This hope proved an illusion in 1929, but most of the blame for the Great Depression was put off on big business and big banks. While they certainly deserved much of it, the Board had displayed neither foresight nor courage in dealing with the 1927-1929 boom. The Federal Reserve authorities now asked for more power, and in 1933, 1934, and 1935 they got it. They did not, however, have much opportunity to use it. By this time the federal government was assuming increased responsibility in many other areas too.

A major consequence of the Great Depression was a firm determination to avoid, if possible, another one like it. That presupposed a theory as to what causes depressions and some kind of program for the government to follow to prevent a depression or to stop one if it got started. The economic theories of the English economist J. M. Keynes and his American followers were thought to provide many of the answers. The new program visualized doing more than merely stabilizing the price level. It called for governmental activity in many areas instead of in just a few like banking. These increased activities cost vast amounts of money and added rapidly to the public debt. The Federal Reserve authorities were expected to coöperate with other governmental departments and agencies, to help keep interest rates low, and in general to submit to the political will of the administration.

Even before World War II the Federal Reserve Banks found themselves subordinate to the Treasury. During the war they did almost anything the Treasury asked, rationalizing that they must help win the war by providing ample funds. When the war ended, both the Federal Reserve Banks and the commercial banks were heavily loaded with government securities. Thus the government was the chief customer of both the Federal Reserve Banks and the commercial banks. For a variety of reasons these did not want to call into question the loans of their chief customer, the federal government. For one thing, it was unpatriotic; for another, it would reduce the value of their chief assets, government securities.¹ The position of the Federal Reserve Banks was especially weak. They did not dare assert their independence of the Treasury because the Treasury had more power over credit now than they did. And member banks were independent of the Federal Reserve System because their holdings of government securities convertible into cash amounted to excess reserves. Without the Treasury's coöperation the Federal Reserve authorities could not control member banks. If the Treasury proposed only moderate restraints on the

¹ Nor could the government, on its part, again afford to permit scores of banks to fail, as happened in the 1920's and early 1930's. The guarantee of the F.D.I.C. was at stake, and, more important, the forced liquidation of bank assets would throw hundreds of millions of dollars of government securities on the market and raise interest rates or else would create vast amounts of money which it would be a problem to control when prosperity returned.

banks, the Federal Reserve authorities had to be content. Discerning people began to ask what purpose the Board of Governors of the Federal Reserve System served. They were told by some who were more discerning that the popular illusion that the Board and the system were independent of the Treasury was worth preserving. It protected the Treasury from inflationary pressures by special interest groups. Notice that the government is now regarded as a potential creator of inflation, not a protector against inflation.

Thus, in a century of time, the control over bank credit has slipped from the hands of almost unregulated state banks to those of federally chartered banks, then to bankers' banks, and finally to the Treasury itself. Can this control be centralized further? To some degree it might be. For example, centralization would be greater if the Treasury sold its securities directly to the Federal Reserve Banks, as European nations have done to their central banks, or if they crudely resorted to printing money. The danger in more centralized control is obvious. It is the danger of too great political power over the supply of money. Many times in financial history such power over money has led to inflation. That danger is certainly great in a democracy where Congress is subject to constant pressures to provide costly services for many "deserving causes" at home and abroad. Many of the demands upon Congress seem very worth-while, let there be no misunderstanding on that score. Coming as they do, one by one, it is difficult for Congressmen to refuse them. It is thus easy to wind up with a total budget that is appallingly high. All too often the budget is not balanced. The debt grows. To carry the load and to stimulate prosperity, the Federal Reserve Banks are called upon to keep interest rates low. That makes money cheap, which is another way of saying that it creates inflation.

Virtually all the old checks that helped to maintain the value of money and credit have been removed. Our gold standard is weak, if indeed it is existent; and so people cannot demand gold, which would tighten credit and end the spending spree. Government bond prices are kept artificially high and interest rates artificially low. Faced with low interest rates and high overhead costs, banks tend to increase their loans. They have ample reserves to do so. The Federal Reserve Banks cannot do much to curb credit expansion, for they have less

power than the Treasury. They know it, and they dare not contest the Treasury's will. Foreign currencies are in a more deplorable state than our own, and so timid capital can hardly flee abroad. In the long run a gradual credit inflation seems very likely. It is what usually happens when controls over credit are lodged entirely in the hands of one group, either bankers or government. If this diagnosis is correct, we should do our utmost to restore some of the checks that formerly existed on government spending. We should discourage government expenditures ourselves in every way possible.

Even though the long-run trends of money supply and prices are probably rising ones, there will be dips, upturns, and level stretches in the short run. It is in the short run that most of us are interested. How may we guess intelligently what the near future will be like? Which items in the mountain of Federal Reserve statistics are likely to be most revealing? How can the layman find them? How can he keep up with new developments in banking? All this information the alert businessman and the intelligent, conscientious citizen should have. It is the topic of our last chapter.

Ξ CHAPTER XVII Ξ

What to Look For and Where to Find It

THE intelligent citizen is interested in following the further progress of our economy. If he has read this book with halfway reasonable care, he should be able to do that from his knowledge of the operations of the Federal Reserve System. First, however, he must know what trends to look for and where to find evidence of the direction of these trends. Fundamentally, three questions will concern him. They may be simply stated: (1) Is the price level rising or falling? (2) Is the country tending toward a boom or a depression? (3) Is there too much control in the hands of big business or of government?

The country is economically healthiest when the answers to all of these questions are indefinite because a middle ground is being held. Moderation is the course to follow. Moderation is one of the hardest lines to hew to, and that is particularly true of a steady policy of moderation. Let us look at these three basic questions, at some of the facts which would give the answers to them, and at the publications which contain those facts. First a word about the publications.

PUBLICATIONS

For your purposes three Federal Reserve publications and one or two independent financial publications provide all the current information you need to answer the questions mentioned above. The three Federal Reserve publications are:

1. *The Federal Reserve Bulletin* (monthly, \$2.00 per year, \$1.50 per subscription when ten or more persons subscribe in one group).
2. *The Federal Reserve Chart (Book) on Bank Credit and Money Rates* (monthly, \$9.00 per year, \$1.00 per copy). One or two issues a year is all you need.
3. *The Annual Report of the Board of Governors of the Federal Reserve System* (free on request).

Write the Board of Governors of the Federal Reserve System, Washington, D. C. for all three of these. All of the statistical information you need is obtainable from them. They will also explain and attempt to justify Federal Reserve policy.

For a criticism of Federal Reserve policies you should consult one or two of the following:

1. *Monthly Letter on Economic Conditions, Government Finance* (free). This is generally known as the *National City Bank Letter*. All you need to do is write the National City Bank, New York, and ask to be put on their mailing list.
2. *Monetary Notes* (monthly, free). All you need to do is write the Economist National Committee on Monetary Policy, 1 Madison Avenue, New York 10, New York.
3. *Banking: Journal of American Bankers Association* (monthly, \$4.00 per year). Address: 105 West Adams Street, Chicago, Illinois.
4. *Finance* (weekly, \$5.00 per year). Address: 20 North Wacker Drive, Chicago 6, Illinois.
5. *Commercial and Financial Chronicle* (weekly, \$35.00 per year). Address: 35 Park Place, New York 8, New York. Available in most college libraries.
6. The financial section of your metropolitan newspaper.

Notice that the first two of the above are free. *Banking* will perhaps best present the bankers' viewpoint. The scholars' viewpoint may be obtained from occasional articles in learned quarterlies like the *American Economic Review* (address: Northwestern University, Evanston, Illinois) or the *Journal of Finance* (address: Indiana University, Bloomington, Indiana).

CHANGING PRICE LEVELS

Now that you know the names of some of the current publications, let us see what you want to find from them. We mentioned above that you should be chiefly concerned with the answers to the three questions, namely, whether prices were rising or falling, whether a boom or a depression was imminent, and whether big business or government was assuming too much power. The easiest of these to watch is the first, the question of the price level trend.

If the general price level is rising or falling, you will probably be

well aware of it without chart books and up-to-the-minute statistical reports. But you may want to know how much prices are changing, how this rise, say, compares with past rises, whether prices are going up or down for most products or for just a few, and how long the trend has been going on. To get a perspective on your immediate price level change, consult your *Federal Reserve Chart Book*. In the section of the table of contents marked "Business Conditions" look for mention of the chart marked "Consumer Prices Since 1913." That chart will give you the trend for four price items, namely, all items, food, apparel, and rent. To get more detailed information and the most recent figures, consult your latest *Federal Reserve Bulletin*. Look in the main table of contents for the section entitled "Financial, Industrial and Commercial Statistics of the U. S." The first page of that will contain an inner table of contents. (See the illustration on page 206.) Look there for an item marked "Cost of Living." For an even fuller breakdown of price trends see the table of wholesale prices which is usually on the adjoining page.

Presumably you will want to have some idea of what the future is likely to bring. Good indicators of that are the following: (1) commercial loans (see your *Chart Book*, the section marked "Bank and Other Credit," the chart of loans and investments of member banks); (2) bank rates on customer loans (see your *Chart Book*, the section on "Money Rates and Security Markets"); (3) industrial production index (see your *Chart Book*, the "Business Conditions" section).

If commercial loans and production indexes are rising and the interest rates are still low, the price rise will probably continue, but if interest rates are rising or high already and commercial loans and industrial production—particularly industrial production of the durable goods industries—are beginning to decline, the price level may soon begin to fall. The reverse of all this would tend to be true of a falling price level. For further information see the inner table of contents of your *Federal Reserve Bulletin* and look up such items as loans under "Weekly Reporting Member Banks," "Money Rates," and "Business Indexes," but most particularly consult the statistics provided expressly to bring your *Federal Reserve Chart Book* up to date.

Indicators of inflation in the long run, but not necessarily in the im-

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mediate future, are such things as increasing gold imports, increasing Federal Reserve bank holdings of government securities, growing excess reserves of member banks, and a chronically unbalanced federal budget. For information on these, see the inner table of contents of

your *Federal Reserve Bulletin*. Look under Treasury finance for budget statistics. We repeat, these factors may not produce much of a price rise in the short run. The later 1930's are an illustration of this fact. Indicators of deflation in the long run would of course be the opposite of the above.

BUSINESS CYCLE CHANGES

Akin to price level trends are trends in business activity. Some of the indexes that point to inflation also point to business expansion. However, business expansion is not always accompanied by rising prices. During the generation after the Civil War, business expanded, but the price level fell. And during the 1920's business expanded, but the price level remained remarkably stable. Thus a boom may be in the offing although the price level seems well behaved. What are the indicators of a boom? Usually prices will be rising in some segments of the economy, at least. For example, in 1926 it was real estate prices that were rising, and in 1927-1929 and 1936-1937 it was stock market prices that were rising. See the inner table of contents in your *Bulletin* under "Security Prices and New Issues" for security prices. Important indicators of an approaching boom, at least in the eyes of government and Federal Reserve economists, are sharply rising gross national product, gross private domestic investment, personal consumption expenditures, and corporate profits. To find data on these look at the inner table of contents of your *Federal Reserve Bulletin* under "Gross National Product, etc." If these seem to show that a boom is imminent, the Federal Reserve authorities may be expected to raise reserve requirements, margin requirements, and rediscount rates. Changes in these will be found on the third page after the inner table of contents in the *Federal Reserve Bulletin* and are usually discussed in the editorial section.

If a depression is really imminent or getting under way, you should expect the gross national product figure to be leveling off, the gross private domestic investment to be declining, personal consumption expenditures to be decreasing, the stock market to be slipping, commercial loans to be falling off, the index of industrial production to be declining, and employment to be dropping. Look for the last two of

these under "Business Indexes" in the inner table of contents of the *Federal Reserve Bulletin*. Presumably the Board will lower reserve requirements, margin requirements, and rediscount rates, and possibly even buy government securities when a depression threatens. Excess reserves probably will rise. See the second page after the inner table of contents in the *Bulletin* for these. Your *Chart Book* also contains a graph on excess reserves.

Finally, if recovery is being made from a depression, security prices will pick up, the indexes of industrial production and employment will rise, the gross national product figures will improve, and probably price levels will rise somewhat. All these trends can be noted from the *Bulletin* or the *Chart Book*.

SEEKING A MIDDLE GROUND

The third main factor which should interest the intelligent citizen is whether too great control is falling into the hands of either big business or government. A generation ago big business had too much control in finance, judging by the great powers wielded by J. P. Morgan, the elder, in the panic of 1907 and by the great bank presidents in the boom of 1927-1929. The likelihood that this sort of thing will take place again soon is small. The chief factor favoring big business recently is the independence of our banks. This independence rests on their present large holdings of government securities, together with the Treasury's and Federal Reserve System's support policy for government bonds. Banks can loan almost at will. Federal Reserve controls can not hinder them materially. That was a danger in 1947-1948 and could be again. A renewal of that danger may well result in further curtailment of the banks' independence. Temporarily such curtailment might be justified and necessary.

In the long run the banking and business elements of the community would probably remain freer of government controls if the government would gradually abandon its policy of supporting low interest rates for bonds, letting interest rates find their own level. Admittedly this is a very difficult thing to achieve. Other developments that would give the banking business more control are falling taxes, a balanced budget, no renewal of such controls as Regulation W or the increased

power to raise reserve requirements temporarily granted in August, 1948, elimination of the provision permitting the use of government securities as backing for Federal Reserve notes, and a Board that was more sympathetic to the banker's or businessman's viewpoints. Most of these developments would be definitely desirable because the trend has for too long been toward more government control of bank credit.

Among the trends toward more government control in recent years may be mentioned the abandonment of the gold standard, which deprives the people of a check on unsound government financing, and the virtual end of open-market selling operations, which took away the Federal Reserve System's check on undue business expansion. Most of these were sacrificed to make possible the artificial long-term interest rate of about 2.5 percent which is desired to keep the service of the public debt down and to keep prosperity with us in the only way that the planners think possible. To take the place of open-market selling operations, Congress has added increased reserve requirements, control over margin requirements, and Regulation W. To keep national income high, Congress has at times spent lavishly for relief and public works and has incurred deficits year after year. The Board have been more inclined to listen to the wants of the Treasury than to those of business and banks. However, the government could increase its controls still further if Congress began imposing more regulations on the nonmember banks, if reserve requirements were raised still higher, if more selective controls were devised and put into operation, if the government collected a still larger proportion of the national income in taxes, if the Treasury began selling government securities directly to the Federal Reserve Banks, and if the Treasury absorbed the Federal Reserve System on the excuse that it determines fundamental Federal Reserve policies anyway.

The editorial pages of your *Federal Reserve Bulletin*, the *Annual Reports* of the Board of Governors, and the comments of your newspaper and of financial publications like *Banking* or *Monetary Notes* or the *National City Bank Letter* will tell you if any of the above developments are imminent. Increased government controls seem much more likely to develop, especially in the event of a depression, than increased power in the hands of the banking business. In view of the trend in the

last generation, developments favoring more power in the hands of the banks should not be particularly feared—in fact, they should be encouraged—and developments favoring government should be looked upon with some suspicion. If our purpose should be to pursue a middle course of moderation, we have veered farther over on the government side than is desirable.

Ξ APPENDIX Ξ

WHY STATE BANKS DO NOT BELONG TO THE FEDERAL RESERVE SYSTEM

Of the 14,707 banks in the United States at the end of 1948, 47 percent were members of the Federal Reserve System. The deposits of these banks constituted 75 percent of all the banking deposits in the country, so that it is obvious that most of the larger banks belong to the System. Why do not all belong? Generally, it is the small banks in the small towns that do not. To belong, a bank in a small town must have a minimum capital of \$50,000. Perhaps 2500 banks do not have that much capital today.¹ Yet \$50,000 in capital stock is not difficult for a bank to have if the bank really wants to. Inability to raise \$50,000 in capital might be a valid reason in a pioneer community or in a few other exceptional cases, but generally the real reasons must be sought elsewhere. What are they?

The directors of state banks debating whether to join the Federal Reserve System are likely to ask themselves such questions as these: "What must we give up if we join the Federal Reserve System?" "What advantages do we gain by joining?" "How many of these advantages might we get in some other way without joining?" Let us look at the answers to these basic questions.

WHAT STATE BANKS LOSE WHEN THEY JOIN THE FEDERAL RESERVE SYSTEM

What state banks give up depends, of course, on the laws of the state in which they are chartered. They may have to invest a little more capital: they may have to increase their stock from \$25,000 to \$50,000. They will have to submit to one and perhaps two additional sets of bank examinations. These may well be stricter than those to which they are accustomed. Sometimes they have to reduce the percentage of loans that they may make on real estate or stiffen the terms of their real estate loans. They become subject to a wide variety of Federal Reserve rulings and regulations, which they might otherwise hope to escape. Perhaps the most important consideration, however, is the amount of legal reserve that member banks are

¹ In 1940, 2774 banks had insufficient capital stock to qualify for membership in the Federal Reserve System. *Federal Reserve Bulletin*, 1940, p. 530. Most of these banks had capital stock of less than \$25,000, and 573 had capital stock below \$15,000. Nearly all had less than \$1,000,000 in deposits.

required to keep. A nonmember bank may have about 10 or 15 percent of its deposits tied up in legal reserves and accounts with correspondent banks, but a member country bank today can hardly hope to have less than 25 percent so tied up.² This means, according to Marriner Eccles' own testimony, that member banks' earnings, on the average, are 2.01 percent, while nonmember banks' earnings average about 2.58 percent.³ That gives the nonmember bank a decided advantage in competition.

WHAT STATE BANKS GAIN BY JOINING THE FEDERAL RESERVE SYSTEM

Nonmember banks are frequently told of the privileges they will gain by joining the Federal Reserve System. Chief among these privileges are facilities for rediscounting eligible paper, free delivery of currency and coin promptly when needed, the right to have funds transferred by telegraph, direct use of the Federal Reserve System's check collection and noncash collection services, the safekeeping of their government securities at the Federal Reserve Bank so they can be sold quickly, and the use of the emblem "Member of the Federal Reserve System."⁴ These are of considerable help to a small bank, although none can be regarded as indispensable. The bankers who are offered them are frequently inclined to ask whether they cannot get most of them just as easily without joining the Federal Reserve System. Are they worth the price the bank must pay in order to join the system? In many instances the banks feel that they are not.

HOW STATE BANKS GET ALONG WITHOUT JOINING THE FEDERAL RESERVE SYSTEM

Several of the services offered by the Federal Reserve System are willingly performed by correspondent banks in the big cities. Some of these New York or Chicago banks, such as the Continental Illinois National Bank, are essentially bankers' banks.⁵ They compete vigorously with the regional Federal Reserve Bank for the deposits of out-of-town banks. While they may not pay interest on demand deposits, as they once could, they can perform free of charge services that are of considerable value to the banks or bankers receiving them. They handle the purchase and sale of government securities for their out-of-town customer banks, they make loans to them, they transfer funds for them, they handle their foreign business, and they even offer to get theater tickets or railroad tickets for

² "Means of Combating Inflation," Board reprint of M. S. Eccles' testimony before the House Committee on Banking, August 3, 1948, pp. 13-14.

³ *Ibid.*, p. 31.

⁴ "The Significance of Membership in the Federal Reserve System," *Federal Reserve Bulletin*, 1948, p. 1341.

⁵ See *Finance* magazine, February 28, 1949, for a discussion of the services performed by this correspondent bank for its customer banks.

their banker customers. The correspondent banks are so accommodating, in fact, that member banks also maintain deposits with several of them. Member banks frequently depend on their city correspondent bank to keep their legal reserve always above the minimum.

A bank does not have to belong to the Federal Reserve System to clear through it. Many nonmember banks are clearing members. Furthermore, now that the F.D.I.C. has an emblem, too, and most banks belong to that corporation, the prestige of membership in the Federal Reserve System is somewhat less overwhelming. People are quite satisfied to deal with a bank whose deposits are insured. It is not necessary to be a Federal Reserve member bank to belong to the F.D.I.C. The officials of the F.D.I.C., moreover, tend to discourage banks from joining the Federal Reserve System. In a real sense the Federal Reserve System is the big banks' banking organization, and the F.D.I.C. is the little banks' banking organization. There is considerable rivalry and jealousy between the two.

THE UNDERLYING PROBLEM

The Federal Reserve System, which at first glance has a monopoly as a bankers' organization, thus has two strong rivals, the big city correspondent banks and the F.D.I.C. This leads us to ask why banks should really join the Federal Reserve System at all, or, for that matter, remain in the system. The answer is that a member bank, especially a national bank, would have a lot of explaining to do to its customers if it withdrew from the Federal Reserve System. A big bank, moreover, gets some prestige from belonging to the system.

The main reason for banks belonging to the Federal Reserve System is that a central bank organization is thereby made available which can create its own credit in time of crises and which is able to assist somewhat in stabilizing the economy. While these considerations have little short-run appeal to individual banks, especially to small banks, nevertheless, banking history has shown clearly that there are strong reasons for having a central banking system. Therefore, a large number of banks should belong to it if the system is to succeed and if the banks and the country are to benefit. The legal reserves each bank keeps with the Federal Reserve Bank are, according to Board chairman Thomas McCabe, "each bank's contribution to an effective national monetary policy."⁶

It is neither sensible nor right, however, for the banks that join to be put at a heavy disadvantage in competing with those which are not members. That does not imply that all should join. It is healthy for the Federal Reserve System to have some competition always. But it does imply

⁶ "The Significance of Membership in the Federal Reserve System," *Federal Reserve Bulletin*, 1948, p. 1342.

that the conditions of competition should be more comparable than they are at present. Primarily, that means more similar reserve requirements. Some of the responsibility for this rests with the state legislatures. If they do not stiffen their reserve requirements, the federal government may have to do it for them. It seems obvious that the current advantage is too much with the nonmember banks, that that cannot last, and that the Federal Reserve System is here to stay. The question, then, is whether those responsible for regulating nonmember banks will stiffen their requirements or wait to have sterner regulations thrust upon them.⁷ The Board has recently advocated increasing reserve requirements for nonmember banks as well as for member banks. Marriner Eccles went so far as to say in 1948 that it would be better to leave reserve requirements for the member banks unchanged unless the new requirement applied to all banks.⁸

⁷ It will be recalled that once before in our banking history, 1863-1865, after the National Banking System was founded, state banks hesitated to stiffen their requirements, and Congress thereupon passed a law forcing them to join the National System or give up one of their valued privileges, that of issuing their own notes. That was the 10 percent tax on state bank notes enacted in 1865 and effective in 1866. Thereupon most state banks joined the National Banking System.

⁸ *Supra*, p. 192.

Σ SELECTED BIBLIOGRAPHY Σ

GENERAL

A complete bibliography of writings on the Federal Reserve System would be a good-sized encyclopedia. This is intended merely as an aid to the student who wishes to read further about Federal Reserve Banks. The expert will doubtless miss some of his favorites on our list. For that we beg his pardon. These are merely some of our favorites and not even all of them.

The student who wishes to delve deeper into the many problems of banking should consult one or more of the better-known money and banking and financial history texts. Among the money and banking texts, Ray Westerfield's, *Money, Credit and Banking* (Ronald, New York, 1947), is complete to the point of being encyclopedic. Frederick Bradford, *Money and Banking* (Longmans, New York, 1949), is particularly reliable and well-balanced. Charles Prather, *Money and Banking* (Irwin, New York, 1947), is especially good from the viewpoint of describing banking operations. Lester Chandler, *The Economics of Money and Banking* (Harper, New York, 1948), describes banking principles clearly and integrates banking principles and the national income economics well. There are many other fine texts which we simply do not have space to mention. Three financial histories may be suggested, however. Davis R. Dewey, *Financial History of the United States* (Longmans, New York, 1939), although out of date, is a classic but does not discuss banking in much detail. More popular in treatment is William J. Shultz and M. R. Cain, *Financial Development of the United States* (Prentice-Hall, New York, 1937). Just published is Benjamin M. Anderson's *Economics and the Public Welfare* (Van Nostrand, New York, 1949), a careful, conservative treatment of our recent financial history since 1913. On the more practical and everyday aspects of banking see William H. Kniffin, *How to Use Your Bank* (McGraw-Hill, New York, 1949).

BACKGROUND

On the historical background of banking and Federal Reserve banking consult Horace White, *Money and Banking* (Ginn, Boston, many editions, 1895-1935), or Louis Rufener, *Money and Banking* (Houghton Mifflin,

Boston, 1936). For a description of early panics and for a certain amount of color read Alexander D. Noyes, *Forty Years of American Finance* (Putnam, New York, 1909), *The War Period of American Finance* (Putnam, New York, 1926), and *The Market Place* (Little, Brown, Boston, 1938). Noyes was for many years the financial editor of the *New York Times*. Among the more helpful historical studies of the National Monetary Commission should be mentioned Davis R. Dewey and John T. Holdsworth, *The First and Second Banks of the United States*; Davis R. Dewey, *State Banking before the Civil War*; David Kinley, *The Independent Treasury System of the United States*; David Kinley, *The Use of Credit Instruments in Payment in the United States*; Andrew M. Davis, *The Origin of the National Banking System*; O. M. W. Sprague, *History of Crises under the National Banking System*; James G. Cannon, *Clearing Houses*; George R. Barnett, *State Banks and Trust Companies Since the Passage of the National Bank Act*; and Alexander D. Noyes, *History of the National Bank Currency*. All of these were published by the Government Printing Office about 1910.

Significant biographies are Lewis Corey, *The House of Morgan* (Watt, New York, 1930), and Frederick Lewis Allen, *The Great Pierpont Morgan* (Harper, New York, 1949). The first is critical of Morgan; the second presents a sympathetic viewpoint. G. W. Stephenson has written a fine biography of *Nelson W. Aldrich* (Scribner, New York, 1930).

The voluminous testimony before the Pujo Money Trust Committee of 1912-1913 makes interesting reading. This was an investigation before a subcommittee on banking and currency in the second session of the 62nd Congress, pursuant to House Resolution Nos. 429 and 504. There is also a wealth of detailed information in the three volumes of *Hearings* before the Senate Committee on Banking and Currency of the first session of the 63rd Congress pursuant to H.R. 7837 and to S.R. 2639 (The Federal Reserve Act).

BEGINNING OF THE FEDERAL RESERVE SYSTEM

Carter Glass was the legislative founder of the Federal Reserve System. His *Adventure in Constructive Finance* (Doubleday, New York, 1927) and *The Biography of Carter Glass* by Rixey Smith and Norman Beasley (Longmans, New York, 1939) provide many personal details. Paul Warburg, one of the first members of the Federal Reserve Board, wrote a monumental two-volume study called *The Federal Reserve System* (Macmillan, New York, 1930). Another first member of the board, W. T. G. Harding, also wrote an account from first-hand experience, namely, *The Formative Period of the Federal Reserve System* (Houghton Mifflin, Boston, 1925). H. Parker Willis, Secretary of the Board, wrote several studies on the Federal Reserve System. Probably the best-known of them

is *The Federal Reserve System: Legislation, Organization, and Operation* (Ronald, New York, 1923). The editorial pages of the monthly *Federal Reserve Bulletin* and the *Annual Reports* of the Federal Reserve Board are always helpful. A. D. Noyes, *The War Period of American Finance*, already mentioned, is also good on the early period.

THE 1920's

On the New York money market read Randolph Burgess, *The Federal Reserve Banks and the New York Money Market* (Harper, New York, 1946), which treats a complex subject with great clarity. Also good is W. W. Riefler, *Money Rates and Money Markets* (Harper, New York, 1930). More detailed is Margaret Myers, Haggott Beckhart, and others, *The New York Money Market* (Columbia University Press, New York, 1931-1932, 4 vols.). A. D. Noyes, *The War Period of American Finance* and *The Market Place*, already mentioned, provided a first-class journalistic approach to the 1920's. H. P. Willis' and Paul Warburg's classic studies of the Federal Reserve System are more technical and detailed. Sometimes helpful are E. A. Goldenweiser, *The Federal Reserve System in Operation* (McGraw-Hill, New York, 1925) and *Federal Reserve Policy, 1921-1930* (McGraw-Hill, New York, 1930). For an understanding of the speculative mania in financial circles and over the country in 1928-1929 read Ferdinand Pecora's *Wall Street under Oath* (Simon and Schuster, New York, 1939), which is based on several volumes of testimony before Congress in 1932-1934 on stock exchange practices. Also revealing are *Hearings* on Federal Reserve operations in the later 1920's before the Senate subcommittee on banking and currency, third session of the 71st Congress, pursuant to Senate Resolution 71. Again it should be emphasized that the *Federal Reserve Bulletin* and the *Annual Reports* throw much light on month-to-month and year-to-year developments in this period. For a big bank's viewpoint, we recommend the *National City Bank Letter* and the sporadic *Economic Bulletins* of the Chase National Bank.

CHANGING LAWS AND POLICIES IN THE 1930's

A grasp of the new economic and banking philosophies which have been spreading in the last few years is necessary for an understanding of the changes made in the 1930's. A readable account of the new economics is Paul Samuelson, *Economics: An Introductory Analysis* (McGraw-Hill, New York, 1948), especially Chapters XI and XII. Also helpful is Lester Chandler, *Introduction to Monetary Theory* (Harper, New York, 1940). Of considerable influence in its time was Lauchlin Currie, *The Supply and Control of Money in the United States* (Harvard University Press, Cambridge, 1934). For an adverse criticism see Benjamin M. Anderson, Jr.,

"A Critical Analysis of the Book by Lauchlin Currie," a paper delivered before the New York chapter of the American Statistical Association, April 26, 1935. Two fairly readable criticisms of the new economics are Benjamin M. Anderson, Jr., "Equilibrium Creates Purchasing Power," *Commercial and Financial Chronicle*, January 25, 1945, and Kenneth Boulding, "Professor Tarshis and the State of Economics," *American Economic Review*, March, 1948.

Marriner Eccles' testimony before Congress in behalf of the Banking Act of 1935 was published by the Board in a pamphlet in 1935. For the full hearings on this act see the *Hearings* before the House and Senate Committees on Banking of the first session of the 74th Congress pursuant to H. R. 5357 and to S. R. 1715. *The Federal Reserve Bulletin* and the *Annual Reports* of that period contain the chief arguments in favor of the new legislation. For other viewpoints consult the *American Economic Review* and the American Economic Association's *Proceedings* for this period, various articles published in *Barron's* and *Banking*, and the publications of the Reserve City Bankers' Association. Among the many writers then interested in the new laws and trends may be mentioned Edwin Walter Kemmerer, O. M. W. Sprague, Ray Westerfield, Walter E. Spahr, Frederick Bradford, Benjamin M. Anderson, Jr., Frederic E. Lee, John Riddle, John T. Holdsworth, and John Henry Williams. Some of these testified before the Congressional committees.

On specific problems in this period consult such studies as C. B. Upham and Edwin Lamke, *Closed and Distressed Banks* (Brookings Institution, Washington, 1934); John M. Chapman and Ray Westerfield, *Branch Banking* (Harper, New York, 1942); Robert C. Turner, *Member Bank Borrowing* (Ohio State University Press, Columbus, 1938). From the mid-1930's on, the Board's economists made and published numerous special studies, which appeared in the *Bulletin* from time to time. Many of these are still available in special pamphlets. A list appears regularly just inside the back cover of the *Bulletin*.

THE WAR AND POSTWAR PERIODS

The Board prepared a series of studies on postwar economic problems, one of the best of which was entitled *Federal Reserve Policy*, published at the end of 1947. In the *American Economic Review* for March, 1949, Lester Chandler's "Federal Reserve Policy and Federal Reserve Debt" provides an excellent summary of Federal Reserve support of the government security market in the war and postwar years. As usual, the *Bulletin* and *Annual Reports* are helpful. Also revealing are two reprints of Eccles' testimony in July and August, 1948, before House and Senate banking committees. Both of these are called "Means of Combating Inflation" and are

published by the Board. On the Board's government security reserve plan see the January, 1948, *Bulletin*. Just out is *Monetary Management* (McGraw-Hill, New York, 1949) by E. A. Goldenweiser, for years the Board's director of research. Any new article by Harvard's John H. Williams, economic advisor of the New York Federal Reserve Bank, is significant.

LEGISLATION AND RULINGS

The National Monetary Commission collected for publication in 1910 *The Laws of the United States Concerning Money, Banking and Loans, 1778-1909*. After each major change in our banking laws the Board publishes the latest version under the title *The Federal Reserve Act as Amended*. The Board also publishes a *Digest of Rulings* periodically. Most helpful, however, is *Federal Reserve Banking Law Service* (A. S. Pratt and Sons, Washington, 1940), in two volumes, the second of which is loose-leaf and kept up to date. For the latest changes consult that part of your *Bulletin* called the "Law Department."

CURRENT PERIODICALS

See pages 203-204.

STATISTICS

The *Federal Reserve Bulletin* carries nearly all the recent important statistics on banking operations and on the state of the economy. There is a compilation of many of these, running from 1914 to 1941, called *Banking and Monetary Statistics* (Board, Washington, 1943). Additional statistics are found in the Board's *Annual Reports*. More detailed information on the holdings of member banks are found in the quarterly *Federal Reserve Call Reports*. Much of all this material is presented graphically in *The Federal Reserve Chart Book* already mentioned. The *Annual Report of the Comptroller of Currency* (Government Printing Office, Washington, annually) covers the operations of national banks particularly. The *Annual Report of the Federal Deposit Insurance Corporation* (F.D.I.C., Washington, annually) contains information on many small banks not members of the Federal Reserve System. The *Annual Report of the Secretary of the Treasury* carries Treasury statistics not readily available elsewhere. For further information, P. M. Hauser and W. R. Leonard, *Government Statistics for Business Use* (Wiley, New York, 1946), may prove quite useful as a guide. Two excellent collections of general economic statistics are the *Statistical Abstract of the United States* (Washington, annually) and the National Industrial Conference Board, *The Economic Almanac* (247 Park Avenue, New York 17, annually).

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For further information on banking and other financial matters consult some of the bibliographies in the money and banking and financial history texts, especially C. Prather, F. Bradford, Davis R. Dewey, and W. Shultz and Cain. There is a ponderous *Bibliography of Finance* written by M. Masui (Keigyosha Press, Tokyo, 1935) which is spotty but often helpful. Henry P. Beers, *Bibliographies in American History* (H. W. Wilson, New York, 1942), contains a list of bibliographies in finance and banking (pp. 138-140). For the list of fine special studies by the Board's economists, see the third page from the end of your latest *Federal Reserve Bulletin*. Also helpful is Edwin T. Coman, Jr., *Sources of Business Information* (Prentice-Hall, New York, 1949), especially Chapter VI, "Financial Information." Now old but still good is Ray B. Westerfield, *Selected Bibliography of Money, Credit, Banking and Business Finance* (Bankers Publishing Company, Boston, 1940).

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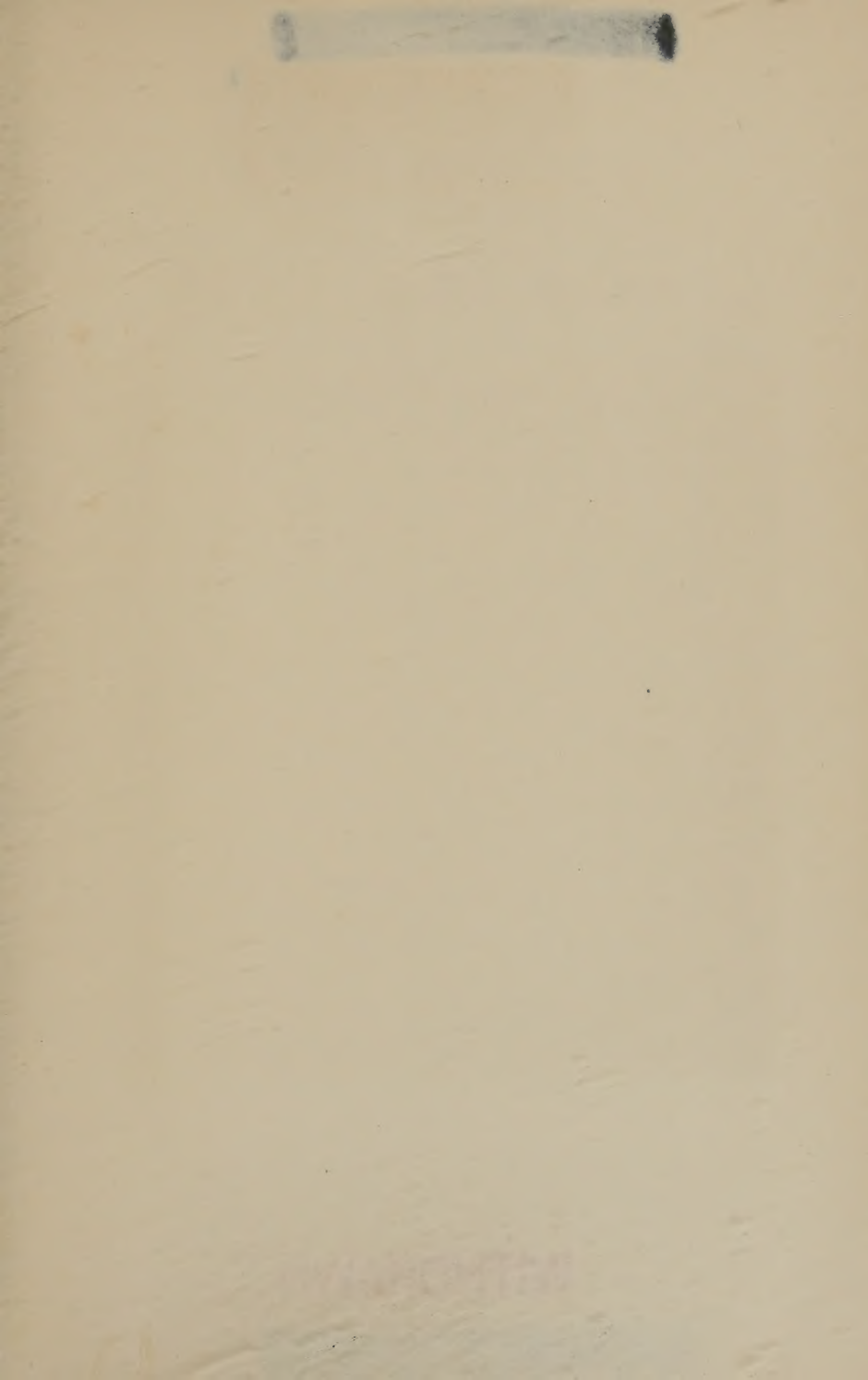
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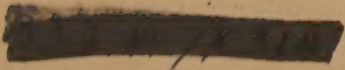
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