FEDERAL RESERVE SYSTEM IN OPERATION

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FEDERAL RESERVE SYSTEM IN OPERATION

BY

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PREFACE

This book is intended to serve as an introduction to the study of the Federal reserve system by college classes in banking and by business and professional men who wish to have a general idea of the purposes, structure, and functions of the system. It has been the writer's endeavor to collect and present on the workings of the Federal reserve banks and the Federal Reserve Board material which, though most of it can be found scattered in different books, reports and periodicals, has not been conveniently available in any one publication. The book is not a treatise on the principles of Federal reserve banking and does not undertake to define the limits within which Federal reserve policy can influence the course of the business cycle; neither does it attempt to give a detailed technical account of the system's operations. It merely describes the most important functions of the system, points out the principal problems with which it is confronted, and outlines the methods developed or in process of development for the solution of these problems.

One-half of the twenty-year duration of the Federal reserve banks' charters has now elapsed, and the system has gone through an evolution during its eventful decade of operation which makes it different in many particulars, both as a matter of law and of practice, from the plan contemplated by the framers of the Federal Reserve Act. This volume presents a picture of the system as it appears today at the mid-point of its span of life under its original charter, and deals particularly with developments in 1922, 1923, and 1924, when the system for the first time since the spring of 1917 functioned under conditions not influenced primarily by the war and its aftermath.

In the preparation of this study the writer has made use of files of the *Federal Reserve Bulletin* and of the *Annual Reports* of the Federal Reserve Board and has freely drawn upon information and ideas developed in discussion with fellow members of the Federal Reserve Board's staff. For ideas thus acquired it has been impossible to give specific credit, and the writer takes this occasion to acknowledge his indebtedness to his associates on the staff. He wishes to make it clear, however, that this book is in no sense official and that no one but himself is responsible for the opinions here expressed. Neither can anyone, except the writer, be held accountable for the shortcomings of this study. If the book succeeds in stimulating interest in the system and leads to further study by the readers, the author's purpose will be accomplished.

The appendices contain a summary of the principal provisions of the Federal Reserve Act arranged topically, with many details omitted; the text of the regulations issued by the Federal Reserve Board; certain reviews of the month reproduced from the *Federal Reserve Bulletin;* extracts from the *Tenth Annual Report of the Federal Reserve Board;* statistical tables showing the principal items in the Federal reserve bank statement from the establishment of the system to date; portions of articles by A. C. Miller of the Federal Reserve Board, and Professor W. O. M. Sprague of Harvard University; a sample of the weekly condition statement of the Federal reserve banks, and other illustrative material to which reference is made in the appropriate places in the text.

The text has been checked for technical accuracy by J. R. Van Fossen; the charts, many of which are reproduced from the *Federal Reserve Bulletin* and from *Annual Reports* of the Federal Reserve Board, have been prepared by Miss Nora V. Elder. The statistical tables are the work of Miss Dorothy Deeds, to whom the writer is also indebted for constant assistance in the preparation of the volume. He wishes also to thank Walter W. Stewart for numerous valuable suggestions, both as to form and substance, made at different stages of the composition. To all these persons grateful acknowledgment is made; without their assistance this book could never have been completed.

E. A. G.

WASHINGTON, D. C.
January, 1925.

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CHAPTER I

INTRODUCTION

More than a decade has elapsed since the passage of the Federal Reserve Act on Dec. 23, 1913, and the Federal reserve banks, which opened their doors for business on Nov. 16, 1914, have been in operation for over 10 years. Only during the past 3 years, however, have economic and financial conditions sufficiently recovered from the influence of the World War to make it possible for the Federal reserve system to enter upon the performance of its normal peace-time functions. During this period many of the problems with which the system will be constantly confronted have had to be considered, and credit policies, to be pursued under normal conditions, have had to be developed. From the point of view of a consideration of the permanent place of the Federal reserve system in the banking organization of this country, therefore, the system's operations during the past 3 years present the most fruitful field of study.

Scope of This Study.—The Federal reserve system was inaugurated late in 1914 and grew out of grave dissatisfaction with the previously existing banking and monetary system whose defects were forcibly brought out once more by the panic of 1907. It is not the purpose of this study to discuss the growth of the Federal reserve idea, or the evils which it was intended to cure. This has been done in many other publications. Nor is it the writer's purpose to describe in detail the workings of the Federal reserve system during the war when banking principles were inevitably subordinated to the exigencies of financing the requirements of the Government. The present study will be concerned chiefly with developments after 1919, and more particularly with a description of the Federal reserve system's activities during the past 3 years of relatively normal business and credit conditions.

The System before and during the War.—Prior to our participation in the war the Federal reserve banks were essentially in a quiescent state. During this period the system was largely occupied by the difficult and important task of initial organization. The Federal reserve districts had to be defined, the boards of directors and the officers and staffs of the banks selected, and the methods of operation formulated. In accordance with the provisions of the Act, the reserve banks took over some of the reserves of the member banks. The reserve banks' capital was being paid in and relatively small amounts of currency were issued. The bank's discounts were small, because of the abundance of funds at the disposal of member banks arising out of the reduction of reserve requirements by the Federal Reserve Act and the inflow of gold sent by the belligerents to pay for American supplies. The reserves of the reserve banks were in excess of their note and deposit liabilities. This situation was radically changed when the United States entered the war in April, 1917. An amendment to the Federal Reserve Act passed in June of that year provided that the entire reserves of member banks must be kept on deposit with the reserve banks, nothing counting as lawful reserves except deposit credit with the reserve banks. Other amendments further reduced the amount of reserves required by member banks against deposits, and liberalized the provisions relating to the issue of Federal reserve notes.

Throughout the period of hostilities the principal function of the Federal reserve banks was to assist the Treasury in floating government securities. This was done by liberally discounting paper secured by United States obligations and by putting into effect preferential discount rates on this class of paper. This procedure enabled the member banks to sell government securities to customers on the instalment or other deferred payment plans on liberal terms without other charge than the interest borne by the securities themselves. It is through the operation of this system that it was possible for the government to sell in less than two years over $20,000,000,000 worth of bonds, an amount far in excess of the nation's savings during the period.

In the following table are shown the principal items in the condition of the Federal reserve banks on Mar. 30, 1917, prior to the entry of the United States into the World War; on Nov. 29, 1918, soon after the cessation of hostilities; on Oct. 29, 1920, when the peak of post-war credit expansion was reached; on July 31, 1922, when the subsequent liquidation came to an end; and on Sept. 10, 1924, the latest available date.

PRINCIPAL RESOURCES AND LIABILITIES OF THE TWELVE FEDERAL RESERVE BANKS COMBINED ON SELECTED DATES
(In millions of dollars)

	Mar. 30, 1917	Nov. 29, 1918	Oct. 29, 1920	July 31, 1922	Sept. 10, 1924
Resources					
Cash Reserves	$947	$2,120	$2,168	$3,048	$3,172
Bills Discounted, total	20	1,815	2,801	406	261
Secured by U. S. obligation	....	1,412	1,204	132	85
All other	20	403	1,597	274	176
Purchased Acceptances	84	375	299	140	93
U. S. Securities and Other Earning Assets	64	122	296	537	570
Total Earning Assets	$168	$2,312	$3,396	$1,083	$ 924
Liabilities					
Federal Reserve Notes in Circulation	$358	$2,569	$3,351	$2,132	$1,751
Deposits	707	1,668	1,675	1,847	2,200
Ratio of Reserves to Deposit and Note Liabilities, per cent	89.0	50.0	43.1	79.9	80.3

At the conclusion of the war the reserve banks had accumulated a large amount of cash and had discounted over $1,800,000,000 of paper for member banks, $1,400,000,000 of which was secured by government obligations. Deposits, consisting chiefly of members' reserve deposits, were large, and Federal reserve note circulation was in excess of $2,500,000,000.

Post-war Developments.—Subsequent activities of the Federal reserve banks must be discussed with reference to their condition at the close of the war. During 1919 and 1920, government securities found their way in large volume into the hands of more permanent investors; instalments on Liberty and Victory loans were being paid up and the volume of so-called war paper, *i.e.*, notes of persons purchasing government securities on credit and pledging these securities as collateral for loans covering a large part of the purchase price, began to diminish both in the hands of the member banks and of the reserve banks. In place of this type of paper, ordinary commercial paper arising out of business transactions began to become increasingly important. From 78 per cent of total discounts on Nov. 29, 1918, paper secured by United States government obligations declined to 43 per cent at the end of October, 1920, and even this reduced total included a large volume of loans for commercial purposes obtained on the basis of United States obligations merely for convenience or on account of the preferential rates which were still applicable to this class of paper.

In order to understand banking developments after the armistice it is important to keep in mind that the business and speculative boom, which developed in 1919 and 1920 largely as a result of the release of war-time energies and the lifting of war controls and inhibitions, was dependent for its credit requirements upon a banking system which had already undergone an enormous expansion in financing the war, and that even in 1919 the financial needs of the government continued to be the principal factor in the credit situation. The Victory loan, it will be remembered, was not floated until May, 1919, and instalments on this loan continued to fall due until late in the autumn of that year. The rapidly growing demand for commercial credit, which developed in 1919 and 1920, thus had to be met by the banks at a time when they were already carrying a heavy load of loans granted for the financing of the war.

It is not surprising, therefore, that in spite of the fact that the gold reserves of the United States had increased by about $1,000,000,000 since 1914, and that most of these reserves were in the possession of the Federal reserve banks, the reserve ratio of these banks *i.e.*, the ratio of combined note and deposit liabilities to reserves, fell in 1920 almost to the legal minimum, being at times below 42 per cent. Indeed, some of the reserve banks, where the demand for credit was particularly heavy, would have had reserves far below the legal requirement had it not been for the assistance they were able to obtain from other reserve banks. The volume of inter-reserve bank accommodation in 1920 reached $267,000,000 before the change in the business situation relaxed the strain and permitted the borrowing reserve banks to begin to repay the loans obtained from other reserve banks.

It was not until May, 1920, that the inevitable reaction in business began, and it was about six months later, in the autumn of the same year, that liquidation of loans both at member banks and at Federal reserve banks got under way. Between that time and the summer of 1922, loans and discounts of member banks decreased by about 11 per cent, and the volume of their accommodation at the reserve banks declined by about 80 per cent.

Beginning with the middle of 1922, the growth of business activity, which had begun to be manifest nearly a year earlier, resulted in an increased demand for credit and currency to finance the enlarged volume of trade and industry. The volume of member bank credit in use once more increased at a rapid rate, but the banks were able to meet this increased demand of their customers without the use of additional reserve bank credit. This ability of the banks resulted from the fact that gold in large volume was coming to this country from abroad. Thus between 1922 and 1924, as in 1915 and 1916, the growth of member bank credit was based on the use of gold imported from abroad rather than on an increased volume of accommodation at the reserve banks. In fact, in 1924, a slackening of business activity and a consequent decrease in currency requirements, together with a continued inflow of gold from abroad, caused the volume of reserve bank credit in use to decline to the lowest level since 1917.

Problems Facing the Federal Reserve System.—Under conditions prevailing at the present time the Federal reserve system is endeavoring to develop new banking policies and to establish a new banking tradition in a financial world different in many respects from that in which the system was originally conceived and organized. The system cannot depend for guidance in its credit policy upon its reserve position, the traditional indicator of credit conditions in pre-war days, and must function without relying on international gold movements as semi-automatic equalizers of financial conditions in the different money markets of the world. Gold movements during and since the outbreak of the war have been larger than ever before in history, but they have not been in settlement of trade balances, as was the case formerly, and have been one-sided, flowing principally to the United States in payment for food and other products purchased in this country. The stock of gold in the United States has increased by more than $2,000,000,000, and this increase, together with the continued inflow of gold, has had a profound effect on our banking and credit situation. The accumulation of gold in this country, which has been caused by the disorganization of financial conditions abroad rather than by credit developments at home, has deprived the reserve position of the reserve banks of a large part of its significance as an indicator of domestic credit conditions.

In formulating its domestic credit policy the Federal reserve system must, therefore, look for other less well-known indicators of credit trends. It must observe changes in the volume of production, employment, trade and prices, in their relation to changes in the demand for credit. The task confronting the system is to develop a body of facts reflecting current economic and financial conditions, and a better understanding of the bearing of these facts upon credit policy. It is also a part of its problem to encourage the growth in the banking and business community, and among the general public, of a better knowledge of the functions and principles of operation of the Federal reserve system, with a view to a closer cooperation between the system, the member banks, and the business public. The ultimate success of the system depends upon such cooperation, and upon an understanding by the public of the service that the Federal reserve banks perform for the community.

CHAPTER II

STRUCTURE OF FEDERAL RESERVE SYSTEM

In order to be able to follow the discussion in the subsequent chapters, which deal with the principal operations of the reserve banks and the functions of the Federal Reserve Board, it is necessary to have some knowledge of the manner in which the reserve banks and the Board are organized. In the present chapter, therefore, is presented an outline of the structure of the Federal reserve system and of its different parts. This chapter is necessarily schematic in content, but those unfamiliar with the system will find in it a description of the skeleton around which the body of the system is built and of the organs through which its operations are performed.

Ownership of the Federal Reserve Banks.—Federal reserve banks are owned by the member banks. All the national banks are required by law to be members of the Federal reserve system, and state banks and trust companies are eligible to membership if they comply with the prescribed requirements as to amount of capital and as to the nature of their business.[1] Member banks must subscribe 6 per cent of their capital and surplus to the capital stock of the Federal reserve bank of their district; one-half of this subscribed amount must be paid in and the remainder is subject to call. Member banks are the only stockholders of the Federal reserve banks. The Federal reserve bank is thus a banker's bank not only because its functions are primarily to serve other banks, but more literally because it is owned by its member banks. In this respect the Federal reserve banks differ from the Central banks of European countries.

[1] The requirements as to capital vary from $25,000 in cities of not more than 3,000 inhabitants to $200,000 in cities of 50,000 inhabitants or more. Requirements as to capital have been made more liberal by the Agricultural Credits Act of March, 1923, which provides that state banks having 60 per cent of the required capital may join the system, provided they undertake to make up the additional capital in a reasonable period of time.

Administration of the Federal Reserve Banks.—While member banks own the Federal reserve banks, these are not entirely controlled by their members. Each Federal reserve bank has nine directors, of which three are appointed by the Federal Reserve Board and six are elected by the member banks. The government directors include the Federal reserve agent, who acts as chairman of the board, the deputy agent, and one additional so-called "unattached" director, while of the six directors elected by the member banks three must represent the commerce and industry of the district and three must be connected with banking. In electing the three business directors and the three banking directors, the banks of a district are divided into three groups, the first representing large banks, the second medium-size banks, and the third small banks, each of these groups being entitled to one of the banking directors and to one of the business directors.

The management of a Federal reserve bank is in the hands of the board of directors. They appoint the officers and staff, though the salaries paid are subject to approval by the Federal Reserve Board; they control the discount rate policies of the banks, though rates of discount must also be approved by the Federal Reserve Board and eligibility of paper for discount is defined by that Board. Within the bank's organization the board of directors is supreme. The executive head of a Federal reserve bank is known as its governor and there are one or more deputy governors. Under these the bank is divided into its various departments, the heads of the departments being known by different names at the several banks.

The Loan Committee.—In every reserve bank there is a loan committee, consisting of some of the higher officers, which passes upon each piece of paper presented to the bank for discount. This committee must first ascertain whether the paper is eligible under the law and the regulations of the Federal Reserve Board, and second, whether it is acceptable, *i.e.*, whether the credit back of it is good; whether the particular member bank which presents it is entitled to more credit, etc. This distinction between eligibility and acceptability of paper presented for discount to the Federal reserve bank is important and is not always appreciated.

Eligibility is a matter of law and regulation. In order to be eligible paper must comply with definite standards as to the transactions which gave it origin and as to maturity, while its acceptability is entirely independent of these matters and rests on the credit standing of the signers, the availability of funds, the question of whether the particular member bank has exhausted its legitimate quota of credit, whether experience has shown that the bank is using Federal reserve bank accommodation for improper or undesirable purposes, and a number of other considerations which are not definitely formulated but are entirely within the discretion of each loan committee and board of directors, subject to the legal limitation that the Federal reserve bank shall grant accommodation to each member bank with "due regard to the rights of other member banks" and with a view to "accommodating commerce and business."

Operations of the Federal Reserve Banks.—The discount of paper for member banks either in the form of notes made out by the bank's customers and then rediscounted by the member banks with the Federal reserve bank, or in the form of fifteen-day bills payable by the member banks themselves, secured by eligible paper or by government securities, constitute the principal part of the loan activities of the reserve banks. They also have authority under Sec. 14 of the Act to go into the open market and purchase from anyone who offers them "cable transfers and bankers' acceptances and bills of exchange of the kinds and maturities by this Act made eligible for rediscount," and government securities. Open-market operations of the reserve banks are managed by different officers or committees in the different banks, but always subject to general control by the board of directors.

The chairman of the board of directors, as has been stated above, is appointed by the Federal Reserve Board, is known as the Federal reserve agent, and his function in addition to presiding over the meetings of the board of directors is to act as a liaison officer between the Board and the bank. He represents the Board in all matters relating to the bank's business and is entrusted by law with the function of handling the issue of Federal reserve notes. The Federal reserve agent obtains the notes from the Comptroller of the Currency and holds them in readiness against the demands of the reserve bank. When the reserve banks wish to issue Federal reserve notes in response to a demand from member banks for currency they apply to the Federal reserve agent and turn over to him sufficient collateral to cover the notes. The collateral must consist of gold or eligible paper amounting to not less than 100 per cent of the notes. The reserve bank is required to hold a gold reserve of not less than 40 per cent against its Federal reserve notes in circulation, the gold offered as collateral against notes issued to the bank counting as part of this reserve. The Federal reserve agent holds the collateral in joint custody with the Federal reserve bank, and when notes are returned releases an equivalent amount of the collateral either in the form of eligible paper or of gold, as the reserve bank may desire.

Relation to Member and Non-member Banks, the Government, and the Public.—This general sketch of the operations of a Federal reserve bank may be illustrated by the chart (see Fig. 1) on page 11. The chart shows that the public comes to member banks and to non-member banks, generally speaking, with one or two things—either with money or checks to deposit, or with some kind of credit instrument, whether a note, a draft, or an acceptance, upon which to borrow. The public can come with these demands to any one of the 10,000 member banks or to the 20,000 non-member banks. In return for its promise to pay or for its money, the public obtains from the bank cash or deposit credit. Non-member banks may come to member banks for the same kind of service as the latter give to the public, *i.e.*, the non-member bank may come to a member bank with cash, usually in the form of drafts, or with notes, in order to obtain a deposit credit or a supply of cash, so that, broadly speaking, the member banks receive deposits and grant loans both to the public and to non-member banks. This is an important point to remember because it is a connecting link between the non-member banks and their customers and the Federal reserve system. Member banks may also deposit with, or borrow from, non-member banks, but since most of the large banks are members and most of the non-member banks are small, the old relationship between country banks and city correspondents exists in most cases between non-member country banks and city members. Besides, the member bank can generally obtain credit from a reserve bank on as good, if not better, terms than

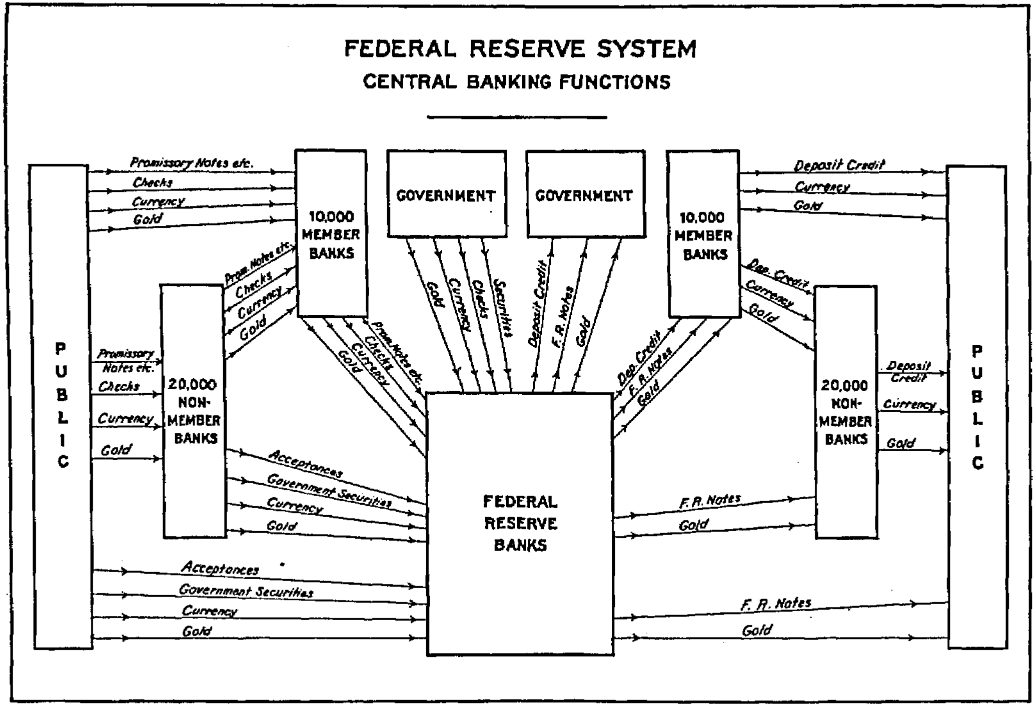

FIG. 1.—General outline of the operations of the Federal reserve banks and of their relation to member and non-member banks, to the government and to the general public. The chart brings out the fact that Federal reserve banks can be used in the same general way by non-member banks as by the public.

from any non-member bank, and so a member bank does not usually borrow from a non-member. One member may, and frequently does, however, borrow from another member, but these transactions, taking place between member banks, are not represented in the chart.

When a member bank, to meet the demands of its customers, either individuals or non-member banks, desires currency or additional credit, it applies to the Federal reserve bank of its district. The law provides that each member bank must keep reserves of specified amounts against its deposits, and that these reserves must be kept entirely on deposit with the Federal reserve bank. The member bank can grant loans to its customers and give them deposit credit to an amount limited, in addition to banking prudence, by the legal requirement that it must keep a specified proportion of its deposits as reserves with the reserve bank. As a matter of fact, the bank frequently borrows from the reserve bank in order to increase its deposit credit with that bank up to the necessary minimum required by law. The machinery works in the following way: When a member bank desires cash or funds for out-of-district payments it obtains Federal reserve notes from the reserve bank, draws a draft against its Reserve account, or effects a telegraphic transfer through the agency of that bank, the amount withdrawn being charged to its deposit account. This reduction in the deposit account may impair the bank's reserve balance, *i.e.*, reduce it below the legally required minimum, in which case the member bank will replenish its reserves by borrowing from the reserve bank. The members' reserve deposit may also become too low, without being actually reduced, when a member bank grants credit to a customer and increases its own deposit liabilities to a point where its reserve balance with the reserve bank is below the minimum required by law. In such a case, also, the member bank applies for accommodation from the reserve bank in order to bring its reserve deposit up to the legal minimum. Thus in the Federal reserve system the members' reserves are not cash, but a credit on the books of a reserve bank, and the cash reserves which the reserve bank keeps against its own deposits are, therefore, the ultimate and the only legal hard cash reserves back of all the deposits of the member banks. The law requires the reserve bank to have not less than 35 per cent in gold or lawful money as reserve against its deposits. The Federal Reserve Act greatly reduced the amount of reserves that member banks must carry, and by transferring these reserves to the reserve banks made them available as a basis for further credit operations.

Turning once more to the chart, it appears that the public and the non-member banks may come directly to the reserve bank and sell acceptances and government securities. In return they may receive gold or Federal reserve notes. The government also deals with the reserve banks by depositing cash or checks, or by selling its own securities and receiving in return deposit credit or Federal reserve notes in accordance with its requirements.

Federal Reserve Banks, Branches, and Agencies.—There are twelve Federal reserve banks, located in Boston, New York, Philadelphia, Cleveland, Richmond, Atlanta, Chicago, St. Louis, Minneapolis, Kansas City, Dallas, and San Francisco (see Fig. 2). Each of these banks serves one of the twelve Federal reserve districts shown on the map. Several of the banks have branches which operate in different parts of the districts, usually having a certain portion of the district assigned to them. There are at present twenty-three branches and one domestic agency in operation.

In addition to permitting the establishment of branches in this country the Federal Reserve Act authorizes the reserve banks to open accounts in foreign countries, to appoint correspondents, and to establish agencies abroad for the purpose of purchasing, selling, and collecting bills of exchange.. Under the authority of this legal provision the reserve banks have established correspondent relationships with many foreign central banks and have acted as agents of such banks in the purchase and sale of acceptances and government securities in this country. During the summer of 1923, the Federal Reserve Board authorized two of the Federal reserve banks to establish agencies in Cuba. The relations of the United States with Cuba are unique, because of provisions of the Platt Amendment, which gives the United States a control over Cuba's foreign loans, and because Cuba is dependent for its monetary requirements almost entirely on American currency, the Federal reserve note being legal tender in Cuba though not in the United States.[5] Agencies in Cuba were authorized for the Federal Reserve Bank of Atlanta, which had for some time supplied most of Cuba's currency needs, and the

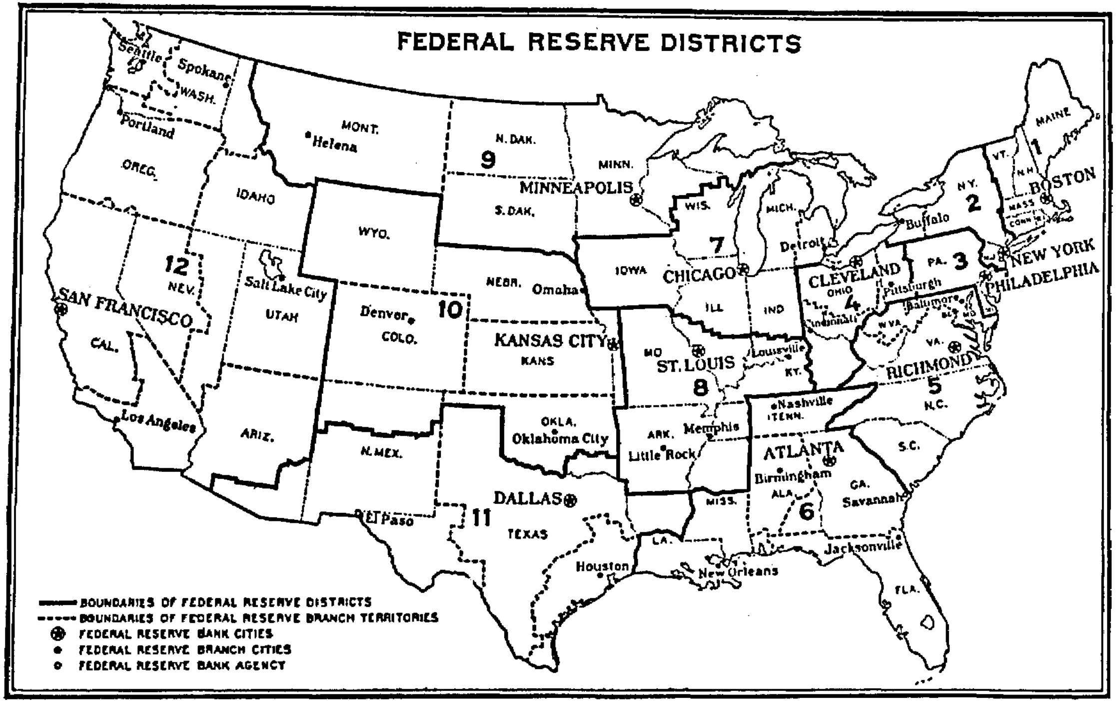

FIG. 2.—There are 12 Federal reserve banks, 23 branches, and one domestic agency (in Savannah, Ga.). There are also two agencies in Cuba.

Federal Reserve Bank of Boston, because there are active commercial relations between New England and the Island of Cuba. The principal occasion for the establishment of these agencies was that much of the money in circulation in Cuba was in bad condition because there was no efficient machinery for its redemption. Currency presented to the Cuban agencies of the reserve banks for the purchase of cable transfers is sorted, and unfit currency is sent back to this country for replacement by new currency. The new money is then put into circulation through the purchase, by the Cuban agencies of the reserve banks, of bills of exchange from the banks operating in Cuba and through the payment to banks in Cuba of funds on account of cable transfers sold by the Federal reserve banks to member banks in the United States. The Federal Reserve Board has issued regulations prescribing in detail the manner in which the Cuban agencies shall operate. These agencies opened their doors for business on Sept. 1, 1923.

Fiscal Agency and Other Functions.—In addition to performing the functions already described, the Federal reserve banks act as fiscal agents of the government, and render many other services such as the clearing and collection of checks, the supplying of the cash requirements of member and non-member banks and other matters. These activities, which theoretically are not an essential part of the operations of a central banking organization, have assumed a large measure of importance in the reserve banks' organization because they involve much expense which is not proportional to the volume of the banks' credit operations. These functions need only be referred to here in order to make it clear that in addition to their fundamental operations the reserve banks perform a great many others, not so fundamental to their original purpose, but which employ a large part of their personnel and occasion a large proportion of their expenditures.

The Federal Reserve Board.—As a general supervisory body over these twelve Federal reserve banks, there is established by law a Federal Reserve Board of eight persons, six of whom are appointed by the President with the advice and consent of the Senate and two who serve ex-officio. The ex-officio members are the Secretary of the Treasury and the Comptroller of the Currency, the former acting as Chairman of the Board. No two of the appointed members may be from the same Federal reserve district. The law provides that in selecting the six appointive members the President shall have due regard to a fair representation of the financial, agricultural, industrial, and commercial interests, and geographical divisions of the country. The salaries of Board members are fixed by law at $12,000 per annum, and they must give their entire time to the business of the Federal Reserve Board. The term of office is 10 years. From among the six appointive members the President designates a governor and a vice-governor. The governor acts as executive officer of the Board. The Board's expenses are met by an assessment on the Federal reserve banks in proportion to their capital and surplus.

Among the most important functions of the Board are the definition of the eligibility of paper under the law, and the approval of discount rates. The Board holds frequent meetings and has worked out an elaborate code of definitions of the terms of the law, and this code constitutes something in the nature of a central banking law of the country. The main principles of this code are incorporated in the Board's regulations which are reprinted in Appendix B, but these regulations are constantly supplemented by rulings made upon questions arising out of the actual operations of the banks. The function of the Board in defining eligibility was more arduous in the beginning of the system's operation, when terms had to be newly defined, than it is at present, when the fundamental problems have been solved and questions of eligibility arise only occasionally. Of the other functions of the Board several should be mentioned here. The Board has control of the machinery of clearing between the reserve banks, *i.e.*, the reserve banks clear the checks between their own member banks, and the Federal Reserve Board through the gold settlement fund acts as a clearing house for the different reserve banks, thereby completing the clearing machinery and reducing the necessity for actual cash shipments to a minimum. The Federal Reserve Board also has complete control over rediscounts between the different reserve banks, *i.e.*, when the reserves of one reserve bank become depleted and it is under the necessity of obtaining a loan from another reserve bank, it applies to the Reserve Board which has the power to request or to require another reserve bank to grant the desired accommodation. The

Federal Reserve Board, through its division of examinations, regularly examines the twelve Federal reserve banks and branches, the law providing that each reserve bank must be examined at least once a year. Examinations of non-national banks are generally conducted by the reserve banks, often in cooperation with state banking authorities, while national banks are examined by the Comptroller of the Currency.

Another function of the Board is obtaining daily condition reports of the reserve banks, publishing them weekly in accordance with the requirements of the law, and preparing and submitting its annual report to Congress. These activities of the Board, in collecting and publishing information, have been considerably expanded and enlarged into the collection of much research and statistical material, which is intended to afford a basis for credit policies for the Board and the reserve banks and to keep the member banks informed of the general business and credit situation. The Reserve Board also publishes a monthly bulletin which contains information on many phases of domestic and foreign business and credit conditions.

Federal Advisory Council.—In addition to the Federal Reserve Board, the law provides for a Federal Advisory Council consisting of one man from each Federal reserve district appointed by the Boards of Directors of the twelve reserve banks. This council meets not less than four times a year, considers problems of importance to the Federal reserve system, and makes a report to the Board incorporating its advice and recommendations. The Advisory Council has no other powers than the submission of this advisory report, but the Council consists of men prominent in the banking field and its reports command considerable respect and attention from the Board and the banks, as well as from the general public.

Conferences with Governors and Federal Reserve Agents.—In order to keep in close touch with the developments in the different districts the Federal Reserve Board, not less than twice a year, invites the governors to Washington, and once a year also invites the agents of the twelve Federal reserve banks, and on occasion some of the directors. At these conferences many of the problems confronting the system are discussed first by the twelve agents and the twelve governors meeting in separate conferences, and later by all the twenty-four officials meeting with the members of the Board. Much progress is made at these meetings toward the establishment of consistent policies and the development of what has been called a "common language" for the Federal reserve system, so that the different officers of the system learn to understand exactly what certain terms and concepts mean.

The system is new, the principles of Federal reserve banking are not yet generally understood or fully developed, and the semi-annual conferences help toward such an understanding and development of principles. There are also committees of the governors and of the agents of the different banks entrusted with the handling of specific problems. Thus, for instance, an agent's committee has recently made a report on deposit reserves and the advisability of changing some of the legal provisions on this matter. Another committee consisting of some of the officers of the banks and members of the Board is working to establish methods of cost accounting and uniform economy and efficiency procedure in the twelve banks, a subject which is of particular importance in view of the reduced earnings of the system in the past few years.

CHAPTER III

DISCOUNTS

"An Act to provide for the establishment of Federal reserve banks, to furnish an elastic currency, to afford means of rediscounting commercial paper, to establish a more effective supervision of banking in the United States, and for other purposes." This is the full title of the Federal Reserve Act approved Dec. 23, 1913. It indicates that next to the creation of elastic currency the framers of the Act considered "to afford means of rediscounting commercial paper" as the most important purpose of the Act.

Source of Reserve Banks' Lending Power.—It is pertinent to begin the discussion of discounts with the question: Whence arises the ability of a reserve bank to rediscount paper for a member bank? In an ordinary commercial bank ability to discount paper for a customer is derived from two principal sources: the capital contributed by the stockholders; and the deposits entrusted to the management of the bank by its customers. Broadly speaking, a bank can lend to its customers whether in lawful money, its own bank notes if a note-issuing bank, or in deposit credit, only as much money as it receives from them and from its stockholders, less the reserves which the law and banking prudence dictate that it shall hold. In so far, however, as a bank is itself able to borrow funds from other banks, it can extend its loaning power. That this is true is evidenced by the fact that the total loans, investments, and reserves of banks are about equal to their capital, surplus, total deposits, and borrowings.[1]

[1] This is not inconsistent with the accepted doctrine that a deposit in most cases is merely a book entry resulting from a loan transaction. A deposit credit may result from the actual deposit of cash or from the negotiation of a loan; it represents on the part of the customer the exchange of cash or of a claim on himself at some future day for an immediate claim on the bank, and on the part of the bank, the assumption of a deposit liability in exchange for cash or a claim on the customer.

A Federal reserve bank is fundamentally in the same position. Its capital, however, constitutes but a small part of its lending power, representing only 3 per cent of the capital and surplus of the member banks and amounting altogether to about $100,000,000 for the twelve Federal reserve banks combined. In addition the reserve banks have built up a surplus of about $200,000,000 which also is available as loanable funds. It is not from its capital and surplus, however, that the reserve bank derives the larger part of its lending power. A larger portion of the funds originally turned over to the reserve bank by the member banks was for the purpose of creating reserve deposits. The law provides that the member banks must keep with the reserve banks a certain proportion of their deposits.[1] These reserve deposits were paid in by the member banks in currency and coin and in addition the reserve banks received considerable sums of gold and lawful money in exchange for Federal reserve notes. The reserve deposits, which on Aug. 27, 1924 were about 19 times as large as the capital of the reserve banks, are the principal source of the reserve banks' lending power. Furthermore, the reserve banks have authority to issue Federal reserve notes in an amount 2½ times as large as their reserves (after setting aside 35 per cent against deposit liabilities), and this note-issuing power enables the reserve banks to meet the member banks' demands for currency as well as their requirements for deposit credit.

Economy of Reserves.—The Reserve Act reduced materially the reserve requirements of member banks, and it did so for the reason that it was thought, and justly, that the concentration of reserves in a central institution, where they would be available for any emergency anywhere in the district, reduced the chances of calls upon a bank which it would be unable to meet and, therefore, reduced the amount of reserves necessary in order to conduct the banking business on a safe basis. As a consequence of this reduction in reserve requirements the member banks can lend a larger proportion of their funds than they could before the establishment of the system. Furthermore, the reserves kept with the reserve bank need not be idle, as the reserve bank is not required to keep all the member banks' reserve deposits in its vaults. The reserves required against deposits are only

[1] Reserve requirements are discussed in detail on p. 79.

35 per cent, so that 65 per cent of these deposits are available for lending to member banks. The reserve bank also has authority to issue Federal reserve notes to the member banks in the ratio of \$2.50 of notes to \$1 of reserves, so that when a member bank deposits \$100 in cash with a reserve bank, the latter must keep \$35 as a reserve against the deposit and may lend on the basis of the remaining \$65 in the form of Federal reserve notes 2½ times that amount, or \$162.50 or in the form of deposits, 2.85 times the amount, or \$185.25.[1]

[1] Money borrowed from the reserve bank may in turn be lent by the member bank to a customer. Thus a member bank having received a cash deposit of \$100 from a customer may deposit it with the reserve bank and thereby increase the latter's lending power by \$162.50, which the member bank may then borrow and lend to its customers. The lending power of the member bank may be increased still further if the loan to its customer merely gives rise to a deposit account and not to a cash payment, for against a deposit the member bank needs to keep on the average only a 10 per cent reserve with the reserve bank. Thus the \$100 in cash deposited by being turned over to the reserve bank enables the member bank to lend \$1,000 additional to its customers in the form of deposit credit. At the same time this addition of \$100 to the reserves of the reserve bank increases the latter's own lending power, for after setting aside \$35 as reserve against the \$100 deposit the reserve bank can lend in the form of deposit credit an additional \$185 (2.85 times 65). This additional loan of \$185 will increase the member bank's reserves by this amount and the latter in turn will be able to increase its own lending of deposit credit by ten times this amount, that is, by \$1,850, so that the \$100 deposited in cash with the member bank has increased its lending power directly by \$1,000, and through borrowing at the reserve bank by \$1,850 more, the total increased lending power thus amounting to \$2,850. The difference between the \$1,000 and the \$2,850 represents the additional lending power introduced into the situation by the Federal reserve bank. But this is predicated upon all the borrowing being in the form of deposit credit. If, on the contrary, the customer wishes to withdraw his entire loan in cash, the reserve bank will be able to issue on the basis of the \$100 deposit (less the 35 per cent reserve) \$162 of Federal reserve notes, and this amount and no more the member bank will be able to lend to its customers. Whether, therefore, a deposit of \$100 with a member bank will increase that bank's lending power by \$162 or by \$2,850 will depend on what form its own lending will take. The larger the proportion of this lending that will be withdrawn in cash the smaller the added lending power, and vice versa. The proportion of the funds that is withdrawn in cash varies in accordance with the business situation and with the demand for currency, so that the volume of lending power of a reserve bank on the basis of \$100 deposited with it depends, within the broad limits of from \$162 to \$2,850, upon the demand of the

Character of Paper Discounted.—Section 13 of the Federal Reserve Act provides that a Federal reserve bank may discount notes, drafts, and bills of exchange arising out of actual commercial transactions; that is, notes, drafts, and bills of exchange issued or drawn for agricultural, industrial, or commercial purposes, or the proceeds of which are used for such purposes. This positive authority is accompanied by the inhibition—"but such definition shall not include notes, drafts, or bills covering merely investments, or issued or drawn for the purpose of carrying or trading in stocks, bonds, or other investment securities, except bonds and notes of the government of the United States." A further limitation is added in regard to maturity, paper not being eligible for discount by the reserve bank unless it has a maturity at the time of discount of not more than 90 days exclusive of days of grace; the only exception is that paper issued for agricultural purposes or based on livestock may be discounted with a maturity not exceeding 9 months. These provisions of the Act indicate the fundamental nature of the discount activity of Federal reserve banks. These discounts must originate in a demand in the commercial market for purposes of production or distribution. The reserve banks thus are intended to create only circulating credit and not credit to be used for capital purposes or for speculation. The liquid nature of the discounts is further assured by the requirement that the paper (except agricultural paper) must mature within 90 days. A loan to be repaid in 90 days must originate in transactions which are consummated approximately in 90 days or in transactions which, though they take a longer time, have only 90 days of their duration left at the time of discount. A person may, for example, borrow money for the purpose of carrying merchandise in his store, the turnover in this particular class of goods being 6 or 9 months. The member bank may carry this paper for 6 months in its own portfolio and then take it to the Federal reserve bank and have the Federal reserve bank carry it for the last 3 months before maturity.

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business community for currency. (The difference in this respect between an individual member bank and all the member banks combined is discussed on page 83. At this point it is assumed for the sake of simplicity that all the member banks are a unit.)

The framers of the Federal Reserve Act intended to make it possible for the member banks to issue more credit through the instrumentality of the reserve banks than was possible by the banks acting individually. But the Act was so designed as to make the paper in the hands of the reserve banks of a strictly self-liquidating character, *i.e.*, originating in transactions whose consummation would automatically produce the funds for the liquidation of the loan. If a man borrows money for the purpose of shipping cotton he will need the loan while the cotton is in transit, and when it reaches its destination and is paid for the shipper will be in funds and in a position to repay his loan. Similarly, if a farmer borrows money for the purpose of feeding a load of steers, he expects to be able to repay the loan as soon as the steers have been fattened and sold. The 9 months' limit permitted for agricultural paper is a concession to agriculture in recognition of the fact that the agricultural turnover is slower than the industrial turnover and that 9 months' paper offers no greater facilities to agriculture than 3 months' paper offers to commerce and industry.

Rediscounts and Collateral Notes.—Loans by the reserve banks to member banks may be made in two general ways: upon customers' paper offered for rediscount by the member banks; and on the member bank's own collateral notes secured by customers' paper or by government obligations. The limit of maturity on collateral notes is 15 days. The amendment authorizing collateral loans, approved on Sept. 7, 1916, was for the purpose of enabling banks to obtain immediate credit for short terms. A large part of the reserve banks' discounts is in the form of collateral notes, most of which are secured by government obligations. Collateral notes are used chiefly by the large banks in financial centers, where commercial banks do a great deal of business for short terms and where they can easily adjust their borrowings from time to time to immediate requirements. For purposes of this kind of borrowing, collateral notes are much more convenient than customers' notes, which generally have longer maturities. By borrowing on its own note made out for a relatively large amount in a round figure, such as $1,000,000, $5,000,000, or $10,000,000, the member banks can save a great deal of bookkeeping and clerical work. On the other hand, the smaller banks, which find themselves short of funds, are more likely to rediscount one or more of the customers' notes in their possession with the reserve bank, which will carry them until maturity.

It should be kept in mind that the difference in methods of borrowing just described is a purely technical one and the choice of methods depends simply upon the member bank's convenience. In either case the bank obtains accommodation at the reserve bank, *i.e.*, passes to that bank a part of the loans which it has itself extended to its customers.

Paper Secured by United States Obligations.—It has been stated that the reserve banks were intended primarily to finance current short-term transactions arising out of the production and distribution of goods. In the definition of paper which member banks are permitted to discount, however, there is included a proviso to the effect that, while the banks are not permitted to carry paper drawn for the purpose of trading in investment securities, this does not apply to trading in bonds, notes, or other obligations of the government of the United States. This proviso, which can generally be found in the charters of central banks having the note-issue privilege, has played a more prominent part in the operations of the reserve banks than could have been anticipated by the framers. The table below shows total discounts of the Federal reserve banks at different dates from November, 1918, to November, 1921:

Total Federal Reserve Bank Discounts and Discounts Secured by United States Obligations
(In millions of dollars)

Date	Total discounts	Secured by United States obligations	
		Amount	Per cent of total
Nov. 15, 1918	$1,798	$1,359	76
Nov. 14, 1919	2,140	1,701	80
Nov. 19, 1920	2,673	1,159	43
Nov. 16, 1921	1,198	432	36

Up to the entry of the United States into the war the Federal reserve banks had very small amounts of discounts. The war began in Europe in 1914, shortly before the opening of the doors of the Federal reserve banks, and resulted in an enormous demand for munitions and other supplies by the European belligerents, and in the shipment of $1,000,000,000 of gold into the United States in payment for these supplies. Money in this country was, therefore, abundant; business was booming and there was little demand for reserve bank credit. The reserve banks issued moderate amounts of Federal reserve notes, indirectly in exchange for gold, of which there was an abundance.

The situation changed, however, when the United States entered the war. In the first place, the allies ceased to pay cash for supplies obtained in the United States and instead obtained credits from the United States Treasury, paying for their purchases with funds thus secured. In the second place, the United States government itself was immediately in need of funds for the carrying on of the war. To meet this demand for funds, both on the part of its allies and for its own needs, the government, in addition to adopting measures of additional taxation, proceeded to float a series of loans generally known as Liberty loans. The amounts of these loans, together with the dates of their flotation are shown in the following statement:

AMOUNTS OF LIBERTY AND VICTORY LOAN ISSUES, AND RATE OF INTEREST, TOGETHER WITH DATES OF THEIR FLOTATION

	Amount	Rate of interest, per cent	Date
First Liberty loan	$ 1,989,456,000	3½	June 15, 1917
Second Liberty loan	3,807,865,000	4	Nov. 15, 1917
Third Liberty loan	4,175,650,000	4¼	May 9, 1918
Fourth Liberty loan	6,964,581,000	4¼	Oct. 24, 1918
Victory loan	4,495,373,000	4¾	May 20, 1919
Total	$21,432,925,000		

It is clear that the American people could not pay for this vast amount of Liberty bonds out of their current earnings. They were obliged to buy them on time, *i.e.*, to borrow upon them while accumulating the funds to pay the principal. The banks of the country were thus called upon to lend large amounts of money to the public for the purpose of enabling it to purchase government securities. It is at this point that the Federal reserve system entered into the equation and enabled the government to carry its fiscal program through to success. There was nothing to prevent member banks from discounting with the reserve banks paper secured by United States government obligations. In fact, the reserve banks, in their desire to uphold the government, charged lower rates on such paper, so that members were able to borrow from the reserve bank on paper secured by Liberties at a rate no higher and sometimes even slightly lower than that carried by the bonds themselves. This margin compensated the banks for the expense of handling the bonds and for the clerical work of keeping books for large numbers of customers, and made it possible to lend money to the customers purchasing bonds at a rate corresponding to the coupon rate. In this way the purchaser of bonds on time paid no interest on the unpaid balance of his purchase, as the coupon attached to the bond paid the interest on his loan from the bank. The following statement shows, for the dates of flotation of Liberty bonds and Victory notes, the rates charged by the reserve banks on paper secured by government obligations, as compared with the rates of interest paid by the bonds themselves, and with the discount rates on commercial paper:

Rates Charged by Federal Reserve Banks on Paper Secured by United States Obligations, Rates Borne by the Securities, and the Discount Rate on Commercial Paper at the Federal Reserve Bank of New York

Date	Rate charged on commercial paper, per cent	Rate charged on paper secured by government obligations, per cent	Bond rate, per cent
June 15, 1917	4	3½	3½
Nov. 15, 1917	4	3½	4
May 9, 1918	4¾	4¼	4¼
Oct. 24, 1918	4¾	4¼	4¼
May 5, 1919	4¾	4¼	4¾

Figures 3 and 4 show the effect of war developments on Federal reserve bank activity. It will be noted that the discounts of the banks rose from almost nothing at our entry into the war to $2,800,000,000 in October, 1920. It will also be observed that up to the middle of 1919, when the Victory loan was floated, the bulk of the discounts of the reserve banks consisted of paper secured by government obligations which at that time was generally known as "war paper." It is only after the consummation of the Victory loan in 1919 and the completion of instalment payments on account of that loan that war paper began to decline both in absolute amount and relatively to total discounts. Soon after that time the reserve banks began to abolish the preferential rates on government paper. The war was over and steps were being taken looking to a return of peace-time banking.

Post-war Economic Boom.—Hostilities came to an end in November, 1918 but expenditures for war purposes continued for some time, and until after the Victory loan was launched in the summer of 1919 the character of credit developments was much the same as during the war. As a matter of fact, the peak of government debt was not reached until August, 1919. In the second half of 1919 there developed a distinct tendency for speculation, a general feeling of release from war-time restraints, and a consequent display of recklessness and extravagance which affected the entire nation.

The economic boom of 1919-1920 was the result of many factors, whose relative importance it would be difficult to estimate, but whose combined effect on business and credit conditions has become a matter of history.[1] Among these factors there was the indulgence of appetites long held in restraint by war-time controls; there was a general celebration of the abolition of meatless and wheatless days; there was the necessary replenishing of stocks exhausted during the war period. The shelves of retail merchants were bare and needed restocking; the wardrobes of a large portion of the population were in need of renovation;

[1] For discussion of this period from the point of view of credit and banking developments see Pt. II of the *Report of the Joint Commission of Agricultural Inquiry* (Sixty-seventh Congress, First Session, Report No. 408) also Appendices I and J to this volume.

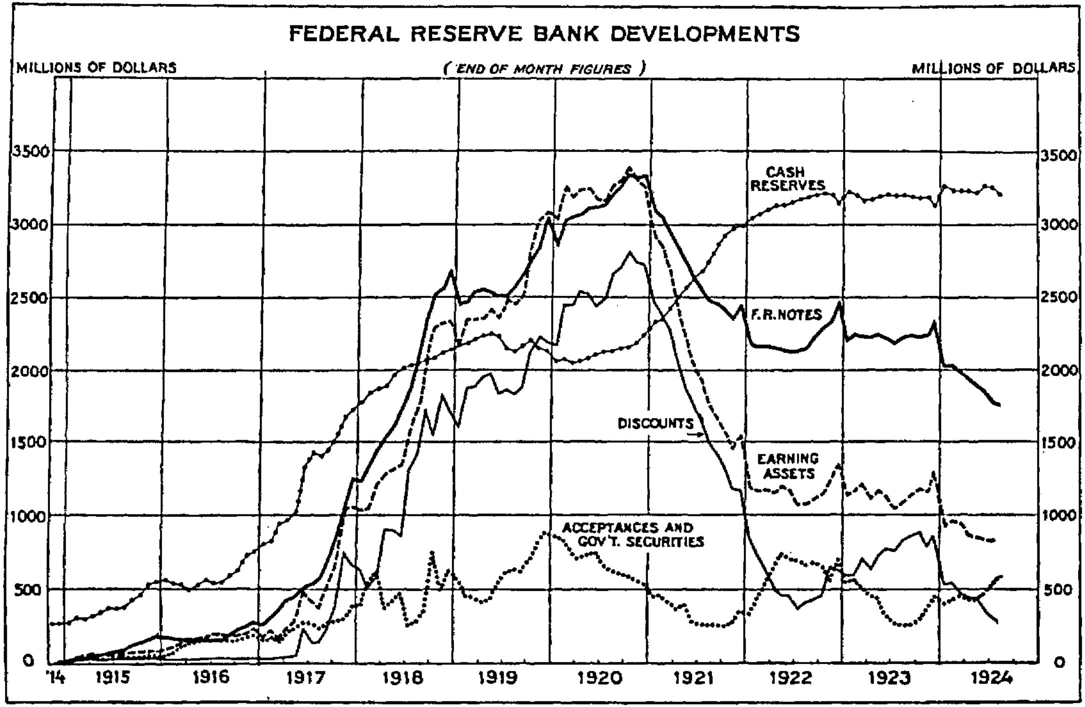


FIG. 3.—Earning assets and Federal reserve notes followed a similar course between 1917 and 1920, when the volume of reserve bank credit was rapidly increasing; in 1921 earning assets declined much more than Federal reserve notes, because gold imported from abroad was used by member banks to repay borrowings at the reserve banks. This is reflected also in a rapid growth of cash reserves.

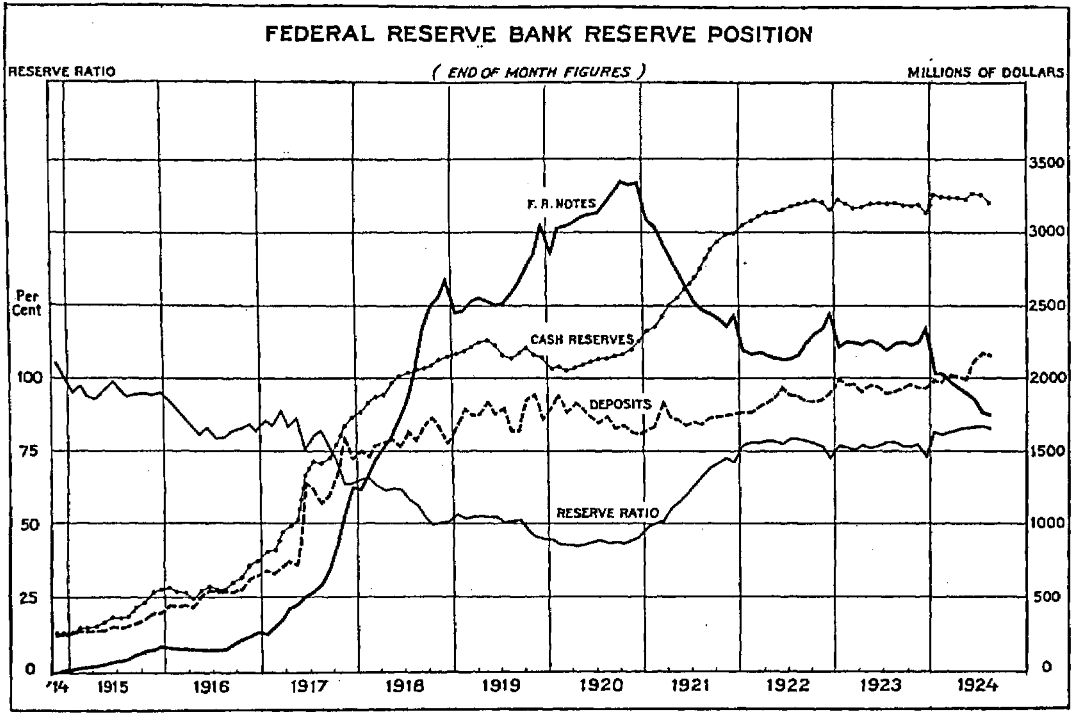


FIG. 4.—During 1917–1920 liabilities increased rapidly and the reserve ratio declined; in 1921 the ratio rose both because Federal reserve note circulation decreased and because reserves increased. The chart brings out also the relative stability of deposits compared with the wide fluctuations in Federal reserve notes.

there was also a heavy demand for new dwellings, as building activities for private use had been on a greatly reduced scale during the war.

With the war emergency over, and with the continuance of full employment at high wages the people of the United States were freely spending their income by buying clothes, investing in homes, and purchasing automobiles. The returned soldiers, with their discharge pay to spend, also added to the buying power of consumers. The increased demand for goods arising from all these sources was reflected, upon the removal of price controls, in a rapid rise in prices. The country's improved credit machinery made it possible for the banks to supply the funds required to finance the rapidly growing volume of business. Speculation in securities and commodities was widespread, and to the earlier growth of bank credit caused by the necessities of war was added a further expansion on a large scale arising out of the requirements of the post-war boom.

Collapse of the Boom in 1920.—It became clear in the summer and fall of 1919 that credit was expanding at an alarming rate. The Federal Reserve Board recognized the fact but was not free to raise rates while the government was floating the Victory loan and did not wish to have obstacles thrown in the way of the success of this issue. The Board, however, issued several warnings telling the banks that the situation was serious and should be controlled. But this good advice was accorded the customary treatment of good advice and remained unheeded. Speculation continued unabated. At last in November, 1919, after the date for the payment of the last instalment on the Victory loan, the reserve banks adopted moderate advances in discount rates. Credit expansion, however, continued, as is clearly seen from the chart on page 28.

In 1920 the early rumblings of approaching catastrophe were heard when the silk market in Japan collapsed, and it seems difficult to realize in retrospect that few people in America were far-sighted enough to see that a collapse was imminent. Several Federal reserve banks raised their rates to 6 per cent, others to 7 per cent, and still others adopted systems of progressive rates.

In May, 1920 occurred a definite turn in the tide. While the country's productive plant was still employed nearly to capacity, the foreign demand for American goods collapsed with the exhaustion of public and private credits granted to exporters, transportation facilities were no longer adequate for the prompt distribution of the output, serious freight congestion developed, goods were not moving to market in an orderly manner and their accumulation at distributing points together with the growing unwillingness of consumers to continue buying at the prevailing level of prices were among the factors resulting in a reversal of the price movement.

The liquidation, which began in the late fall of 1920, continued until the beginning of 1922, and for many banks until the fall of that year. This liquidation, which is reflected in the steep declines of the discount and Federal reserve note curves in the chart on page 28 was the basis of the accusation that the reserve banks were deflating the country, forcing liquidation, and bringing about a paralysis of business. As a matter of fact, the process of liquidation was world-wide and was brought about by the inevitable work of economic forces which, when a period of inflation reaches its peak, brings about a reversal, and after the turn comes accelerates the decline until the pendulum once more swings in the opposite direction. During the period of advancing prices business accumulates a large number of weak concerns which are kept afloat merely by the fact that the value of their inventories advances continuously. Anyone can make money on a rising market, and many did in 1918 and 1919, and congratulated themselves upon their wisdom. This self-congratulatory spirit was part of the reason for the rapidity of the subsequent decline as it encouraged men to buy larger and larger stocks so long as these stocks constantly increased in value. When confidence was once shaken and prices began to decline these accumulated stocks began to be thrown on the market, thereby accelerating the price declines and drawing more and more concerns into the movement. A trade and credit contraction, like an avalanche, grows as it moves forward, and gathers unto itself continuous accretions which are carried along by the momentum of the moving mass.

Gold Movements.—Gold movements, which had been away from the United States during the months following the removal of the gold embargo in June, 1919, began to be in the direction of this country in the fall of 1920 as foreign debtors began to pay for their obligations incurred in the United States. The liquidation of borrowings from the Federal reserve banks was due approximately as much to the repayment of foreign as of domestic debts. Roughly, domestic liquidation is measurable by the reduction in Federal reserve note circulation, and foreign liquidation by the increase in gold reserves. The following statistical statement will bring out this point:

TOTAL RESERVES, FEDERAL RESERVE NOTES IN CIRCULATION, DEPOSITS, AND RESERVE RATIO OF FEDERAL RESERVE BANKS ON SELECTED DATES

(End-of-month figures in millions of dollars)

	Total reserves	Federal reserve notes in circulation	Deposits[1]	Reserve ratio, per cent
1920:				
October	$2,168	$3,351	$1,675	43.1
1921:				
January	2,320	3,091	1,643	49.0
April	2,505	2,830	1,726	55.0
July	2,685	2,538	1,695	63.4
October	2,937	2,409	1,739	70.8
1922:				
January	3,059	2,184	1,779	77.2
April	3,125	2,158	1,833	78.3
July	3,181	2,127	1,888	79.2

[1] Net deposits to March, 1921; total deposits beginning with that date.

Domestic concerns paid their indebtedness in the final analysis by Federal reserve notes, as this is the only elastic part of our circulation that can be easily retired when the demand for it decreases, while foreign concerns paid their balances by the only available international means of cash payment, that is, gold.

Liquidation in Industrial and in Agricultural Districts.—While liquidation proceeded through the country and in all classes of communities, it is notable that it was at first much more pronounced in industrial centers than in agricultural districts. This was due in part to the fact that much of the speculation and industrial expansion occurred in the cities, while agricultural credit was utilized for productive purposes. It is also due to the fact, however, that in the cities speculators whose ventures had been unsuccessful were obliged immediately to take their losses. Their loans were of a nature which enabled the banks to dispose of the collateral when payment was not forthcoming at maturity. In country districts, on the other hand, where the relationship between the banker and the customer is closer, and where it was clear that to sell out an overdue debtor would mean ruin to him and a severe loss to the bank, there was frequently manifested unwillingness to use drastic measures, and an inclination to renew loans. This resulted in the accumulation of a large amount of so-called frozen loans. A study of loans in agricultural, semi-agricultural, and non-agricultural counties in the spring of 1920 and 1921 shows that liquidation in urban communities was much more drastic than in rural communities, and that Federal reserve bank accommodation, which had decreased decidedly in the urban communities during this year of contraction, had actually increased in the rural counties. The larger increase in borrowing in the cities, and the subsequent rapid liquidation was also caused in part by the withdrawal of funds by rural correspondents during the stringency and the building up of balances when money became more abundant. The city banks were obliged in 1920 to lean on the reserve banks partly in order to help them stand the drain caused by withdrawals of country bank deposits, and in 1921 and 1922 used the funds redeposited by the country banks to reduce their indebtedness at the reserve banks.

End of Liquidation in July, 1922.—Liquidation ran its course, and, as far as Federal reserve bank discounts are concerned, came to an end in July, 1922. After that time there was a considerable increase in discounts due to industrial revival. At the end of July, 1923, total discounts of the reserve banks were $826,000,000, compared with $380,000,000 at the end of July, 1922. During the remainder of 1923 discounts continued at about the level reached in July, but in 1924, owing to a business recession with the consequent decrease in the demand for currency and to the continued inflow of gold from abroad, discounts at the reserve banks declined rapidly, and at the end of August of that year totaled only $263,000,000.[1]

To sum up the history of discounts at the Federal reserve banks: There was first a period of inactivity prior to our entry into the war; then a period of war-time inflation followed by one of post-war expansion, culminating in a rapid liquidation which came to a halt in July, 1922 and gave place to a temporary revival to the end of 1923, followed by further liquidation in 1924. In considering the curve of expansion and contraction of Federal

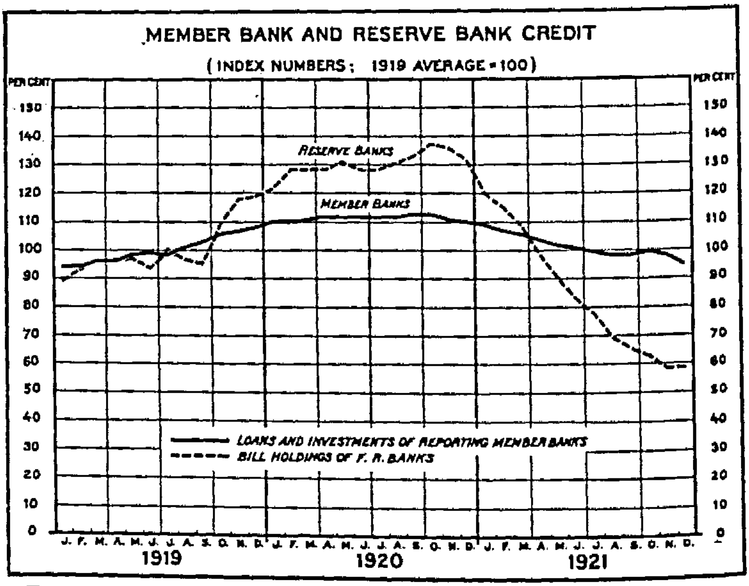


FIG. 5.—Since the Federal reserve banks supply only the excess credit after member banks have exhausted their own lending power, the volume of reserve bank credit fluctuates much more widely than the volume of member bank credit.

reserve bank discounts, it should be clearly kept in mind that loans by the Federal reserve banks represent only the overflow of loans granted by member banks. The volume of reserve bank credit starts at close to nothing, rises to a great height in periods of strain, and then contracts to a small amount as the strain relaxes. Reserve banks do not deal directly with the business

[1] The decline in discounts in 1924 was also due in part to purchases of U. S. securities by the reserve banks (see page 58).

man—they deal with member banks. The demand for credit originates with business and reaches the reserve bank only when the member banks have not sufficient funds to finance their customers. This causes the contrast between the reserve bank loan curve and the member bank loan curve on the chart (see Fig. 5).

The great bulk of the nation's business is done by the member banks on the basis of their own lending capacity, and even the great periods of expansion and contraction cause relatively small waves on the top of the great volume of the nation's credit. This is brought out by the contrast between the relatively even course of the member bank loan curve and the rapid rise and fall of the reserve bank loan curve.

Inter-reserve Bank Borrowing.—An important feature of the reserve system is inter-reserve bank borrowing, which assumed large proportions in 1920, and which forms the last link in the chain that in case of need welds the entire credit structure of the United States into a unified whole. Each reserve bank in normal times does business with its own members and depends upon its own resources, but when the credit conditions in some parts of the country become more strained than in others, as was the case in 1920, there is a possibility of mutual aid. Some of the industrial districts in 1920 and 1921 were not as severely affected as were the agricultural districts. As a consequence, when the reserve banks in the agricultural districts found that they could no longer accommodate their members on the basis of their own reserves, there were other reserve banks with large excess reserves which were able to assist the agricultural banks, and these in turn were enabled to accommodate many more of their own customers. The seasonal demands for crop-moving superimposed upon the heavy credit strain made inter-reserve bank borrowing, in the fall of 1920, very heavy. It was not a demand for Federal reserve notes that caused the large volume of inter-district accommodation. In fact, the volume of these notes in the agricultural districts was not increasing during the period of the greatest strain. It was chiefly the fact that payments for crops were slow and at relatively low prices, while payments for agricultural and other supplies had to be promptly met, so that funds were constantly moving out of the agricultural districts and were not offset by equivalent amounts which normally come in payment for the crops. These unfavorable balances of trade payments caused the member banks in the agricultural districts to borrow from the reserve banks to meet out-of-district payments, and it is borrowings for this purpose that exhaust reserves most rapidly, as is explained on page 92. It is this movement of funds from agricultural to industrial districts that partly accounts for the more rapid financial recovery of the manufacturing sections of the country. A table is here inserted showing the amounts of inter-reserve bank borrowing and a chart (Fig. 6) illustrates this table:

TOTAL INTER-RESERVE BANK ACCOMMODATION AT END OF EACH MONTH DURING 1920 AND 1921

(In thousands of dollars)

	1920	1921
January	$114,460	$91,365
February	106,156	36,552
March	96,480	16,222
April	163,084	25,942
May	148,552	32,520
June	126,167	47,429
July	148,704	60,412
August	215,455	68,304
September	250,296	60,208
October	260,440	41,950
November	168,435	14,812
December	122,174	none

By the end of 1921 all of the inter-reserve bank loans were liquidated, and in 1922 there were no inter-reserve bank loans outstanding.

The Federal reserve system has thus demonstrated that cooperation between member banks for the purpose of strengthening each other in times of stress is practicable. The system has helped the country go through a period of great expansion followed by sharp contraction, with much loss and suffering, to be sure, but without a panic and without wholesale bankruptcy of banks and business enterprises. The Federal reserve system has been tested and found effective as an instrument for the support of government finance during the war, and as a means

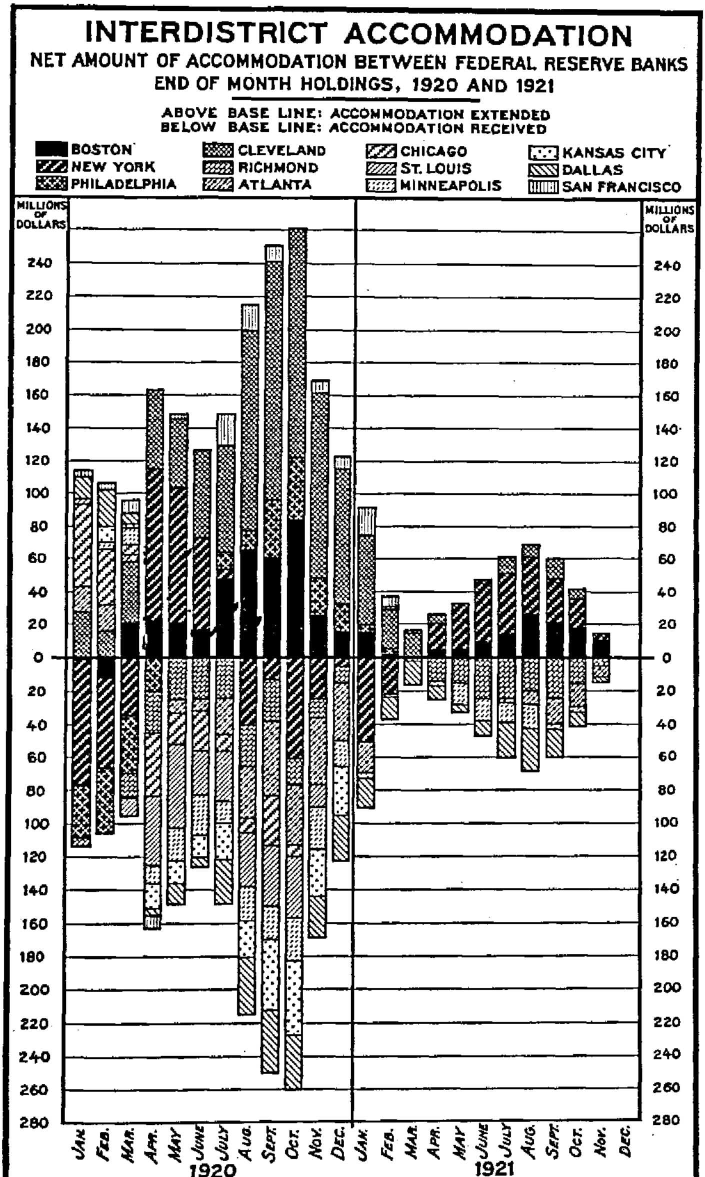


FIG. 6.—In 1920 all the reserve banks participated in inter-district accommodation either as lenders or as borrowers. In 1921 the volume of such accommodation was much smaller, and by the end of December of that year—all the reserve banks had retired the entire amount of their borrowings from other reserve banks.

for helping the country's business over the peak of a business cycle. The problem upon the solution of which reserve banking has now entered is how it can best serve business in a period of more normal fluctuations in business volume and credit demand, and to what extent it can be instrumental in still further moderating these fluctuations. Upon the solution of this problem depends the future character and scope of Federal reserve banking in the United States.

CHAPTER IV

DISCOUNT RATES

In central banking tradition the principal phase of credit policy is the determination of the discount rate. American experience with the reserve banks has been relatively brief, extending, as it does, only over a decade during a part of which the war interfered with the development of a rate policy formulated solely with a view to prevailing credit and banking conditions. Much of the discussion of discount rates in this country has, therefore, been based on analogies with the experience of foreign countries, and especially of Great Britian, where the official discount rate of the Bank of England has long been an important factor in the money market, and where the technique of credit control through the discount rate has reached the highest degree of development. It is proposed in this chapter to summarize the history of discount rates in the Federal reserve system, to describe the place of the reserve bank rate in the general structure of money rates, to point out the conditions that distinguish the situation in this country from that in England, and to outline some of the principles of rate policy that appear to have grown out of American experience during the first decade of the operation of the Federal reserve system.

Discount Rate Policy Prior to the Autumn of 1919.—During the first years of the system's operation prior to the entry of the United States into the World War there was but little borrowing by member banks from the Federal reserve banks, a large part of whose operations consisted in the purchase of acceptances and government securities. The reduction of reserve requirements for member banks by the Federal Reserve Act and the large gold imports resulted in an abundance of loanable funds at the disposal of member banks which, therefore, were applying for but little accommodation at the reserve banks. In these circumstances the rates charged by the reserve banks were of relatively small importance and need not be discussed in this study. During the period of our participation in the war, when the government was floating its war loans, and for about a year after the armistice when war financing continued to be the principal factor in the credit situation, the Federal reserve banks were guided in their rate policy chiefly by the necessity for supporting the Treasury. The level of discount rates was kept low and preferential rates were granted on loans secured by government obligations. As stated in the preceding chapter, a large part of the borrowing at the reserve banks during 1917, 1918, and the first half of 1919 was of this character, and the discount rate was thus not used as a means of credit control—but as a method of helping the government to raise the funds necessary for the prosecution of the war. It was not until the summer of 1919 that the use of the discount rate as a means of credit control received serious consideration.

Advances in Discount Rates in 1919 and 1920.—It became apparent early in 1919 that the recession in prices and the volume of business activity, which had followed the armistice, were short-lived, and that the country was entering upon a period of rapid business and credit expansion and of price advances. There was evidence of a growth of speculative activity, and the Federal Reserve Board issued several warnings to the reserve banks and the member banks pointing out that a continued growth of bank credit, especially for speculative purposes, would endanger the soundness of the banks of the country. Little heed was paid to these warnings, however, and the growth of the volume of bank credit in use continued at a rapid rate. Thus total loans of all the member banks increased from about $14,000,000,000 on Mar. 4, 1919 to $15,500,000,000 on June 30, and $17,500,000,000 on Nov. 17 of the same year, an increase of 25 per cent in a period of a little more than 9 months. During the same period the earning assets of the Federal reserve banks increased by about $700,000,000. While the Federal Reserve Board and the reserve banks were cognizant of this credit expansion and fully realized its dangers, they did not feel free to raise discount rates, as at that time the Treasury was engaged in the flotation of the Victory loan upon which the instalments were still being paid by the purchasers. It was not until November, 1919, that the first rate advances were made by the Federal reserve banks.

On Nov. 3, the Federal Reserve Bank of New York raised its discount rate on commercial paper from 4 to 4¾ per cent, and rate advances were also made by other Federal reserve banks. These advances have an important historical significance, as they mark the beginning of discount rate action independent of the interests of the Treasury and thus are the first step in the direction of reserve bank policy based upon prevailing credit conditions. The establishment of higher discount rates was taken by the public to mean that the Federal reserve system was seriously concerned about existing credit trends and was prepared to take such action as the conditions might demand. There followed a flurry on the stock exchange and an abrupt rise in call money rates to 30 per cent, but credit expansion both at member banks and at the reserve banks continued.

In view of these developments, together with the fact that gold was leaving the country in considerable quantities, as the result of withdrawals by South American and Oriental countries of balances built up during the war,[1] the Federal reserve system, early in 1920, considered the desirability of further rate advances. At that time the ratio of reserves, at the reserve banks, to the combined deposit and note liabilities was only about 42 per cent, and was thus approaching its legally required minimum, and at some of the reserve banks it would have been below the minimum had they not built up their reserves by borrowing from other reserve banks. Toward the end of January a general advance in discount rates was put into effect, the rate in New York rising from 4¾ to 6 per cent.

The same tendencies, however, continued to be manifest in the credit situation during the spring months of 1920. At a meeting in May between the Federal Reserve Board, the Federal Advisory Council, the governors of the Federal reserve banks, and the banking directors (Class A) the credit situation was carefully canvassed and it was decided that further rate advances were necessary. At this conference, the minutes of which have since been made public,[2] the governor of the Federal Reserve

[1] Between Sept. 10, 1917 and July 9, 1919, gold exports were prohibited.
[2] *Senate Document* 310, Sixty-seventh Congress, Fourth Session.

Board stated that the banks of the country were facing a serious situation as the result of a rapid expansion of credit, and the prevailing wave of extravagance and speculation, that a turn in the business situation was inevitable, that the Federal reserve banks must cooperate with other banks and with the public to bring about gradual liquidation, but that there must be no attempt at radical or drastic deflation which would result in a serious disturbance of business. The conference expressed itself in general agreement with the governor, and the governors and directors upon returning to their banks recommended to the boards of directors a general advance of the discount rates. On June 1 the rate at the New York bank was advanced to 7 per cent; at about the same time rates at the other reserve banks were raised to 6 or 7 per cent, and four of the banks adopted systems of progressive rates.

Progressive Rates.—Progressive rates were authorized by an amendment to the Federal Reserve Act passed during the preceding winter, which gave the reserve banks the right to charge individual member banks a graduated rate of discount increasing in proportion as the volume of their borrowing above a specified amount, known as the basic line, increased. The principle of progressive rates is in accordance with the proviso in the Act that credit extended to each member bank shall be granted "with due regard for the claims and demands of other member banks." The adoption of progressive rates in 1920 was for the purpose of distributing Federal reserve bank credit more evenly among the member banks, and of discouraging excessive borrowings by a small number of banks. The basic lines were determined differently in the several banks adopting progressive rates, but the principle and purpose of the system was the same in all cases. Though these rates accomplished some of the purposes for which they were adopted, and resulted in a wider and more equitable use of reserve bank credit, they caused hardship to some individual member banks and were probably not worked out and administered in the most effective manner. The rates were in force a relatively short time, and when they were abolished and flat rates substituted all charges to any member bank in excess of 12 per cent were refunded. The *Agricultural Credits*

Act of 1923 repealed the amendment authorizing the charging of progressive rates.[1]

Reduction of Discount Rates since 1920.—For about a year the high rates established in May, 1920, continued to be in effect. In the meantime the country passed from a period of business and credit expansion and price advances into a period of business depression, credit liquidation, and falling prices. Though the rates were raised in May the use of member bank and reserve bank credit continued to grow until the autumn months of 1920. Prices, however, began to decline rapidly in June, had fallen by about 27 per cent before the end of the year, and continued to decline throughout 1921. While bank loans to domestic borrowers were being repaid in 1921 as a result of lower prices and smaller currency and credit requirement of business, there was also a large volume of liquidation of advances to foreign countries through the heavy inflow of gold which began late in 1920, came in large volume in 1921, and has continued to the present time (August, 1924). The reserve position of the reserve banks was rapidly improving, and the volume of inter-reserve bank accommodation was constantly diminishing. In view of all these developments the reserve banks began, in the spring of 1921, a gradual reduction of their discount rates. The 7 per cent rate, which had been in effect at six of the reserve banks, was discontinued by May, 1921, and the rates continued an uninterrupted decline for over a year, so that at the end of July, 1922, the rates were 4 per cent in Boston, New York, and San Francisco, and 4½ per cent at nearly all the other banks. The rates prevailing at all the reserve banks at the end of each month from November, 1919 to October, 1924, are shown in the table on page 53.

In the early months of 1923 the rates at Boston, New York, and San Francisco were raised to 4½ per cent in view of the fact that at that time there was evidence of speculation and expansion at the financial centers, and from March, 1923 to May, 1924 a uniform rate of 4½ per cent prevailed at all the reserve banks and on all classes of paper. This was the only period of

[1] For discussion of the experience with progressive rates see 67th Congress, 4th Session, *Senate Document, 291*, reprinted in H. P. Willis' "The Federal Reserve System," p. 1354.

such uniformity of rates in the history of the Federal reserve system.

In 1924, the continued inflow of gold and the reduced demand for currency caused by a recession in the volume of business activity resulted in extremely easy conditions in the money market, and in the lowest level of money rates in more than a decade. In view of these conditions the discount rate at the New York reserve bank was reduced gradually from 4½ to 4, then to 3½, and finally to 3 per cent, the lowest rate since the establishment of the system, and rates at all the other reserve banks were reduced to 4 or 3½ per cent. At its present level, the discount rate at the New York bank is lower than the rate at any other central bank in the world.

Place of Discount Rate in Rate Structure.—In the general structure of money rates the discount rate of the Federal reserve banks has not as yet found a definite or permanent position, but its relationship to certain important money rates is gradually becoming established. The rate charged by Federal reserve banks on discounts for member banks is almost invariably lower than the rate charged by the latter on loans to their customers. The spread between these rates differs at different times and particularly in different places, but almost never does the rate charged by the reserve banks exceed the rate on customers' loans. Thus, for instance, in December, 1923, when the discount rate was uniformly 4½ per cent at all Federal reserve banks, the average rate charged by member banks on paper rediscounted with the Federal reserve banks averaged 5.60 per cent and varied by districts as follows:

	Per Cent		Per Cent
Boston	5.30	Chicago	6.00
New York	5.38	St. Louis	6.03
Philadelphia	5.51	Minneapolis	7.99
Cleveland	5.71	Kansas City	7.04
Richmond	6.10	Dallas	8.21
Atlanta	6.20	San Francisco	5.86

In the financial centers, where there is keener competition between banks for borrowers, rates charged to customers are lower and the spread between customer rates and the reserve bank discount rate is less than 1 per cent, while in the agricultural districts rates are much higher and the spread is as much as 4 per cent. That this difference between Federal reserve districts is in part a reflection of differences between banks in large cities and in country towns is indicated by the fact that during the same month the average rate charged to customers was 5.44 per cent in cities of 100,000 or more inhabitants, 6.34 per cent in cities between 15,000 and 100,000 inhabitants, and 7.54 per cent in cities and towns of less than 15,000 inhabitants. This difference between city banks and country banks is due in part to the smaller competition between country banks, partly to the greater risk incurred by banks in the less developed parts of the country, and partly to the relatively greater cost of conducting the banking business in country districts where the volume of operations is smaller and overhead expenses per dollar loaned are correspondingly larger.

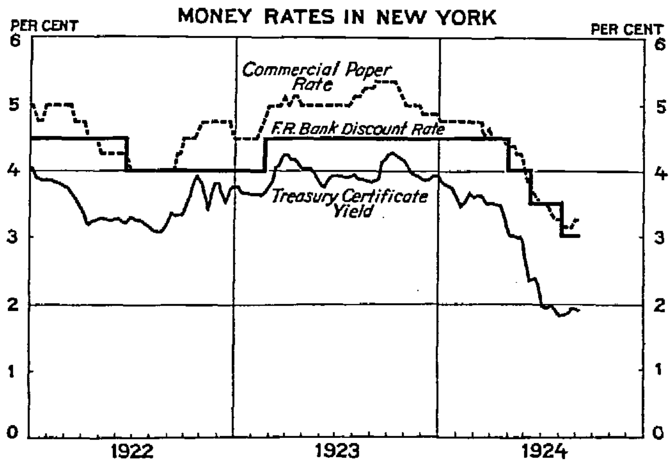


FIG. 7.—The discount rate of the New York Federal Reserve Bank is generally between the yield on treasury certificates and the open-market rate on prime commercial paper.

Discount rates are thus universally lower than rates on customer loans. The position of the discount rate in relation to the open-market rate on prime commercial paper and to the yield on Treasury certificates in the New York market is illustrated by the chart (Fig. 7). The discount rate is generally below the commercial paper rate and above the yield on Treasury certificates; it is also above the rate on bankers' acceptances, which is only slightly above the yield on certificates. Thus the discount rate tends to be higher than the rate on the most liquid kind of short-term paper, and below the rate on one-name commercial paper. The chart shows that when early in 1922 the commercial rate fell below the discount rate, the latter was reduced from 4¼ to 4 per cent, and that in February, 1923, when this spread was widening, the discount rate was advanced once more to 4½ per cent. In 1924 the series of reductions in the discount rate at the New York reserve bank has been preceded by declines in open-market rates. The inference from these observations is not that the discount rate is deliberately adjusted to market rates, but that both rates reflect the influence of the same set of financial developments, and that for the past 3 years a fairly definite relationship has existed between the different interest and discount rates.

Comparison with the Bank of England Rate.—Bank rate in England has traditionally been above the open market-rate, and this relationship has been considered as an essential part of credit administration by a central institution. This rate relationship is based on the principle that the central bank must not be resorted to by the market, except at times of real necessity and at some expense to the borrower, who must pay more for money obtained from the central bank than he receives from his customers on his own loan. There are, however, important differences between the banking structure and practice in Great Britain and in the United States. In London the joint stock banks do not rediscount paper with the Bank of England. Instead, when their funds are low they call their loans to brokers and discount houses, and these turn to the Bank of England to obtain the funds needed to pay their borrowings from the joint stock banks. The paper that is rediscounted with the central bank consists almost entirely of acceptances bearing a rate lower than bank rate, as the official minimum rate charged by the Bank of England is called. Line of credit loans by the joint stock banks to their customers in England are made in the form of book entries, or overdrafts, which do not result in the creation of negotiable instruments and are, therefore, not available for rediscount. These advances generally bear a rate higher than bank rate, and in many cases customers have a definite agreement with their banks that their advances will bear a rate 1 or 1½ per cent above bank rate. Thus the class of loans in England, corresponding to those on which member banks borrow from the Federal reserve banks in this country, bears a higher rate of interest than is charged by the central bank and, as seen above, acceptances in this country, which correspond to the paper rediscounted in London with the Bank of England, bear a lower rate than the discount rate of the reserve banks. It appears, therefore, that when comparison is made between similar classes of loans, the rate structure in this country and in England is essentially similar. There remains, however, this difference: In London, borrowing from the Bank of England is done on paper bearing a rate below bank rate, while in this country, borrowing from the reserve banks is done on paper bearing a higher rate than the reserve bank discount rate. This difference arises partly out of the different importance of acceptances in the London and in the New York market, and partly out of the difference in banking structure and tradition in the two countries. From one point of view, however, this is merely a difference in technique: In both markets when money is borrowed from the central bank, it bears a rate higher than the rate on the most liquid form of open-market paper, but lower than the rate charged to customers by commercial banks. In the final analysis the principal difference is that in England there is one, highly centralized money market with the Bank of England, an independent, privately owned institution, at its apex, while in this country there are twelve Federal reserve districts, with highly different economic and financial conditions, served by twelve autonomous reserve banks, which are owned and managed, with government participation and supervision, by the member banks. The conclusion from this comparison is, that while there are many analogies between banking conditions and practices in this country and in England, there are sufficient differences in the nature of the money market and in the character of services rendered by the Bank of England and the Federal reserve banks, to make it impossible to follow British precedents in American banking practice. The fact is that, though the British maxim that bank rate should be higher than market rate has generally been quoted with approval in American banking discussion, in practice, Federal reserve bank discount policy has been adjusted to American conditions to which this maxim has not been applicable.

Relation of Discount Rate to Member Bank Earnings.—Since member banks can borrow at the reserve banks at a lower rate than they receive from their customers, the question arises why member banks do not borrow as much as possible on the basis of available eligible paper and United States securities in order to profit by the margin between the discount rate and their own rate to customers. This is due in part to a banking tradition which has not been altogether destroyed by war-financing experience, that a bank must not borrow, except in emergencies, and that heavy borrowings by a bank reflect unfavorably on its standing. It is also due to the fact that the Federal reserve banks disapprove the practice of borrowing reserve bank funds, which are a joint reserve of credit belonging to all the members, for the purpose of increasing the earnings of an individual bank. When a reserve bank finds that a member bank is borrowing for such a purpose it uses its influence against the continuance of such borrowing. But the reserve banks, especially at financial centers, are not in a position to know in every case to what purpose funds obtained from them are put, and the fact that borrowing from the reserve banks for profit is a rare occurrence needs further explanation. That it is infrequent and unimportant in amount is evident from the fact that the volume of discounts at the reserve banks declines rapidly whenever the member banks have funds available for the reduction of their borrowings. On Aug. 27, 1924, for instance, total discounts of all the member banks were only $263,000,000, compared with $816,000,000 a year earlier, and nearly $3,000,000,000 at the peak of credit demand in 1920. The chart (Fig. 8) shows the relation between the discount rate at the Federal Reserve Bank of New York and the volume of discounts for member banks. It brings out the fact that member bank borrowings continued to increase in 1920 after the rate was advanced to 7 per cent, and continued to decline in 1921 and 1922 and also in 1924, in spite of successive rate reductions. The volume of borrowing at the reserve banks is thus not immediately and directly responsive to changes in the discount rate as it would be if member banks were in the habit of borrowing as much as they could lend at a rate higher than the discount rate.

The reasons why banks do not, to any great extent, use reserve bank funds to increase their earnings are different in the financial centers and in other sections of the country. In the financial centers, where, as has been pointed out, the spread between discount rates and customer rates is relatively narrow, the banks find that,

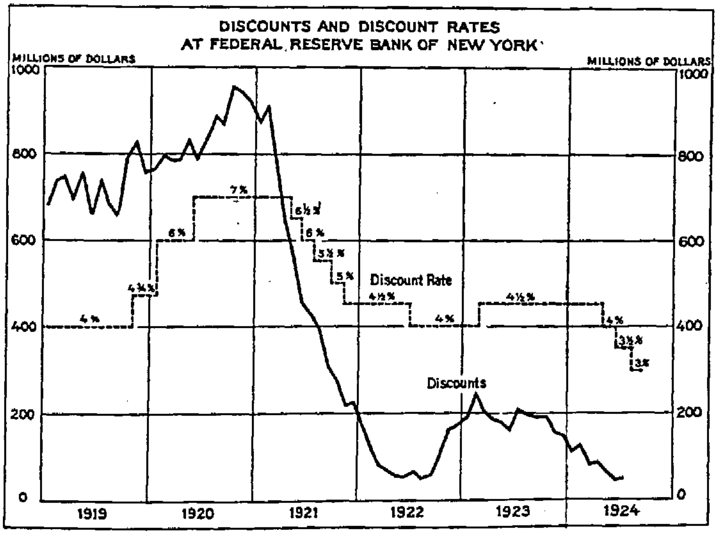


FIG. 8.—Holdings of discounted paper at the New York Reserve Bank continued to increase after the discount rate was raised to 7 per cent in 1920—and continued to decline between 1921 and 1924, with a rally in 1922, while the rate was gradually reduced to 3 per cent.

as a rule, they cannot borrow from the reserve banks with profit after allowance is made for the expenses of the loan and of the resulting deposit account, except when the credit requirements of their customers are in excess of funds available out of the banks' own resources. In a period like the summer of 1924, when money conditions were so easy that the banks had difficulty in finding profitable employment for their funds, borrowings from the reserve bank in New York were reduced to a negligible amount. On the other hand, during the period of the greatest credit demand in 1920, member banks in certain cases borrowed from the reserve bank at 7 per cent in order to accommodate important customers of long standing with loans at lower rates.

In the country districts, where a much wider spread exists between the discount rate and rates charged to customers, there is a more definite limit to the credit required by the business of the community, and member banks cannot lend money borrowed from the reserve bank in excess of local needs without reducing the general level of rates and thus cutting into their own earnings. It is true that the banks could borrow from the reserve bank and invest the money in the open market, but the margin between discount rates and open-market rates is generally insufficient to make such a transaction profitable. The fact is that in practice, as well as in theory, on account of tradition, reserve bank policy, and conditions in the money market, the funds borrowed from the reserve banks are used "to accommodate commerce and business," and not for the profit of any individual member bank.

Summary of Experience with Discount Rates.—Discount rate policy independent of Treasury needs has not had a sufficiently long period of development in this country to result in the formulation of definite rules upon which rate changes are based. Certain observations, however, may be derived from the system's experience during the past 5 years. It is apparent, in the first place, that discount rates are advanced when the reserve position approaches its legal minimum, as was the case in 1920. On the other hand, under present conditions of abnormal gold movements resulting from the disorganization of international financial relations, the mere existence of a high reserve ratio is not considered a sufficient reason for a reduction of discount rates. Thus rates were advanced in 1923 at three reserve banks, in spite of a high level of the reserve ratio, and subsequently remained unchanged for over a year at all reserve banks at a time when the reserve ratio was rising. In existing circumstances the reserve ratio has no direct bearing on the domestic credit situation, as has been pointed out by the Federal Reserve Board in a review printed in Appendix K.

Discount rate advances have been made in the past for individual member banks, which at a time of credit strain were using more than their share of reserve bank credit. The principle of graduated charges, or progressive rates, was considered to be in accordance with the spirit of the Federal Reserve Act and with the purposes of the establishment of the Federal reserve system, since the reserve banks could not supply all their members with their just quota of assistance out of the common fund if individual members were allowed to use up a disproportionate amount of available funds. Under the present law, however, since the repeal in 1923 of the amendment authorizing progressive rates, the reserve banks will be able to cope with such a situation, if it arises again, only by the use of discretion in granting accommodation to certain banks and not through the application of variable rates to the borrowings of individual member banks.

An important relationship exists between reserve bank discount rates and money rates prevailing in the open market. Since 1919, when government financing ceased to be the dominant factor in rate policy, discount rates at the reserve banks have not been, for any length of time, out of line with open-market money rates, occupying, most of the time, a position above the yield on short-term government obligations and the rate on acceptances, and below the rate on commercial paper and on line of credit loans of member banks to their customers. There is nothing sacred or final in the present rate structure, but it appears to be adapted to credit conditions prevailing in the United States during the past few years. To what extent market rates are influenced by changes in the discount rate, and, conversely, how much changes of rates in the open market are reflected in reserve bank rate advances or declines is a problem that requires much further study before a definite conclusion can be reached. It suffices for the present purpose to call attention to the existence of the relationship without undertaking to determine the extent and manner in which it is a causal relationship.

During the past few years, and particularly since 1922, there has been an increasing tendency to relate reserve bank rate policy more directly to the prevailing relationship between the volume of production, employment, and trade, on the one hand, and changes in the volume of bank credit, on the other. Discount policy of the reserve banks in 1922 and 1923, and the development of guides to credit policy were discussed in the

Tenth Annual Report of the Federal Reserve Board, portions of which are reprinted in the Appendix on page 327. At times when the volume of credit is increasing in response to the growing volume of physical production and trade, in other words, when the demand is for productive credit, it has been considered unnecessary to restrain the growth of credit; and it is only at times when production has been constant or receding and credit growth has represented an increase in speculative activity and in competitive bidding for a limited supply of goods, that it has been deemed advisable to consider the desirability of rate advances.

In the same report the Board discusses the relation between credit and prices and reaches the conclusion that, though there is an intimate relation between changes in the volume of credit in use and in the price level, this relationship is not one of cause and effect, and that price changes, which reflect an accomplished fact, are not an adequate guide to credit policy which, in order to be effective, must be timely and must anticipate conditions that tend ultimately to result in changes of the price level. It is to the development of more complete data on current business trends, and to an improved technique of interpretation of their relation to credit conditions, that the system is looking for the gradual establishment of guides to discount rate policy.

It should be mentioned in conclusion, that during the past 2 years there has developed a more complete adjustment of discount rate policy to open-market operations of the reserve banks, and that these two phases of reserve bank credit policy must be considered as mutually supplementary. A discussion of open-market policy is presented in the following chapter.

Discount Rates on Commercial, Agricultural, and Livestock Paper with a Maturity from 31 to 60 Days: 1919–1924
(Rate prevailing at the end of each month)

Month and year	Boston, per cent	New York, per cent	Philadelphia, per cent	Cleveland per cent	Richmond, per cent	Atlanta,[1] per cent	Chicago, per cent	St. Louis,[1] per cent	Minneapolis, per cent	Kansas City,[1] per cent	Dallas,[1] per cent	San Francisco, per cent
1919:												
November–December	4¾	4¾	4¾	4¾	4¾	4¾	4¾	4¾	4¾	5	5	4¾
1920:												
January	6	6	6	6	6	6	6	6	6	6	5	4¾
February–May	6	6	6	6	6	6	6	6	6	6	6	6
June–October	7	7	6	6	6	6	7	6	7	6	6	6
November–December	7	7	6	6	6	7	7	6	7	6	6	6
1921:												
January	7	7	6	6	6	7	7	6	7	6	6	6
February–March	7	7	6	6	6	7	7	6	7	6	7	6
April	6	7	6	6	6	7	7	6	7	6	7	6
May	6	6½	6	6	6	6	6½	6	6½	6	6½	6
June	6	6	6	6	6	6	6½	6	6½	6	6	6
July	5½	5½	5½	6	6	6	6	6	6½	6	6	5½
August	5½	5½	5½	5½	6	6	6	6	6½	6	6	5½
September	5	5	5½	5½	6	6	6	6	6½	6	6	5½
October	5	5	5	5½	6	6	6	6	6	6	6	5½
November	4½	4½	4½	5	5½	5½	5	5	5½	5	5½	5
December	4½	4½	4½	5	5	5	5	5	5½	5	5½	5
1922:												
January	4½	4½	4½	5	5	5	5	5	5	5	5	4½
February	4½	4½	4½	4½	5	5	5	5	5	5	5	4½
March	4½	4½	4½	4½	5	4½	4½	5	5	5	5	4½
April	4½	4½	4½	4½	4½	4½	4½	4½	5	5	5	4½
May	4½	4½	4½	4½	4½	4½	4½	4½	5	5	5	5
June	4	4	4½	4½	4½	4½	4½	4½	5	5	5	5
July	4	4	4½	4½	4½	4½	4½	4½	5	5	4½	4
August–December	4	4	4½	4½	4½	4½	4½	4½	4½	4½	4½	4
1923:												
January	4	4	4½	4½	4½	4½	4½	4½	4½	4½	4½	4
February	4½	4½	4½	4½	4½	4½	4½	4½	4½	4½	4½	4
March–December	4½	4½	4½	4½	4½	4½	4½	4½	4½	4½	4½	4½
1924:												
January–April	4½	4½	4½	4½	4½	4½	4½	4½	4½	4½	4½	4½
May	4½	4	4½	4½	4½	4½	4½	4½	4½	4½	4½	4½
June	3½	3½	3½	4	4	4	4	4	4½	4½	4½	4
July	3½	3½	3½	4	4	4	4	4	4½	4	4	4
August–September	3½	3	3½	3½	4	4	4	4	4½	4	4	3½
October–December	3½	3	3½	3½	4	4	4	4	4	4	4	3½

[1] The following banks had progressive rates in effect for the periods indicated: Atlanta, from May 1, 1920, to Nov. 1, 1920; St. Louis, from May 26, 1920, to June 23, 1921; Kansas City, from April 19, 1920, to Aug. 1, 1921; Dallas, from May 21, 1921, to Feb. 15, 1921.

CHAPTER V

OPEN-MARKET OPERATIONS

In discounting paper the rôle of the reserve banks is purely passive as the initiative in the transaction lies entirely with the member banks. In order to enable the reserve banks to operate in the market on their own initiative when conditions make it desirable, the Federal Reserve Act in Sec. 14 gives these banks authority to "purchase and sell in the open market, at home or abroad, either from or to domestic or foreign banks, firms, corporations, or individuals, cable transfers and bankers' acceptances and bills of exchange of the kinds and maturities by this Act made eligible for rediscount;" and also to deal in gold coin and bullion, and to buy and sell obligations of the United States government and certain specified kinds of securities issued by state and local governments. It is to be noted, that the reserve banks do not have authority to purchase corporate securities, nor to buy in the open market ordinary promissory notes, of the kinds that constitute the bulk of the paper discounted for member banks. The two classes of paper to which open-market operations of the reserve banks are restricted come, broadly speaking, under two general heads: acceptances, and government securities.

The Federal Reserve Banks and the Acceptance Market.—Acceptances are a form of credit which, prior to the enactment of the Federal reserve law, was hardly known in the United States. Business in this country was, and still is, usually transacted on the basis of open book accounts or of promissory notes given by the purchaser of goods to the seller, who in turn discounts the notes with his bank. A large part of bank credit extended to business men is in return for such notes or one-name paper, which is the staple credit instrument in our money market. As compared with the promissory note the acceptance, which is in much wider use in foreign countries than in the United States, has the advantage of greater negotiability and liquidity. An acceptance is a bill drawn by the seller of goods upon the purchaser or upon his bank, and accepted through indorsement either by the purchaser or on his behalf by his bank. In the former case it is called a trade acceptance and in the latter a banker's acceptance. In either case it has the signature and backing of the credit both of the purchaser or his bank and of the seller of the goods, and in case it is a banker's acceptance it partakes of the increased prestige and credit of the bank, which by accepting it has guaranteed its liquidation on maturity.

One purpose of the introduction of acceptances into the system of credit used in the United States was to create a broader discount market. It was expected that the existence of a large volume of credit instruments of unquestioned liquidity and negotiability, which could be bought and sold in the open market somewhat like stocks and bonds, would exert an equalizing influence upon interest rates throughout the country. The acceptance was intended also to afford employment for temporarily idle funds of banks and other institutions and individuals, and to provide to business organizations a means of obtaining funds to finance certain of their operations without borrowing at their regular bank or banks. Up to the present time the bulk of acceptances executed in this country is for the purpose of financing transactions in foreign trade.

In order to encourage the development of the acceptance market the Federal reserve banks, and especially the Federal Reserve Bank of New York, have always stood ready to buy or discount acceptances offered for sale, and have made it possible for acceptance houses and bill brokers to operate with a relatively small capital in the assurance that they can always dispose of their acceptance holdings to the Federal reserve bank. In 1919, when foreign trade was at its height and money rates were high, the acceptance holdings of the Federal reserve banks reached about $600,000,000. After that time they declined to only about $20,000,000 in the middle of 1921, owing partly to the reduced volume of foreign trade and consequently of acceptances outstanding, and partly to the easier money conditions which made it possible for dealers to obtain funds for handling acceptances without assistance from the reserve banks. Another factor was the increasing familiarity of the investing public with acceptances which made it easier for the dealers to find investors for the bills in their possession. From the minimum of about $20,000,000 in the middle of 1921, acceptance holdings of the reserve banks increased again to about $250,000,000 at the end of 1922, chiefly because the stiffening of money rates induced dealers to dispose of acceptances to the Federal reserve banks, but also for the reason that the Federal reserve banks, having large amounts of excess funds available and but a small volume of discounts, purchased acceptances on their own initiative. Throughout 1923 the reserve banks held a substantial amount of acceptances, and in the latter part of the year they further increased their holdings so that on Dec. 26 the total amounted to $355,000,000. In 1924 acceptance holdings of the reserve banks declined as a result of the extreme ease in the money market, and at the middle of August the total volume of bills bought in the open market was only $18,000,000. Since that time acceptance holdings increased once more in response to the autumn demand for credit and currency and at the end of December the total was $387,000,000.

Acceptances of Agricultural Cooperative Associations.—A class of acceptances, which has recently become of some importance, is that of agricultural marketing associations. In its desire to be of assistance to agriculture the Federal Reserve Board, during the past two or three years, has made several rulings favorable to drafts of such associations. Whenever these associations are organized according to the Sapiro Plan, whose principal characteristics are that they are mutual non-profit-making organizations and that they acquire property rights in the products when these are turned over to the association, the paper of such associations, when accepted by a bank, has been held by the Board to be eligible for purchase or rediscount with the reserve banks as agricultural paper with a maturity of 6 months (since 1923—9 months) when the proceeds of the acceptance are to be used for agricultural purposes, and as commercial paper with a maximum maturity of 90 days when the proceeds are to be used for other purposes. Some of the provisions of the Agricultural Credits Act of 1923 have further expanded the system's authority in the purchase of acceptances of cooperative associations.[1]

Acceptance Market Still Limited in Scope.—While the Federal reserve banks have done whatever they could towards the encouragement of the acceptance business, and while there has been some development in this direction, the market for accepted bills being considerably wider than a few years ago, acceptances still constitute a minor part of our credit machinery which continues to be based primarily on the one-name promissory note. In this respect credit conditions here differ materially from those prevailing in England, where there is a constant supply of highly standardized acceptances with a well-organized market, and where, when money becomes tight, a stream of these acceptances flows into the Bank of England. A different type of credit machinery has grown up in this country and appears to be adapted to the requirements of our business organizations, with the consequence that the acceptance market has had a relatively slow growth and that no discount market national in scope has as yet been established. Interest rates vary in different sections of the country, and there is no evidence of a tendency toward standardization of these rates. In this particular the accomplishment of the Federal reserve system has not come up to the most sanguine expectations of the framers of the Act.

Purchase and Sale of United States Securities.—Turning now to the other class of open market operations in which the reserve banks are authorized to engage, the purchase and sale of government securities, it is found that until the past 2 or 3 years the reserve banks' dealings in government obligations were on a limited scale, though, as has been pointed out before, the reserve banks during the Liberty and Victory loan campaigns, and more recently, have carried large amounts of paper secured by government obligations.

Such government securities as were purchased were chiefly of three types: Pittman certificates; temporary Treasury certificates to cover overdrafts; and government obligations acquired under repurchase agreements. Pittman certificates were held

[1] See Appendix E on Agricultural Credit Facilities under the Federal Reserve Act.

as security for Federal reserve bank notes in circulation, as is explained on page 77. Temporary certificates are bills issued by the Treasury of the United States to cover overdrafts, principally around income tax dates when large amounts of Treasury tax certificates come due and must be promptly redeemed by the government, while income tax checks may require several days for collection. These overdraft certificates are renewed each day and generally do not remain outstanding for more than a few days. Government obligations acquired under repurchase agreement represent securities bought from a non-member bank or a bill broker with the understanding that these securities will be repurchased by the seller after a short period, usually 15 days. The volume of such securities, the purchase of which constitutes in substance a method by which others than member banks can borrow from the reserve banks, has not been large at any time.

From the organization of the Federal reserve system to the closing months of 1921, government securities, except for the periodical brief appearance of overdraft certificates, were a fairly constant item in the earning assets of the reserve banks, and did not fluctuate in response to credit conditions. It was not until the early part of 1922 that this item in the statement began to show considerable fluctuations. At that time member banks were rapidly repaying their borrowings from the reserve banks and the latter's total earning assets were at a relatively low level and rapidly declining. In these circumstances the reserve banks invested in government securities in considerable volume partly for the purpose of assuring to themselves sufficient earnings to meet their expenses and dividends. During the preceding years of rapid growth the system's expenses had become heavy, largely on account of services not connected with the discounting of paper; and the continuance of these expenses at a time when earning assets were rapidly diminishing induced the reserve banks to endeavor to build up their earnings through the purchase of government securities.

Developments in 1922 and 1923.—Experience in 1922, however, indicated that earning assets cannot always be increased through the purchase of securities in the open market. There appeared at that time to be a definite relationship between Federal reserve bank purchases in the open market and the volume of discounts. As the volume of securities increased there was a corresponding decline in discounts, and total earning assets remained relatively constant. This was for the reason that total earning assets of the Federal reserve banks, including their discounts, acceptances, and government securities, measure the volume of reserve bank credit in use, and this total is continuously in process of adjustment to the demand for such credit. At a time when there is a large volume of discounts for member banks and a diminishing demand for credit and currency, the addition of funds to the market through the purchase of securities increases the volume of surplus funds and leads to further liquidation of indebtedness to the reserve banks. The chart (Fig. 9) shows

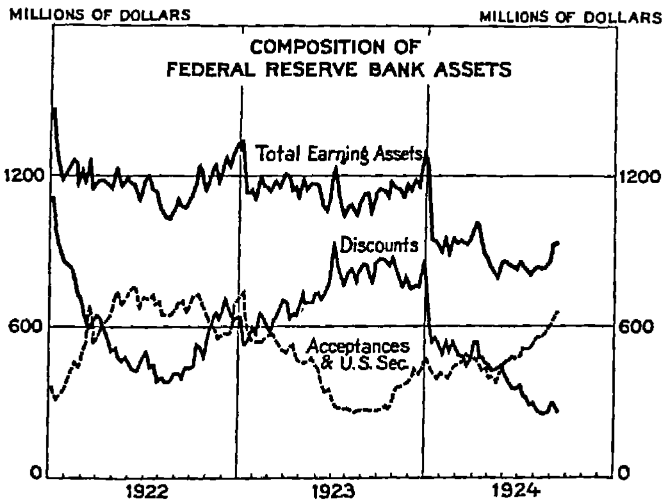


Fig. 9.—During 1922 and 1923 the volume of earning assets of the Federal reserve banks remained fairly constant, but their composition changed, as purchases in the open market were accompanied by reductions in discounts, and sales in the open market—by increases in discounts. In 1924 discounts declined more than open-market purchases increased, with the consequence that the volume of earning assets tended downward.

graphically the compensatory movement of discounts and open-market securities in 1922 and 1923. After the middle of 1922, and especially in the early part of 1923, when discounts at the reserve banks were increasing, and the reserve banks began to dispose of their security holdings, the changes in the volume of the two classes of reserve bank credit continued to offset each other, and total earning assets of the reserve banks showed relatively narrow fluctuations. Thus for a period of more than a year, the total volume of reserve bank credit fluctuated around $1,200,000,000, and remained within a range of from $1,000,000,000 to $1,350,000,000. During that period discounts fluctuated between $1,000,000,000 and less than $400,000,000, and government security holdings between $225,000,000 and $600,000,000. This relationship is explained by the fact that in 1922, when the reserve banks purchased government securities, this resulted in an inflow into the credit reservoir of reserve bank funds in excess of the requirements of the business community, and the excess was utilized to reduce the indebtedness of member banks to the reserve banks, *i.e.*, in a decrease in the volume of discounts. On the other hand, in the early part of 1923 when the reserve banks disposed of their open-market holdings, the result was a shortage of funds leading to the need of additional discounts by member banks. During the period under discussion, therefore, there was a constant adjustment of the amount of reserve bank credit required and the amount in use, with the consequence that purchases and sales of the reserve banks in the open market were balanced in the total of earning assets by equivalent declines and increases in the volume of discounts held.

Open-market Policy a System Matter.—The compensatory relationship between open-market purchases and discounts which obtained for the system as a whole in 1922 and 1923 did not, however, prevail for each individual reserve bank. There were large purchases of government securities by certain reserve banks in the interior without corresponding declines in discounts for their own member banks. But the fact that for the twelve banks combined earning assets remained comparatively constant throughout this period, indicates that a corresponding liquidation took place at other reserve banks. This was due largely to the concentration of open-market dealings at the financial centers. Purchases and sales of open-market obligations were effected largely in the New York market, and the sale of government securities by the Federal Reserve Bank of Dallas, for instance, while it left the volume of that bank's discounts unchanged was reflected in a shortage of funds in the New York market with a consequent increase in the discounts at the Federal Reserve Bank of New York. And, conversely, open-market purchases by a bank in the interior resulted in an overabundance of funds in New York and in a reduction of discounts at the New York bank.

A recognition of this close inter-relationship of open-market operations of the twelve Federal reserve banks and of their effect upon the discount holdings of the system as a whole, emphasized the desirability of coordinating more closely the open-market operations of the several reserve banks and led to a discussion of open-market policy at a conference of the Federal Reserve Board with the governors of the reserve banks, held in March, 1923. The Federal Reserve Board's position in the matter was indicated by the adoption of the following principle with respect to open-market investment operations of the Federal reserve banks:

> That the time, manner, character, and volume of open-market investments purchased by Federal reserve banks, be governed with primary regard to the accommodation of commerce and business and to the effect of such purchases or sales on the general credit situation.

At the same time a committee of governors of the reserve banks was appointed to supervise, in conjunction with the Board, the open-market operations of all the reserve banks.[1]

Recent Developments in Open-market Policy.—In the first half of 1924 the reserve banks once more purchased a considerable volume of government securities, so that in the middle of that year earning assets consisted of securities in more than twice the amount of discounts for member banks. The year was one of recession in business, with a consequent decrease in the demand for currency, and of continued gold imports in larger volume than during either of the two preceding years. As a consequence, there was a diminished demand for reserve bank credit, and its outstanding volume in the summer of 1924 was smaller than at any time since early in 1917.

Security purchases in these circumstances resulted in the building up at the reserve banks of a portfolio of United States obli-

[1] See *Review of the Month for May*, 1923, reprinted in Appendix K on p. 318.

gations, and thus put the Federal reserve banks in a position by the subsequent sale of these securities to cause member banks to discount paper with the reserve banks. Experience has demonstrated that open-market sales, when properly timed, can be used effectively to support the discount policy of the reserve banks. Thus early in 1923, when there was evidence of a speculative boom in the financial centers and the discount rate was advanced in New York and Boston from 4 to 4½ per cent, the reserve banks at the same time sold securities, thus making it necessary for the member banks to borrow from the reserve banks at the higher rate, if they wished to continue to employ an undiminished volume of reserve bank credit. It is believed that at that time this action of the reserve banks, together with the cautious attitude of the business community, prevented the occurrence of an unhealthy credit expansion. Thus the sale of securities, when properly timed, may support the discount policy of the reserve banks, and the proper management and timing of open-market operations consequently constitutes a part of the technique of an effective credit policy.

CHAPTER VI

FEDERAL RESERVE NOTES

Greater elasticity of our currency was one of the essential purposes for which the Federal reserve system was established. Next to the organization of the Federal reserve banks, themselves, "to furnish an elastic currency" is the first purpose mentioned in the title of the Federal Reserve Act. In this respect the Act followed the precedents established by practically all laws organizing central banking institutions: The note-issuing function is universally considered an important part of a central bank's operations, in many instances it is for this purpose primarily that the bank was established, and it is largely through the monopoly of note issue shared in some countries with the government that most of the central banking institutions have attained their position of influence. The Federal reserve banks, however, are not the exclusive dispensers of currency in the United States, as both the government and the national banks continue to enjoy the privilege of issuing paper money. It is in the elastic quality of the currency issued by the reserve banks, the Federal reserve note, that lies the characteristic which distinguishes it from other forms of money in circulation in the United States.

Elasticity of Federal Reserve Notes.—Elastic currency may be defined as paper money whose volume in circulation is at all times responsive to the demand of the community for cash. By this test the Federal reserve note is a highly elastic form of currency, for the volume of these notes in circulation under normal circumstances is in continuous process of adjustment to the public's cash requirements. Not only major changes in currency demand developing from month to month and from year to year, but even minor fluctuations occurring from day to day find a reflection in the volume of Federal reserve note circulation. Thus the increase in retail purchases before the Christmas holidays, the cash requirements of vacation travel on the fourth of July and on other holidays, and the larger currency needs at the crop-marketing season are all clearly reflected in changes of the amount of Federal reserve notes in use.

What Makes Federal Reserve Notes Elastic?—Elasticity of Federal reserve notes, compared with the inelastic character of other kinds of money in circulation, is due to the fact that Federal reserve notes may be issued against eligible commercial paper, that is, they may be supplied in response to a demand which has given rise to borrowing for the purpose of obtaining currency, and may be retired when such borrowing is repaid. A simple illustration will make this point clear. During the week preceding the Christmas holidays a large amount of currency is required by the public for the purpose of purchasing Christmas gifts. The public at that time of the year withdraws large amounts of currency from the banks. But the banks do not keep on hand a sufficient supply of cash to meet this seasonal demand, and they, therefore, turn to the reserve banks which lend them enough money in Federal reserve notes to meet the temporary requirements. The reserve banks issue Federal reserve notes to the member banks in return for promissory notes either of these banks themselves or of their customers. The volume of currency in circulation thus increases in response to the public demand. Examination of the chart (Fig. 4) on page 29 will show that, in fact, Federal reserve note circulation increases in the latter part of December of every year. After the holiday has passed, the retail merchants deposit at their banks the money spent in their stores by Christmas shoppers, and the banks in turn, having no need of this additional amount of cash, deposit it with the Federal reserve banks and use the balances thus created to pay off a part of their borrowings at the reserve banks. Federal reserve note circulation, in fact, declines during the last week of December and in January. Thus money in circulation decreases as the demand for it by the public declines. This responsiveness to public demand is what constitutes the elastic character of Federal reserve notes.

Relation of Federal Reserve Note Circulation to Changes in the Volume of Business.—In the illustration there was shown, for purposes of simplicity, the effect upon Federal reserve note circulation of the regular annual short-lived demand for currency before the Christmas holidays. But the volume of Federal reserve note circulation responds also to longer-term changes in the demand for currency arising from changes in the volume of productive and trade activity and from the level of wages and commodity prices. At a time when industry is active, employment is general and prices are advancing, manufacturers require large amounts of currency to meet their weekly or bi-weekly payrolls. At such times the wage earners have larger earnings and their purchases together with rising prices result in increased activity and larger till money requirements at the retail stores. Manufacturers and merchants, therefore, find it necessary to borrow from their banks and to withdraw their borrowings in cash. The banks in turn use the promissory notes thus received from their customers for obtaining accommodation at the reserve banks, which issue Federal reserve notes on the basis of these notes. Thus once more a demand for currency by the public results in increased issues of Federal reserve notes. On the contrary, when business is less active, when unemployment increases, and pay rolls decline, manufacturers require less currency and their cash withdrawals from the banks become smaller than their cash deposits. At the same time merchants do less business as retail trade suffers from the decreased buying power of the workers, till money requirements become smaller and the cash thus released flows into the banks. Cash holdings of the banks, being swelled by a return flow from their industrial and commercial customers, become too large for the banks' requirements and the excess is used to retire borrowings at the reserve banks. Consequently, there is a decline in the volume of Federal reserve notes in circulation. These longer-term, so-called cyclical swings, in the volume of Federal reserve notes are clearly illustrated by the chart (Fig. 4) on page 29, which shows the large increase of Federal reserve note circulation from 1917 to 1920, during the period of expanding business activity, and the rise in prices; the decline in 1921 and the early part of 1922 when business was less active and prices were declining; and the subsequent rise in the last half of 1922 and early part of 1923 when business activity was once more on the up-grade. Postponing for the moment a discussion of more recent developments, which introduced other factors into the situation, it is clear that the volume of Federal reserve note circulation is affected both by seasonal and longer-term changes in the demand for currency and is, therefore, highly elastic.

Relation between Federal Reserve Notes and Federal Reserve Bank Assets.—In discussing the changes in the demand for currency in the preceding paragraphs it was mentioned that, when member banks are in need of additional currency they borrow from the Federal reserve banks, and that when the demand for currency declines, member banks reduce their indebtedness at the reserve banks. It follows from this that the volume of borrowings at the reserve banks is influenced to a considerable extent by changes in the demand for currency. The chart (Fig. 3) on page 28 shows that, as a matter of fact, throughout the larger part of the period covered there is a close correspondence between the fluctuations in the volume of reserve bank earning assets and of Federal reserve note circulation. This close correlation is explained in part by the nature of the circumstances that cause member banks to borrow from the reserve banks. Member banks seek reserve bank accommodation, broadly speaking, for three reasons: (1) When their own deposit liabilities increase and make it necessary for them to have larger reserve balances in order to comply with the law; (2) when transfers of funds to other districts or withdrawals of gold for export reduce their reserve balances below the legal minimum; and (3) when their customers require an increased amount of currency. Borrowing for the purpose of providing sufficient reserves for increased deposit liabilities is in relatively small volume for the reason that reserve requirements constitute on the average only about one-tenth of deposit liabilities, so that an increase of $10,000,000 in deposits causes an increase of only $1,000,000 in required reserves. Borrowings for the purpose of replenishing reserves depleted through the transfer of funds to other Federal reserve districts during certain periods have constituted a large part of the accommodation at some of the reserve banks, but funds transferred from member banks in one district to member banks in another district, while they increase borrowings in the first district, are likely to reduce them in the second, so that for the system as a whole there is not likely to result any considerable change in the volume of member bank borrowing. Withdrawals of gold for export would cause an equivalent amount of borrowing at the reserve banks, but the system has had little experience with an export demand for gold. In 1919 and the early part of 1920, when this country was losing gold, the demand for this gold was added to the other cause for the increased use of reserve bank credit, but throughout most of its history the Federal reserve system has operated at a time when gold was either not moving in large quantities, as during our participation in the World War, or was moving into this country, as in 1915–1916 and in 1921–1924. With borrowings caused by increased deposit liabilities quantitatively unimportant, with transfers of funds not affecting the system as a whole, and gold withdrawals relatively rare, the principal occasion for borrowing at the reserve banks during the first 10 years of their operation has been the need for additional currency. This is due to the fact that a demand for $10,000,000 of currency causes a member bank to borrow from the reserve bank—not $1,000,000, as in the case of increased deposit liabilities, but the entire amount of $10,000,000.[1] It is for these reasons that there has been a close correspondence between the volume of reserve bank assets and of Federal reserve note circulation, as shown by the chart, and it is this relationship that caused the Federal Reserve Board to say that "Federal reserve banks . . . , from the point of view of the chief use made of their credit, may be regarded as currency-supplying banks."[2]

Federal Reserve Notes and Gold.—Federal reserve notes, on account of the fact that they may be issued against eligible paper, or earning assets, are sometimes referred to as asset currency. In the experience of the Federal reserve system during the first decade of its operation Federal reserve notes, whose volume during much of the time has corresponded closely to the volume of earning assets, have had a close relationship also to the volume of gold in circulation. During the first few years after the establishment of the Federal reserve system prior to our participation in the World War there was little need of borrow-

[1] The effect of different kinds of credit and currency demand on the reserve position of the reserve banks is discussed on p. 93.

[2] *Annual Report of the Federal Reserve Board*, 1923, p. 28.

ing at the reserve banks for the purpose of obtaining currency. The capital of the reserve banks was paid in gold and most of the reserve balances, which under the law were gradually being transferred from member banks to the reserve banks, were in the form of gold. Large amounts of gold were, furthermore, entering the United States from Europe in payment for munitions and supplies purchased by the belligerents. It was the policy of the Federal reserve banks, in anticipation of possible participation in the war, to "mobilize the gold," that is to encourage its concentration at the reserve banks and to substitute Federal reserve notes for the gold withdrawn from circulation. Thus from the establishment of the system to our entry into the war, about $350,000,000 of Federal reserve notes were added to circulation, most of which directly or indirectly took the place of gold coin or gold certificates acquired by the Federal reserve banks. During the period of our belligerency and especially during 1917 Federal reserve notes were also issued in exchange for gold, but at that time the demand for currency was growing rapidly and a large volume of Federal reserve notes was issued also against eligible paper, mostly promissory notes secured by Liberty bonds and other United States government obligations. It was more particularly during the war and the two years following the armistice that Federal reserve notes were, to a large extent, an asset currency. Between Apr. 1, 1917 and Dec. 1, 1920, the volume of Federal reserve notes in circulation increased by over $3,000,000,000 and of this amount more than one-half was a net addition to circulation. Of the collateral pledged against Federal reserve notes at that time nearly three-fourths consisted of eligible paper.[1]

Effect of Recent Gold Imports.—In the autumn of 1920 began the heavy movement of gold into the United States, which still continues and which has brought to this country in less than 4 years a net addition to its stock of gold of $1,500,000,000. This gold in 1921 and the first part of 1922 was used by member

[1] This is not equivalent to saying that the gold reserve against Federal reserve notes in circulation was only 25 per cent, since there was a large amount of excess collateral, and a considerable volume of Federal reserve notes was in the hands of the Federal reserve banks, against which collateral was required, but no reserve was necessary.

banks largely for the purpose of reducing their indebtedness at the reserve banks. Thus borrowings at the reserve banks, which had been incurred for the purpose of obtaining Federal reserve notes, were being repaid by the use of gold imported from abroad. As a consequence, while earning assets of the reserve banks were rapidly declining, the decrease in Federal reserve notes was not so large and a spread of about $1,000,000,000 appeared between earning assets and Federal reserve note circulation. This is clearly brought out in the chart (Fig. 3) on page 28. Thus gold drove a wedge between the assets of the Federal reserve banks and the Federal reserve notes, and once more converted these notes from an asset secured currency into a currency secured largely by gold.

Paying Out Gold into Circulation.—During the past two years the process of mobilizing gold, which had occurred in 1915–1917, was reversed and gold was paid into circulation to take the place of Federal reserve notes. The policy of paying out gold into circulation has been in operation at some of the Federal reserve banks since the middle of 1922 and it has had an important effect on the composition of our currency and on the volume of Federal reserve notes in circulation. These effects may best be considered by a study of the chart (Fig. 10) on page 70, and by an examination of the following figures:

MONEY IN CIRCULATION
(In millions of dollars)

Kind of money	July 1, 1922	Aug. 1, 1924	Increase	Decrease
Gold and gold certificates	$ 590	$1,198	$608	
Silver and silver certificates[1]	555	680	125	
United States notes	292	302	10	
Federal reserve notes	2,139	1,746	....	$393
Federal reserve bank notes	72	10	....	62
National bank notes	728	729	1	
Total	$4,376	$4,665	$289	

[1] Including Treasury notes of 1890.

During the period of 25 months covered by the table, total money in circulation increased by $289,000,000, while Federal reserve notes in circulation decreased by $393,000,000. Gold and silver paid into circulation was sufficient not only to meet the country's increased demand for currency but also to take the place of a large volume of Federal reserve notes and other currency. The chart brings out clearly that from 1917 to the

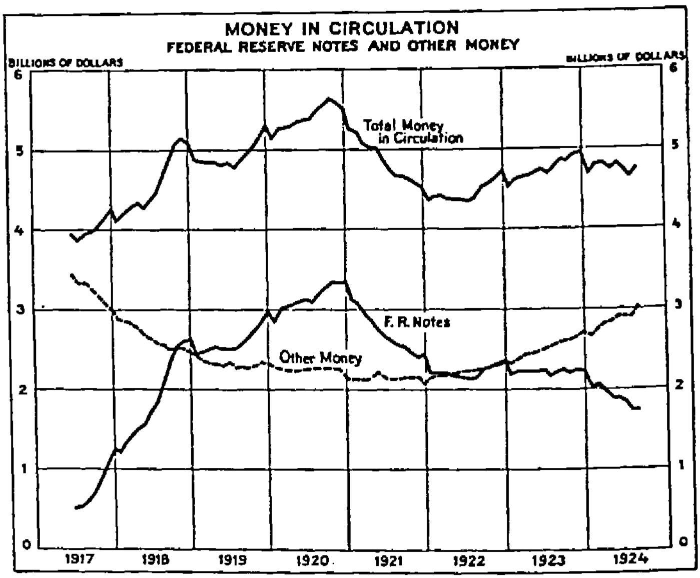


FIG. 10.—Since the summer of 1922, when the treasury and certain Federal reserve banks began to pay out gold, changes in the volume of Federal reserve notes are no longer indicative of changes in the country's currency requirements. Such changes are now reflected only in the fluctuations of total money in circulation.

middle of 1922 changes in total money in circulation were paralelled by similar changes in Federal reserve notes, but since that time Federal reserve notes have declined—while total money increased reflecting additions to "other money," largely gold, in circulation.

The policy of paying out gold into circulation has thus had the effect of changing the composition of our currency, reducing the share of Federal reserve notes from about 50 per cent to about 37 per cent, and increasing the share of gold and gold certificates from about 13 per cent to about 26 per cent. This policy has also had the effect of making changes in total money in circulation, rather than of Federal reserve notes alone, reflect the changes in the country's demand for currency. Its effect upon the condition of the Federal reserve banks has been to reduce their gold reserves and their liability on Federal reserve note circulation by about the same amount, without materially changing the ratio of reserves to liabilities. On the relation between member banks and the reserve banks the policy has had no effect whatever, as the member banks must still turn to the reserve banks for their supply of currency, and it is immaterial to them whether their requirements are met by the paying out of gold or of Federal reserve notes. The important thing to keep in mind is that under present conditions changes in Federal reserve note circulation do not indicate changes in the demand for currency, which are reflected only in the total volume of money in circulation.

Gold Imports, Currency Demand, and Federal Reserve Bank Earning Assets.—While the policy of paying out gold has broken the connection between changes in the demand for currency and Federal reserve note circulation, it has had no effect on the relationship between the demand for currency and the earning assets of the Federal reserve banks. This relationship has, however, been influenced by the constant inflow of gold from abroad. The imported gold, when deposited by member banks with the reserve banks, creates balances in favor of these banks which enable them to meet a demand for additional currency from their customers by drawing upon the balances without being under the necessity of increasing the volume of their borrowings. During 1923, for instance, net gold imports amounted to $294,000,000, and were sufficient to meet the increased demand for currency, with the consequence that the earning assets of the Federal reserve banks remained approximately constant. During the first 7 months of 1924 gold imports continued, but there was no demand for additional currency as business activity had slowed down and prices were tending downward. Money in circulation, in fact, declined by about $286,000,000 between the opening of the year and the beginning of August.

This return flow of currency, together with the importation of over $200,000,000 of gold, resulted in a decline of more than $400,000,000 in the earning assets of the Federal reserve banks. Thus, under existing conditions, the volume of reserve bank assets, though no longer related to the volume of Federal reserve notes in circulation, is still largely dependent upon changes in the demand for currency in this country and upon the volume of gold imported from abroad.

Legal Status of the Federal Reserve Note.—In the preceding portion of this chapter there was given an account of the place occupied by the Federal reserve note in our currency system, and of its relationship to the condition of the Federal reserve banks. In the remaining paragraphs it is proposed to give a brief account of the legal status of the Federal reserve note and of the machinery of its issue and redemption.

Federal reserve notes are issued in denominations of $5 or multiples thereof; they are an obligation of the United States government, are secured by the collateral pledged against them, and are also a first lien on all the assets of the issuing reserve banks. In addition, the reserve banks are required to keep a 40 per cent gold reserve against the reserve notes in actual circulation. The security back of the notes is thus ample and the public has at all times accepted them unquestioningly and has never shown any preference for other kinds of money. Federal reserve notes are receivable in payment of all public dues, but are not legal tender, except, curiously enough, in Cuba. In some states Federal reserve notes are acceptable as part of the legal reserves of state banks, while in others the notes are not eligible for that purpose. Federal reserve notes are redeemable in gold at the Treasury, and in gold or lawful money at any Federal reserve bank. In line with the principle of the Federal Reserve Act that each of the twelve Federal reserve districts shall ordinarily be served by its own reserve bank alone, the Act contains a proviso to the effect that a reserve bank shall not pay out over its counter reserve notes issued by another reserve bank. Such notes the reserve bank must return to the issuing bank for payment. This proviso tends to maintain a relationship between the currency requirements of a Federal reserve district and the volume of Federal reserve notes in circulation within the district.

Machinery of Issue and Redemption.—The machinery of issue and redemption of Federal reserve notes, and the custody of the collateral, is in charge of the Federal agent, who is also the chairman of the board of directors of the reserve bank and the representative of the Federal Reserve Board at the bank. This officer, who is under heavy bond, obtains Federal reserve notes from the Comptroller of the Currency, who has them printed in the Bureau of Engraving and Printing in Washington. The Federal reserve agent issues these notes to the reserve banks in return for gold and other collateral, of which he becomes the joint custodian with the reserve bank. The reserve banks then issue the notes to the member banks as required. When the reserve banks find that they have in their possession more reserve notes than they need they return them to the reserve agent and he releases to them a corresponding amount of collateral. The collateral must equal at least 100 per cent of the notes. As a matter of fact, the reserve banks make it a practice to pledge practically all their eligible paper with the reserve agent, so that there is always a considerable amount of excess collateral in the hands of the agent. The reason for this practice is that it is immaterial to the reserve banks whether their customers' paper is held in vault under their sole control, or under the joint control of the bank and the Federal reserve agent, and the latter course has the advantage of making it possible to obtain additional notes, when required, more expeditiously.

The following statement shows the Federal reserve agents' account on a recent date:

Federal Reserve Agents' Accounts at Close of Business, Sept. 24, 1924

(In thousands of dollars)

Resources	Total
Federal reserve notes on hand	$ 923,047
Federal reserve notes outstanding	2,236,419
Collateral security for Federal reserve notes outstanding:	
Gold and gold certificates	331,504
Gold redemption fund	114,669
Gold fund—Federal Reserve Board	1,585,233
Eligible paper:	
Amount required	205,013
Excess amount held	136,267
Total	$5,532,152

Liabilities	
Net amount of Federal reserve notes received from Comptroller of the Currency	$3,159,466
Collateral received from Federal reserve bank:	
Gold	2,031,406
Eligible paper	341,280
Total	$5,532,152

It will be seen from this statement that the Federal reserve agent has in his possession Federal reserve notes not yet issued to the banks but held in readiness to meet the demand as it arises. The notes issued by the agent to the reserve banks are technically known as notes "outstanding" as distinguished from notes "in actual circulation," the latter term including only such notes as have been actually paid out by the reserve banks. The difference between notes outstanding and notes in circulation is the amount held by the reserve banks in their own vaults, or in transit from other reserve banks or to the United States Treasury for redemption. On Sept. 24, 1924, this item amounted to $507,000,000. Collateral against Federal reserve notes must, under the law, cover the volume of notes outstanding, but the 40 per cent note reserve requirement applies only to notes in circulation, *i.e.*, outside the Federal reserve system, since the banks are not required to have reserves against notes in their own possession. The agent holds gold in the form of coin or certificates in his own vault, and gold credits in the redemption fund and in the Federal Reserve Board's gold fund, the functions of which are described below. In addition, he holds the paper pledged as collateral, the amount required and the excess amount pledged being shown separately in the statement. The entire amount of gold held by the agent and the gold held in the bank's redemption fund must be counted as reserves against Federal reserve notes in circulation, and appears in Federal reserve bank statement (see page 262) as "gold held exclusively against Federal reserve notes." Gold in the banks' own vaults, on the other hand, and in the gold settlement fund with the Federal Reserve Board may be counted as reserves either against Federal reserve notes or against deposits at the option of the reserve banks.

Gold Redemption Fund and Agent's Gold Fund.—In the Federal reserve agent's account there are two gold credits: "gold redemption fund," and "gold fund—Federal Reserve Board." The redemption fund is kept with the Treasurer of the United States and is for the purpose of redeeming Federal reserve notes that are presented. The law requires the reserve banks to keep a 5 per cent gold redemption fund with the Treasurer of the United States against the reserve notes that are not covered by gold deposited with the agent, and the reserve agent in practice keeps an approximately equal proportion of gold against notes that are covered by gold,[1] so that the Treasurer of the United States has at all times, in gold, a sum equal to 5 per cent of the amount of Federal reserve notes in circulation held for the purpose of redeeming such notes.

The term "gold fund—Federal Reserve Board" refers to gold which the agents have turned over to the Federal Reserve Board for safe-keeping. The Board actually entrusts the gold to the Treasury of the United States which keeps it wherever it finds it safe and convenient to do so, giving the Federal Reserve Board a receipt for it. This gold fund is used in conjunction with the gold settlement fund of the reserve banks to effect transfers of gold between the banks and the agents by simple book entries.

[1] The law does not require a 5 per cent redemption fund from the agent, but leaves the determination of the required proportion to the United States Treasury.

The workings of the gold settlement fund will be discussed in a subsequent chapter. When a reserve bank returns a million dollars in notes to the agent, and wishes to have them redeemed in gold, the agent instructs the Federal Reserve Board to have a million dollars charged to his fund and credited to the bank in the settlement fund. And, *vice versa*, when a reserve bank wishes to obtain Federal reserve notes or to redeem eligible paper held by the agent through the payment of gold it instructs the Board to transfer the desired amount from the gold settlement fund to the agent's gold fund. In this way transactions involving large sums are effected between the reserve banks and the agents by mere book entries, without the physical transfer of the gold. The title to the gold changes, while the actual gold is kept in the custody of the United States Treasury.

Relation of Federal Reserve Board to the Issue of Federal Reserve Notes.—As has been stated, the issue and redemption of Federal reserve notes is under the immediate supervision of the twelve Federal reserve agents. These agents, in turn, are the local representatives of the Federal Reserve Board, so that the Board has a particular responsibility for the manner in which the note-issuing function of the Federal reserve banks is performed. The law provides, in fact, that the Board "shall have the right, acting through the Federal reserve agent, to grant in whole or in part, or to reject entirely, the application of any Federal reserve bank for Federal reserve notes." The Federal Reserve Board also has authority to pass upon the adequacy of collateral offered for Federal reserve notes and to request additional collateral when it deems it necessary. The placing of the note issue under the direct control and supervision of the Federal Reserve Board is in accordance with the general principle that the supply of currency is an especial concern of the government.

Under the authority granted by law the Federal Reserve Board could thus, if circumstances appeared to demand it, exercise direct control over the volume of currency to be issued by the reserve banks and over the nature of the collateral to be accepted for Federal reserve notes. The Board, however, has never made use of this power and has considered the issue of notes against acceptable security as a practically automatic function of the Federal reserve agent. In its views on this matter the Board has been influenced by the consideration that the demand for currency arises later in the course of business developments than the demand for credit, and that when the currency demand reaches the Federal reserve banks these banks must meet the demand in so far as it is backed by acceptable security. In other words, in practice the Board has treated the note-issuing function of the reserve banks as a part of their credit-issuing power, and as such, subject to general regulation under the bank's discount and open-market policy.

Federal Reserve Bank Notes.—In addition to Federal reserve notes, Federal reserve banks are authorized to issue Federal reserve bank notes, which were originally intended to take the place of national bank notes. The bank notes are secured by government obligations and it was intended that the reserve banks should gradually buy the security back of national bank notes, thus retiring these notes without reducing the amount of money in circulation. So far, however, there has been no use made of this power to substitute Federal reserve bank notes for national bank note circulation. The provision for Federal reserve bank notes served an entirely different purpose during the war. In 1918 Great Britain was in great need of silver to support the Indian rupee, and the United States agreed, in order to help an ally, to melt and sell not to exceed 208,000,000 ounces of silver stored in the Treasury as silver dollars and to turn the silver over to Great Britain. Authority for this action was granted by the Pittman Act. A corresponding amount of silver certificates was retired, and to take their place in the circulation the reserve banks were authorized to issue Federal reserve bank notes in small denominations to be secured by Treasury certificates generally known as Pittman certificates. The circulation of Federal reserve bank notes at one time reached the substantial amount of $260,000,000. The Pittman Act provides for the purchase by the Treasury of an equivalent amount of silver as soon as the silver shall be obtainable at $1 an ounce. Since July 21, 1921, the Treasury has bought all the silver required to replace the amount that had been melted and the volume of Federal reserve bank notes in circulation is now insignificant.

CHAPTER VII

DEPOSITS OF THE RESERVE BANKS—MEMBER BANK RESERVES

In the discussion of credit and currency functions of the reserve banks, which has chiefly occupied our attention so far, little has been said of the rôle these banks play as the holders of the central reserves of the nation's banking system. And yet this is one of the most important functions of the system and one of the chief reasons for its establishment.

Reserve Requirements Prior to the Establishment of the Federal Reserve System.—Prior to the passage of the Federal Reserve Act the reserve requirements of national banks were regulated by the National Bank Act, which provided that a certain proportion of a bank's deposits must be kept absolutely liquid for the purpose of meeting emergency demands for currency. The required proportion of reserves to deposits varied in accordance with the character of the city. Country banks, *i.e.*, banks outside of so-called reserve and central reserve cities, were required to have 15 per cent reserves, only 6 per cent of which had to be kept in their own vaults, while the remaining 9 per cent might be kept on deposit with their city correspondents. Banks in reserve cities were required to keep 25 per cent reserves, of which one-half might be kept on deposit with the banks in central reserve cities, while banks in these latter cities, of which there were three—New York, Chicago, and St. Louis—[1] were obliged to keep 25 per cent reserves, all in cash, in their own vaults. In this way the reserves of country banks formed part of the deposits of the banks in the reserve cities and portions of the reserves of the latter became deposits in the central reserve cities. Under these arrangements, a stringency of funds in the central reserve cities was felt promptly throughout the country. All the banks would endeavor to hold on to their cash reserves,

[1] Since July, 1922, St. Louis is no longer a central reserve city.

country banks would have difficulty in withdrawing their reserve deposits from reserve city banks, and the public would have difficulty in withdrawing its own deposits. This plan, which might be called a system of interlocking reserves, was one of the important defects in our banking structure which the Federal reserve system was intended to correct.

Reserve Requirements under Federal Reserve Act.—The Federal Reserve Act, as originally drawn, reduced reserve requirements somewhat and provided that the reserves of individual banks should be kept in part with the Federal reserve bank. Soon after the entry of the United States into the World War the Act was amended so as to reduce reserve requirements still further, making them 7, 10, and 13 per cent on demand deposits in the three respective classes of cities, and 3 per cent uniformly on time deposits.[1] It was thought that this reduction in reserves was safe because the member banks' position was strengthened through the concentration of the reserves in the reserve banks, which were easily accessible and which had the note-issuing privilege guaranteeing the availability of currency whenever it was required. The amendment of the Act in June, 1917, also provided that all of the reserves of the member banks must be kept with the reserve banks and that nothing, not even gold, shall count as reserves when kept in the vaults of member banks or in any other place, except on deposit with a reserve bank. This provision completed the centralization of reserves and produced a system which differs from any other system in the world in that the central banks are the holders of the entire lawful reserves of their members, the proportion of reserves to deposits being fixed by law. The determination of the amount of cash that the member banks must keep in their own vaults to be used as till money is left to the discretion of the banks themselves. The fact that Federal reserve notes are always easily available has greatly reduced the cash requirements of the member banks, especially in Federal reserve bank and branch cities, where notes can be obtained by messenger without delay.

Volume of Reserve Balances.—Reference to a balance sheet of the twelve Federal reserve banks[2] will show that members'

[1] Demand deposits are defined by the Act as those payable within 30 days upon demand, and time deposits as those payable after 30 days.

[2] See p. 262.

reserve deposits amounting to over $2,000,000,000 are the principal source of reserve bank funds. Capital and surplus are relatively small items when compared with this huge reserve fund kept by the Federal reserve system in trust for all the members. The volume of reserve deposits at the reserve banks shows relatively slight fluctuations over longer periods of time, but from day to day it changes considerably as the result of daily settlements of balances between banks. The long-term trend of reserve deposits reflects directly the increases or decreases in the member banks' own deposits against which the reserves are held. Member banks do not as a rule permit their reserves to remain below legal requirements because in case of deficiency penalties are assessed at rates higher than the prevailing discount rate, so that a member bank finds it more economical to replenish its reserves by borrowing from the reserve bank rather than to pay the penalty for deficient reserves. These penalties are generally assessed at the end of a 2-week period and apply to the average deficiency for the period. The way the machinery has actually worked has been generally as follows: When a member bank grants a loan to a customer and gives him a corresponding deposit credit on its books, it examines its reserve account and, if this account is inadequate to cover the additional deposit, the bank arranges for accommodation at the reserve bank and thus increases its reserve balance.[1]

How Banks Replenish Their Reserves.—When a member bank's reserves become insufficient either in consequence of an increase in its own deposits or because it was obliged to draw on its deposit with the reserve bank to obtain currency, to pay an out-of-town balance, or to draw out gold for export, the member bank can replenish its reserves only in one of two ways: by borrowing from the reserve bank; or by depositing with it checks on other banks, gold, Federal reserve notes, or other currency. Ordinarily, except in a period of falling prices, the bank will not have currency available for this purpose, since the amount of cash required for circulation does not change rapidly and the public withdraws about as much cash from the bank as it deposits, leaving only a working balance sufficient for till-

[1] In practice the banks, of course, do not adjust their reserves after every loan, but only at stated periods varying from 1 day to 2 weeks.

money requirements. A deposit of a check on another bank only transfers the problem to that bank without changing the situation for the system as a whole, so that in a period of steady prices and in the absence of gold imports the member banks taken as a whole can replenish depleted reserves only by borrowing from the reserve banks. As a matter of fact, in the period of rapid credit growth during and immediately after the war, member banks supplied the growing credit and currency needs of the public largely on the basis of borrowings from the reserve banks, as is seen by reference to the chart on page 28.

Late in 1920 and throughout 1921 and the first half of 1922 the country was going through a period of falling prices and credit liquidation accompanied by large gold imports, and member banks had large amounts of Federal reserve notes, no longer needed in circulation, and of gold imported from abroad, available for deposit with the reserve banks. The balances arising from the deposit of gold and of notes were used by the member banks to reduce their indebtedness to the reserve banks. This is indicated on the chart by the growth of reserves and the decline of Federal reserve notes in circulation and is reflected in a rapid decline in discounts of the reserve banks. At the same time the deposits of member banks increased, as is generally the case in a period of depression when business men build up bank balances against the future revival of activity. Consequently, the deposits of reserve banks also increased. After the middle of 1922, when the demand for credit and for currency began to respond to revived business activity, Federal reserve note circulation and discounts again increased, while deposits remained fairly steady. In 1924 the rapid growth of deposits of member banks, and particularly of demand deposits, against which a larger proportion of reserves is required by law, resulted in a growth of deposits at the reserve banks to the largest total on record.

Constancy of Reserve Balances.—The chart shows in general that deposits are the least fluctuating item of those included in the picture. The reason for this relative steadiness is that members' reserve deposits equal a fraction (7, 10, or 13 per cent, as the case may be) of the members' own deposits and that, therefore, changes in deposits of member banks are reflected on a much reduced scale in changes of the reserve banks' deposit liabilities. A corollary from this is that even relatively small changes in reserve deposits at the reserve banks are significant because they correspond to changes in member banks' deposits that are on the average ten times as large. It may be stated, therefore, that while changes in the volume of Federal reserve discounts give an exaggerated impression of changes in the country's credit requirements, changes in Federal reserve deposits, on the contrary, minimize the changes in the volume of credit. Because the discounts represent the overflow of credit from the member banks, they grow and decline, in the absence of disturbing factors like gold imports, much more rapidly than the total volume of credit in use, as measured by the volume of member bank loans; and because the reserve deposits bear a fixed fractional relationship to the deposits of member banks, they change by much smaller amounts than do these deposits. The absolute changes in reserve bank deposits are, therefore, relatively small, but their percentage changes, and the general contour of the deposit curve, reflect accurately the changes in the volume of deposits held by member banks.

Availability of Reserves.—The establishment of the Federal reserve system has done away with scattered reserves, jealously guarded by every bank at times when these reserves were most needed. Since the inauguration of the reserve system there has never been a shortage of currency. Each of the twelve Federal reserve banks holds the reserves of all of the members in its district and the members can promptly obtain the currency required for the accommodation of their customers. When the demands upon the members in a district become so heavy that the Federal reserve bank cannot take care of their needs out of its own resources, it can obtain additional reserves by borrowing from another Federal reserve bank. Thus the system makes the reserves of member banks in the entire country available for use at any point where the need for them may arise. During 1920, when the rapid decline in agricultural prices resulted in a widespread inability of farmers to meet their current obligations at the banks, these banks turned to the reserve banks for assistance which was granted in large volume. When on top of these frozen loans was superimposed the necessity of making heavy out-of-district payments, because purchases in other districts continued while the sale of agricultural products was delayed, the reserve banks in the agricultural districts were not able to meet their local requirements without resorting to the assistance of reserve banks in industrial sections where the demand for credit was less acute. Thus in October, 1920, the southern and western reserve banks were borrowing from eastern banks an aggregate of $267,000,000. This amount was gradually reduced through the period of liquidation in 1921 and by December, 1921, all of it was paid off. This actual experience demonstrated that in a period of stress the reserve banks can stand together as one united system. Since, owing to the great variety of industries and conditions in the United States, it is unlikely that an equally heavy credit demand will occur in all the parts of the country at the same time, preventing one section from coming to the assistance of another, the Federal reserve system makes the occurrence of a money panic highly improbable.

Changes in Lending Power of One Bank and of All Banks Combined.—It has been stated that when a member bank finds itself short of reserves it borrows from the reserve bank and obtains an advance credited to its reserve balance. This addition to the reserve balance need not be larger on the average than about one-tenth of the amount of the new deposit account. In actual practice, however, when a bank lends money to an individual and credits his deposit account with the proceeds the borrower is not likely to leave the funds thus obtained on deposit for any length of time. He borrows because he needs the money and he proceeds to draw it out by check with the consequence that his bank loses funds through clearings, and since clearings are generally effected through the reserve bank, the member bank loses a part of its reserve deposit and must replenish it, presumably by borrowing from the reserve bank. This indicates that, while it is true that a bank which increases its own deposits by a given amount needs to increase its reserve balance by only one-tenth of this amount, it is not true that an individual bank can lend to its customers ten times as much as it borrows from the reserve bank. If the bank were to do this it would not be able to place at the customer's disposal the funds to which his deposit credit entitled him.

If, however, there were only one bank in existence, then the customer's checks would result simply in transfers of deposits from his account to the accounts of those to whom he makes payments. The bank's total deposits would not change and no funds would be withdrawn from it. If we had only one bank, therefore, which by law was required to keep a 10 per cent reserve against its deposits, this bank could lend to its customers in the form of deposit credit ten times as much as it borrowed from the reserve bank. During a time of general credit expansion a member bank's borrowings from a reserve bank and the additional deposit reserves thus created become gradually diffused throughout the system, and at such a time the lending power of all the banks together increases about as much as would that of one bank, if in it were combined the deposits of all the banks.[1] Thus, while an individual bank can increase its lending power through borrowing from a reserve bank by only slightly more than the amount it borrows, the lending power of the banking system increases by approximately ten times that amount.

Effect of Currency Demand.—It has been assumed so far that increased borrowing from the reserve bank has been resorted to solely for the purpose of obtaining additional reserves made necessary by additional deposits arising from new loans to customers. But increased borrowings by customers indicate growing business activity, larger payrolls, more active retail trade, and larger till-money and pocket-money requirements. All these developments result in a demand for additional currency, so that the deposits created by the new loans will be withdrawn at least in part in cash, rather than by checks in favor of other depositors. The member bank will, therefore, need Federal reserve notes and will have to borrow from the reserve bank to obtain them. And there is this difference between borrowing by a bank to replenish its reserves, and borrowing to withdraw notes: In the first case a member bank needs to borrow only one-tenth of the increase in its deposit liabilities, while in the latter case it needs to borrow the full amount of the funds withdrawn in cash. It is for this reason that credit expansion can never be in a ratio of 10 to 1 to the amount borrowed from the reserve banks. In the natural course of events a larger or smaller part of the funds borrowed

[1] See PHILLIPS, C. A.: "Bank Credit," p. 59.

will be required in the form of cash, so that the 10 to 1 growth can apply only to that portion of the discounts which remains on deposit with the reserve bank and constitutes the basis for additional deposit credit at the disposal of the member banks.

The foregoing can be illustrated concretely. When a man borrows $1,000 from a bank, if he takes the money out in notes the member bank, since it has in its vaults no more cash that it requires, will have to rediscount the customer's note or some other note in order to obtain this amount in cash from the reserve bank. The result will be an increase in the borrowings from the reserve bank equal to 100 per cent of the original loan granted by the member bank. On the other hand, if the customer of the member bank leaves all of the proceeds of his loan on deposit with the member bank, then the member bank will need no additional currency and will need only $100 of additional reserve deposits (assuming that its legal reserve requirements are 10 per cent, as is the case on the average for all member banks), so that it would borrow from the reserve bank not more than $100. What occurs in practice lies between these two extremes. Most of the borrowers from banks leave part of their proceeds on deposit with these banks, and to this extent the reserve deposits of the member banks increase only by one-tenth of the new loan. But part of the funds created by the loan are withdrawn in the form of currency, and these withdrawals result in an increase in the borrowings from the Federal reserve banks to the full amount of the cash withdrawn. The extent of growth of member bank credit on the basis of $1 of reserve bank credit, therefore, depends within broad limits upon the extent of the existing demand for currency.

While member banks do not permit their reserve deposits to fall below the legal limit on account of the penalties for deficient reserves, neither do they carry any considerable amount of excess reserves. Whenever their reserves exceed the legal minimum they find employment for the excess funds either in additional loans or in investments. The ratio of member banks' reserve deposits to their own deposits has, as a matter of fact, remained practically constant at 10 per cent throughout the recent periods of credit expansion and contraction.[1] Thus in

[1] The 10 per cent ratio is based on a calculation in which time deposits are reduced to a demand deposit basis with respect to reserve requirements.

our banking practice the minimum reserves required equal the maximum reserves carried by the member banks.

Increased Loaning Power on the Basis of a Reserve Dollar.—It is too early to appraise all the phases of loan expansion made possible by the Federal reserve system, but there is no doubt that owing to the reduced reserve requirements for member banks and to the fact that the reserve banks themselves must keep only 35 per cent reserves against the members' reserve deposits and 40 per cent against notes, the ability of our banking system to expand its loans has been greatly increased. This increase in possible expansion, or to put it in another way, this enhanced efficiency of the reserve dollar, like any mechanical improvement, creates new responsibilities and new dangers taking the place of the defects inherent in the superseded system of numerous unlinked banking units. The new system creates the possibility of proceeding much farther than was possible before in the direction of credit inflation without being arrested by the shortage of reserves. It, therefore, necessitates more careful and more expert administration of the country's banking system.

CHAPTER VIII

RESERVES OF THE RESERVE BANKS

In the preceding chapter the discussion dealt with the reserve requirements of member banks and their reserve balances with the Federal reserve banks. In this chapter the legal reserve requirements upon the reserve banks themselves will be considered.

Legal Provisions.—These reserves are against two classes of liabilities: against Federal reserve notes, and against deposits. The legal provision on this point is contained in Sec. 16 of the Act, the wording of the clause being "every Federal reserve bank shall maintain reserves in gold or lawful money of not less than 35 percentum against its deposits and reserves in gold of not less than 40 percentum against its Federal reserve notes in actual circulation." The first observation which this legal provision invites is the distinction that is made between Federal reserve notes and deposits. The reserve requirements against notes are more severe than those against deposits in two particulars. In the first place, note reserves must consist entirely of gold, while deposit reserves may consist of gold or lawful money, which includes silver dollars, silver certificates, and United States notes known as greenbacks; and in the second place, reserves against notes must be maintained at 40 per cent, while reserves against deposits need be only 35 per cent.

This distinction is in line with the general recognition of the fact that notes, owing to their wide circulation and the necessity of absolute confidence in them on the part of the public, must be protected with the greatest possible care. Consequently, the reserves against notes have been fixed at 40 per cent, all of which must be in gold. The second provision, excluding from the note reserve all that is not gold, carries out the principle that no other credit instrument should be counted as reserve against paper money, which itself is a fiduciary document. The only money in the United States which involves no element of credit is gold (including gold coin and gold certificates). The silver dollar contains only about 60 cents' worth of silver, the silver certificate is exchangeable for the silver dollar and is, therefore, on a par with it. United States notes, of which there are about $347,000,000, are secured by $153,000,000 in gold, the security for the remainder being the good faith and credit of the United States government. All of this money is good and the public trusts it and does not discriminate between the different kinds of currency. But in providing reserves against the new kind of currency great care was taken to throw sufficient safeguards around the Federal reserve note.

Elasticity of Reserve Requirements.—While the liabilities of the reserve banks are thus protected by what is generally considered adequate reserves, it was not intended to make the reserve provisions so rigid as not to permit the reserve banks to utilize their reserves in case of emergency. A reserve which cannot be drawn upon in emergencies does not serve its purpose, or at least fails of an important part of its purpose, which is to be mobilized and requisitioned in case of emergency. Reserves have been compared to hospital beds kept vacant for emergencies and not assigned to patients arriving in the regular course of the day's work. Such beds are always kept in readiness, clean and vacant for the purpose of being available in case of an accident or an unusual epidemic, so that the hospital may be able to meet an unexpected demand. It is clear that this implies both the keeping of the beds vacant in ordinary times and their utilization on extraordinary occasions. The same principle applies to bank reserves. They should be kept inviolate in ordinary times, but should be called upon to avert panic or disaster in times of stress.

Recognizing this principle the framers of the Federal Reserve Act put in a provision, Sec. 11 (*c*), which gives the Federal reserve Board authority.

> . . . to suspend for a period not exceeding 30 days, and from time to time to renew such suspension for periods not exceeding 15 days, any reserve requirements specified in this act, provided: that it shall establish a graduated tax upon the amounts by which the reserve requirements of this act may be permitted to fall below the level hereinafter specified; and provided further: that when the gold reserve held against Federal reserve notes falls below 40 percentum the Federal

Reserve Board shall establish a graduated tax of not more than 1 percentum per annum upon such deficiency until the reserves fall to 32½ percentum, and when said reserve falls below 32½ percentum a tax at the rate increasingly of not less than one-half of one percentum per annum upon the 2½ percentum or fraction thereof that such reserves fall below 32½ percentum. The tax shall be paid by the reserve bank, but the reserve bank shall add an amount equal to said tax to the rate of interest and discount fixed by the Reserve Board.

It will be seen that the Reserve Board has authority to suspend all reserve requirements when the situation demands it, but in doing so it must levy a tax upon the reserve banks which in turn pass it on to the member banks in order to discourage the exhaustion of the reserves and to bring about the speedy cancellation of the excess credits which caused the necessity for the suspension. In their anxiety to protect Federal reserve notes the framers of the Act provided a rate of progression for penalties for deficient reserves against notes, but did not specify a penalty in the case of insufficient deposit reserves. In this way the law partly defeats itself, because the reserve bank could count all the existing gold reserves as reserves against notes and apply the remainder towards reserves against deposits; and in case these fell short of the required 35 per cent the Reserve Board would be in a position to levy whatever deficiency rate it deemed wise, either higher or lower than that prescribed in the law, or even only a nominal amount. The legal penalty would have to be administered only if there was not sufficient gold in the bank to cover 40 per cent of Federal reserve notes alone, which would not be likely to occur, as it would mean that the bank had no reserves against its deposits and less than 40 per cent against its Federal reserve notes in circulation.

In the 10 years of operation of the Federal reserve banks no occasion for suspending reserve requirements has arisen, owing largely to the fact that when individual reserve banks were under heavy stress they were able to replenish their reserves by borrowing from other reserve banks. At no time was the so-called free gold, *i.e.*, the amount of reserves held above the legal minimum, for the system as a whole, below $200,000,000.

Free Gold.—A chart is here presented (Fig. 11) showing the reserves of the Federal reserve banks, their deposit and note liabilities, the amount of reserves required against these liabilities, and the free gold. The chart shows that in 1920 the margin was quite narrow, that in 1921, when liquidation set in and the gold movement to this country got under way, the amount of free gold constantly and rapidly increased and continued to increase at a slower rate throughout 1922. At the present time the free gold in the Federal reserve system is about $1,700,000,000 and the question of adequate reserves is, for the time being, a purely academic one.

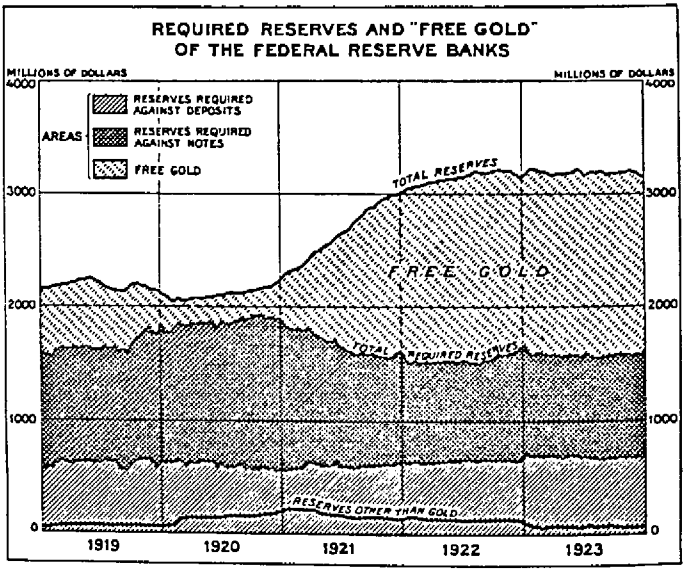


FIG. 11.—"Free gold" or excess reserves of the Federal reserve banks, which was never less than $200,000,000, increased rapidly in 1921, and was fairly constant at more than $1,500,000,000 in 1922 and 1923.

Another chart (Fig. 12) shows gold imports into the United States from 1914 to 1924. During this period over $2,000,-000,000 of gold was imported into this country, the first billion coming before the entry of the United States into the World War, when belligerent countries were buying large amounts of war materials and paying for them in gold; and the second billion coming since the fall of 1920, largely as the result of currency and financial disorganization abroad.[1] That there was relatively

[1] See Appendix K, p. 313.

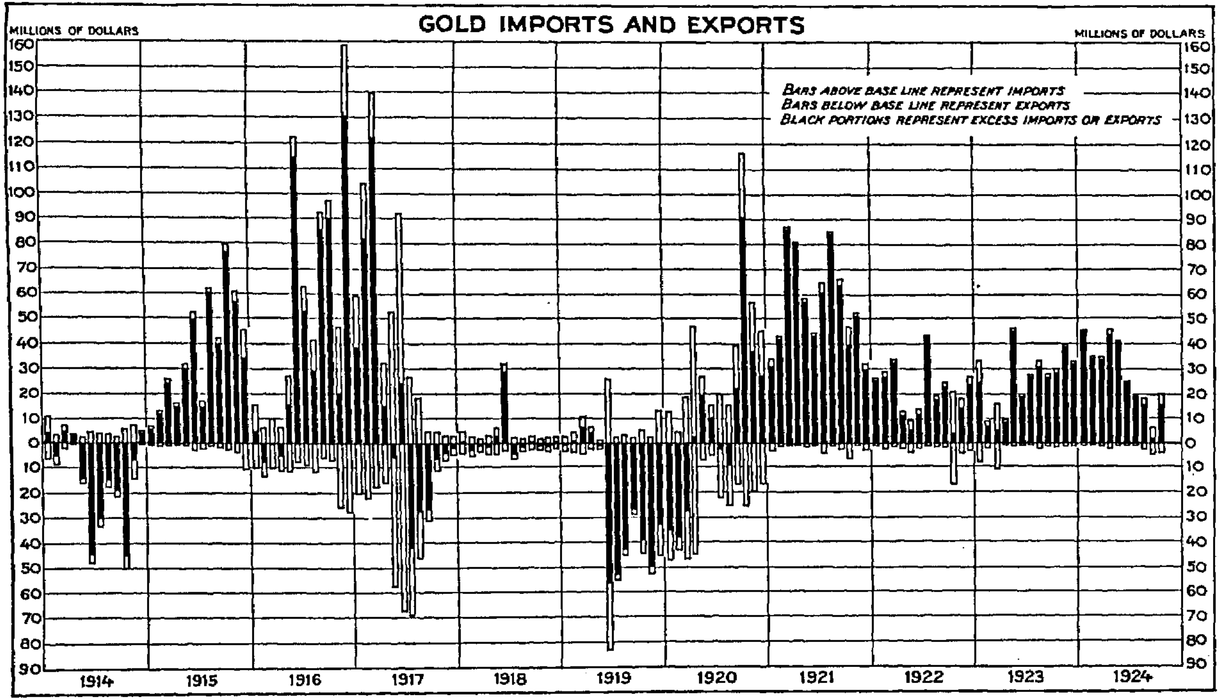


FIG. 12.—The gold movement to the United States in the past decade can be divided into two periods: 1915–1916, and 1921–1924. The effect of these gold imports on the credit situation in the United States is discussed in Chapter VIII, page 95, and in Appendix K, page 313.

little increase after the middle of 1922 in the gold reserves or in the free gold of the reserve banks, in spite of the large gold imports, was due to the policy of reserve banks to pay gold. rather than Federal reserve notes, into circulation.

What Affects the Reserve Position?—Changes in the reserve position of reserve banks may be caused by changes in three items of its balance sheet: deposits, Federal reserve note circulation, and reserves, for deposits and notes are the two classes of liabilities against which reserves are required by law. Changes in any of these items at the reserve bank are brought about by changes in some phase of the demand made by the public upon member banks. An increase in the deposit liabilities of Federal reserve banks is caused by an increased demand for deposit credit by customers of the member banks, as the reserve banks' deposits constitute the lawful reserves of the member institutions.[1] An increase in the reserve banks' note liability results from an increase in the public's demand for currency and a reduction in the reserve banks' reserves occurs in response to a demand for gold either for export or for out-of-district payments through the gold settlement fund.

This statement refers to developments making for increased demands upon the reserves of the reserve banks; changes in the opposite direction would have the opposite effect and would correspondingly strengthen the reserve position of the reserve banks. While a public demand for either additional deposit credit, currency, or gold, results in an increasing utilization of central reserves, the effect of the three kinds of demand upon the reserves is different in extent. An increase of $100 in the deposits of member banks necessitates, on the average, an increase of $10 in the deposits of reserve banks, and against these $10 the reserve bank must keep a 35 per cent reserve, so that its reserve requirements increase by $3.50. An increase of $100 in the public's demand for currency translates itself into an increase of

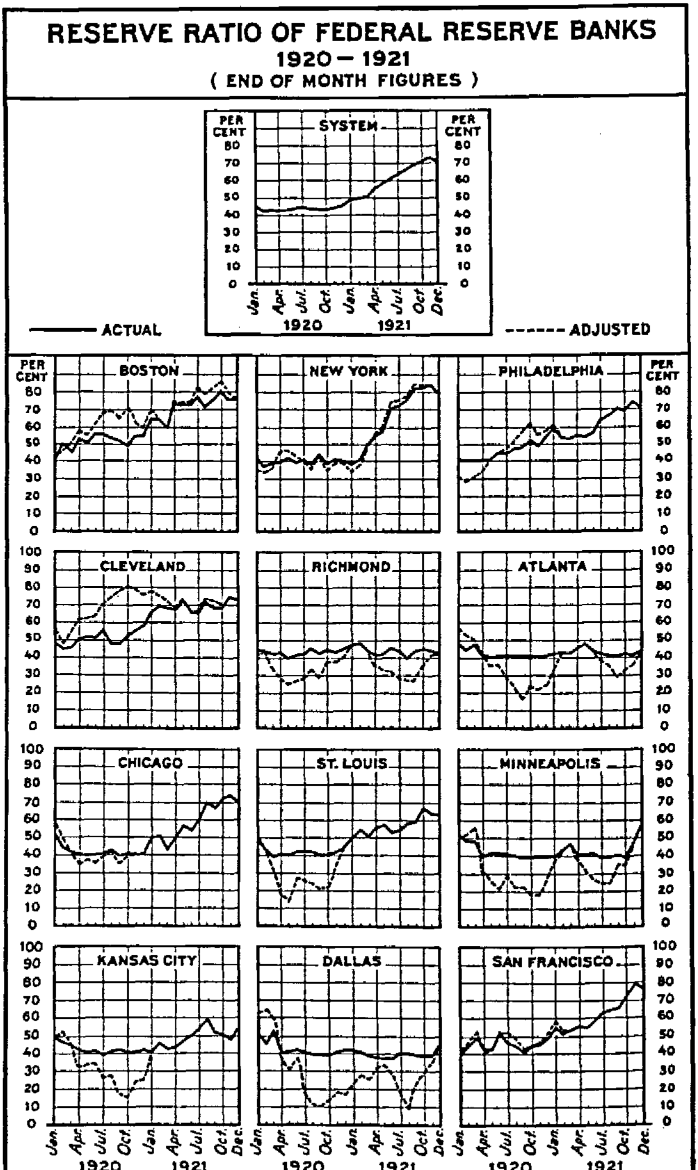
[1] The reserve banks carry in addition to members' reserve balances also deposits for the United States government and "other deposits" consisting largely of foreign government credits, cashiers' checks, and non-member banks' clearing accounts. But members' reserve balances are by far the largest part of total deposits (see balance sheet reprinted in Appendix D, p. 262), and in the discussion reference is made to these deposits alone.

$100 in the Federal reserve note liability of the reserve bank, which must keep a 40 per cent reserve against this increased liability, so that the reserve requirements increase by $40. A demand for $100 in gold, for export or for transfer out of the district, results in a direct reduction of $100 in the reserves of the reserve bank. Thus the ratios of demand by the public to the resultant effect upon the reserves of the reserve banks are 100 to 3.5 in case of deposits, 100 to 40 in case of Federal reserve notes, and 100 to 100 in case of gold or out-of-district drafts.

From this discussion it is clear that increases in the deposits of member banks are a relatively unimportant influence upon the reserve position of reserve banks, that a growing demand for currency is more than 10 times as influential, and that a demand for gold or gold drafts is about 30 times as powerful. This explains the fact, mentioned above (see page 35), that it was the demand for out-of-district drafts that caused the exhaustion of reserves in agricultural districts in 1920 and resulted in a heavy volume of borrowing from reserve banks in industrial districts.

Actual and Adjusted Reserve Ratios.—The chart on page 94 (Fig. 13) shows the reserve ratios of each reserve bank and of the twelve banks combined in 1920 and 1921. Two lines are shown: the solid line indicates the position of the reserve ratio as it was actually recorded; and the broken line, what the position would have been if the reserve banks had not borrowed from each other. The chart shows how low the reserves of some of the banks in agricultural districts would have been in 1920 had it not been possible for them to obtain accommodation at other reserve banks. It also brings out the fact that, for the system as a whole, a fairly steady level of reserves at about 42 per cent was maintained throughout the period of the greatest credit strain.

Gold Reserves and Gold in Circulation.—Prior to 1922 the amount of gold in the United States outside of the United States Treasury and the reserve system was relatively small, about $400,000,000, scattered widely among non-member banks and in small amounts held by many thousands of people in their homes. Between the middle of 1922 and August, 1924, however, the amount of gold in circulation increased by over $600,000,000, as a result of the policy of some of the reserve banks of paying



Adjusted percentages are calculated after increasing or reducing reserves held—by the amount of accommodation extended to or received from other Federal Reserve Banks.

FIG. 13.—In 1920 the actual reserve ratios of all the reserve banks were kept above legal requirements by means of interdistrict accommodation, though adjusted ratios, *i.e.*, ratios as they would have been had there been no interdistrict borrowing, were at times very low for some of the reserve banks.

out gold certificates into circulation. The reason for paying out gold was partly to restore gold to its former place in the country's circulation, as it was thought that it would have a good effect upon the minds of the people once more to see yellow-backs, which had been practically out of circulation since 1917. Another object was to slow down the growth of Federal reserve bank reserves, which were becoming very large and causing a great deal of comment. Imported gold comes to the United States consigned to a member or non-member bank. It is turned over to the United States Assay Office, which assays its actual gold content. The receipt for this gold is then deposited with the reserve bank, which gives the depositing bank a deposit credit. In case the consignee bank is not a member it generally operates through a member bank, though the reserve bank also has authority to buy gold direct from the non-member bank. Whatever the process in detail the final result is that the gold becomes part of the reserves of the reserve system.

Effect of Imported Gold.—This is of great importance in connection with the developments of the last years, when gold moved to the United States in large volume increasing the reserves of the Federal reserve banks. This increase in reserves did not represent domestic loan liquidation, but the payment of obligations to American interests by foreigners, who were scraping the bottom of their barrel and shipping to America whatever acceptable liquid assets they could gather, which in many cases meant gold.

The United States has absorbed in the last 2 or 3 years practically all of the new gold produced in the world and in addition has received large amounts from some of the European reserves (see Fig. 12). The gold did not come from the Bank of England or the Bank of France, which have not diminished their reserves and in fact have somewhat increased them. But it came from the German Reichsbank reserves, a portion of which was paid to the United States through the United States Grain Corporation in return for food sent to Germany after the armistice, another portion coming to the United States in the summer of 1923 in connection with reparation payments. A large part of the gold reserves of the Russian State Bank, which prior to the war had the biggest gold hoard in the world amounting to over

$600,000,000, also came to the United States. A part of this hoard was dissipated before the Bolsheviki came into power, but much of what was left found its way indirectly to the United States. Much Russian gold was sent to Sweden, was there restamped in order to overcome the objection of the United States government against receiving gold from the Bolshevik government, and was then shipped to the United States. Much gold also found its way to France, where it was impounded and equivalent amounts of non-Russian gold shipped to the United States. This absorption of the Russian reserve accounts for much of the $691,000,000 of gold received in the United States during 1921.

In this way the stock of gold in the United States increased by over $1,500,000,000 since the conclusion of the war. This great amount added to our gold reserves came as the result of European disaster, and European countries may sooner or later demand the return of all or a part of this gold to serve as a basis of financial and monetary reconstruction. In a sense, therefore, the United States is trustee for the gold and must neither permit it to be dissipated or to form the basis of a credit structure, as in such case the eventual loss of the gold might create serious financial disturbances in this country.

Gold Used for Liquidation and as Basis for New Credit.—The effect of gold imports on the banking situation in the United States differed in accordance with business conditions prevailing here at the time of the gold's arrival. In 1921 the gold was used largely to pay the member banks' indebtedness to the reserve banks. During that time business and credit in this country were going through a period of contraction, domestic debts were liquidated by the reduction in Federal reserve note circulation, while the gold coming from abroad liquidated foreign accounts owed to the banks and industrial corporations of this country and was used by the banks in reducing their debt to the reserve banks. The repayment of reserve bank loans was accomplished in approximately equal degree through foreign liquidation and through domestic liquidation as is shown by the fact that reserve bank discounts declined between their peak on Nov. 5, 1920, and their trough on July 26, 1922, by $2,400,000,000; during the same period gold reserves of the reserve banks increased by over $1,000,000,000 and Federal reserve note circulation contracted by $1,200,000,000.

Since mid-summer, 1922, the gold coming to the United States has played a different part in our credit developments. In 1922 the country's productive plant was working at full blast, business activity had revived, the demand for bank credit and for currency was growing and member banks were increasing their borrowings from the reserve banks. The gold coming from abroad during this period was no longer used to retire obligations at the reserve banks. Instead it became available for increased loan extension by member banks without recourse to the reserve banks. It is, in fact, the continuing, though diminished flow of gold to the United States that enabled member banks to meet the growing credit and currency requirements of their customers between July, 1922 and the end of 1924 without using additional reserve bank credit. During this period the loans and investments of member banks increased by $5,000,000,000, while the earning assets of the reserve banks remained practically unchanged. Thus part of the gold went into circulation, satisfying the demand for additional currency, and the other part was added to the reserves of the Federal reserve banks, constituting at the same time the basis for the increasing volume of member bank deposits. During both periods gold imports tended to reduce the earning assets of the reserve banks, but the effect on member banks and on the credit situation was different: during the period of liquidation it helped the member banks to melt some of their frozen loans and to get out of debt to the reserve banks, and during the period of growing credit demand it enabled the banks to expand their loans and yet remain independent of the reserve banks. In 1924, in the absence of currency demand and with a relatively small volume of indebtedness at the reserve banks, gold imports have been used by member banks as a basis of additional loans and investments reflected in a rapid growth of deposits. Thus the effect of gold imports on the relation between member banks and the reserve banks differs in accordance with the existing demand for currency and credit and with the extent of member bank indebtedness to the reserve banks.

Gold Imports and the Reserve Ratio.—Gold imports also had an important effect upon the significance of the ratio of the reserve banks' reserves to their deposits and note liability as an indicator of domestic credit conditions and as a guide to credit policy. A reserve ratio of over 75 per cent would give the impression that credit is plentiful and should, therefore, be easily available for all enterprises. But when such a high ratio has been brought about not by conditions in the United States but by conditions abroad, it is not an indication of the possibility of using additional bank credit safely and effectively as has been frequently stated, and as is explained in the Board's *Review af the Month* reprinted in Appendix K, page 313. When in 1920 the reserve ratio went down to 42 per cent it was easy to explain to the public that the reserve banks were obliged to raise their discount rates because their reserves were threatened. But in 1924 the amount of gold in the reserve banks was so abundant that the danger of inadequate reserves had become very remote and credit policy had to be based on other less familiar economic indicators. Among these indicators is the volume of member bank borrowings from the reserve banks, market rates for money, and the volume of production and trade in its relation to changes in the price level. While the Federal reserve banks continue to calculate and make public their reserve ratios, these ratios are no longer watched with the keen interest which they inspired in 1920 and have become a matter of routine. This situation has given rise to various proposals with the object of bringing the reserve ratio into closer touch with current credit developments. One of these proposals is to set aside a part of the gold as a reserve against future exports, another to set aside 100 (or nearly 100) per cent as a reserve against Federal reserve notes, thereby reducing the reserves available against deposits. The latter plan has much in its favor, as it is based on the principle of separating deposit reserves, for which the reserve banks are primarily responsible, form note reserves held by the Federal reserve agent and in the redemption fund with the Treasury, the responsibility for note issues and for the collateral back of the notes resting with the Federal Reserve Board and the Federal reserve agent as the Board's representative. This segregation of reserves, which is in accordance with earlier practice abandoned late in 1917, would have the advantage of reducing the deposit reserve and making it more responsive to changes in domestic credit conditions and of keeping the gold received from abroad impounded in the note reserve. Had this gold not come, the collateral back of Federal reserve notes would have consisted to a larger extent of commercial paper, and if the gold is re-exported this will lead to a substitution of eligible paper for gold in the note reserve. Under the plan of separate reserves the gold received from abroad would be to a considerable extent kept out of the domestic credit situation and in readiness for re-export whenever a demand for gold from abroad would assume considerable proportions.

Reserve Ratio Less Significant at Present.—So long, however, as gold continues to come to this country in large quantities the reserve position of the reserve banks cannot adequately reflect the domestic credit situation. And it is essential for the public to learn to disregard gold altogether as an indicator of the volume of credit that may safely be extended and to direct its attention to other and more significant factors. The public must come to appreciate the fact that additions to our reservoir of credit, which have not arisen out of business conditions in this country, have introduced a complicating factor into our credit situation and have made the task of credit control more difficult than it would have been if credit expansion could not proceed without increased borrowings from the reserve banks.[1] So long as the banks are constantly receiving additions to their funds independently of the reserve system it will be more than ordinarily difficult to detect and to control credit expansion. In normal times such a development could not proceed far without setting in operation a number of corrective forces. Interest rates in this country would fall, money would flow into countries where rates are higher, exchange rates would be against the United States, and the movement of gold to America would cease and presently would be reversed. But at the present time, with the world off the gold basis and heavily indebted to the United States, these correctives are slow to assert themselves. During 1922, gold shipments were indeed made to Canada as a result of such developments, the exchange value of the pound sterling also advanced nearly to parity, and that of some of the neutral European countries even rose above par. This was caused by the unusually easy money conditions

[1] See appendix K, p. 306.

and the rise in prices in the United States not accompanied by corresponding rises in other countries. Still gold continued to come to the United States because no other country was in a position to bid against the United States in the gold market. Favorable trade developments in India have enabled her to divert some of the gold to herself, but the bulk of the new gold has come to the United States. In 1923 new gold imports were $294,000,000 compared with $238,000,000 in 1922, and in the first 7 months of 1924 gold came at the rate of more than $1,000,000 a day.

During the last five months of 1924 considerable gold takings by India directly from the South African mines, together with a large volume of foreign loans floated in the United States, diminished the inflow of gold to this country to relatively small proportions. The foreign loans were facilitated by the fact that interest rates in New York were considerably lower than in London and much lower than in Continental Europe. Thus the low level of money rates in this country, caused partly by the abundance of funds arising out of previous gold imports, was a factor in reducing the volume of gold imports in the latter part of 1924. In December of that year there were furthermore substantial exports of gold, chiefly to Germany which withdrew in gold a part of the proceeds of the $110,000,000 loan floated under the provisions of the Dawes plan for the settlement of reparations. As a result there was in the closing month of 1924 a net export of gold from the United States for the first time since the autumn of 1920. While this outward movement of gold did not reflect a definite change in the conditions that caused gold to flow to the United States in the past four years, it indicated that, with the return of greater currency stability in Europe and with the reestablishment of the relationship between certain European currencies and gold, international gold movements might be expected to be increasingly influenced by differences in money rates and in price levels in different countries. The year 1924, therefore, which witnessed definite progress in the direction of more normal currency conditions in many countries, also saw a beginning of more normal gold movements. If these developments continue they will have an important effect on the Federal reserve system by tending to reestablish the relationship between changes in the reserve position of the Federal reserve banks and in the general credit situation.

CHAPTER IX

CHECK CLEARING AND COLLECTION AND OTHER SERVICES

It is hard to talk about a technical matter like check-clearing and collection, the very sound of which is forbidding to the layman, in such a manner as to interest the general reader. But technical as the matter may be in some of its phases, the function is one that concerns every business man and in the final analysis every person living in this country, no matter what his occupation may be. Prior to the organization of the Federal reserve system, payments by persons in one city of the United States to be made in another city were in many respects on the same level as payments in a foreign country. Such a person had to buy a bill of exchange and if the supply of bills was short, he had to pay a premium, which sometimes was considerable. In many cases a bank would accept out-of-town checks without charge, but then the bank itself would have to secure exchange, and the cost to the community was the same. Furthermore, final settlements of balances between the cities had to be made by the actual shipment of cash. This cumbersome machinery of settling bills between districts has been largely scrapped as a result of the inauguration of the check-clearing service of the Federal reserve banks. Member and non-member banks are now privileged to deposit with a Federal reserve bank any checks that they may have upon other banks, and to receive credit for these checks in accordance with the time schedule based upon the actual length of time that the collection of these checks normally requires. The banks do not have to draw on other cities, and need not maintain balances for the purpose of covering such drafts. They leave all this to the Federal reserve banks which make settlements among themselves through the gold settlement fund.

Principles Underlying the Clearing of Checks.—The fundamental principle underlying check collection is that over a considerable period of time the volume of purchases of goods or services by a community from the outside must substantially equal the volume of sales of services and goods by that community. In other words, no town can permanently purchase more than it sells any more than an individual can continually receive things from others without offering some equivalent in return. There may be seasonal differences, so that a district or a community may purchase a great deal during one part of the year, and during that time may make a much larger volume of payments outside of the district than it receives from the outside. But such a season must be balanced by another season when the conditions are reversed. Broadly speaking, the agricultural districts make their purchases in the early part of the year when they buy machinery, and fertilizers, as well as personal supplies, such as clothing, etc. In the fall months, on the other hand, when crops mature, these districts sell their products and receive payment from industrial centers. An undeveloped community may, for a considerable time, purchase more goods from the outside, because the older communities may invest money in the new one and, so long as the volume of new investment continues to be larger than interest and amortization payments, there may be a continuous flow of goods to the district in exchange for claims upon it in the form of securities or open accounts. But interest must be paid upon such advances and ultimately the principal will mature, so that in the long run the volume of incoming and outgoing payments must balance. The movement of funds between communities responds to an innumerable variety of forces, but, broadly speaking, when the total volume of purchases by a community is compared with the total volume of its sales the difference, which may be called the balance of payments, is generally small even over a period of time so short as a year. If this were not so it would not be of much use to establish a system of check-clearing because large unfavorable balances would accumulate and would have to be settled by the shipment of cash. Since, however, the accounts balance approximately, it saves a great deal of time and money to cancel the payments and receipts of each community, before settling the ultimate balance. This is what the Federal reserve clearing system attempts to do, and it is clear from this exposition that the more nearly all-inclusive the system is the more effectively it can function. An ideal system would include all payments from all districts, and such an all-inclusive system would result in a very large proportion of cancellations and a very limited volume of balances. In substance the idea is the same as that upon which is based the operation of a clearing house between banks in one city. It is well known that balances that banks must pay to each other are a small fraction of the volume of clearings, and that even these balances accruing each day gradually cancel each other, so that the amounts held for the credit of the individual banks with the clearing house remain fairly steady over long periods of time. The Federal reserve banks and branches act as clearing houses in the cities where they are situated and in addition clear and collect out-of-town checks deposited with them.

Growth of the Clearing Service.—The framers of the Federal Reserve Act intended through the operation of the reserve banks to improve the facilities for check clearing. They were not, however, originally inclined to include banks other than member banks in the benefits of the system, but on June 21, 1917, the Act was so amended as to permit the reserve banks to receive on deposit checks and drafts payable upon presentation without reference to the character of the banks upon which the checks were drawn, substituting this proviso for one which permitted the banks to receive checks only on solvent member banks. Out of the application of this provision of Sec. 13 of the Reserve Act there has grown a controversy between certain small banks, particularly in the South, and the reserve system. These banks derived a substantial part of their income from exchange charges and they have been reluctant to dispense with this source of income. What it amounted to was this: If a person, say Mr. Jones, a resident of Mobile, Alabama, bought a book in New York, and in payment sent a check upon his bank in Mobile, the book store in New York would deposit the check with its own bank in New York and that bank would transfer it to the Mobile bank which would send a draft for the amount to the New York bank. Under the system of exchange charges the Mobile bank would refuse to pay the full amount of the check but would deduct a commission of one-tenth of 1 per cent or more for its services. This charge would, of course, make it necessary for the New York bank to pass the exchange charge on to the depositing book-seller, who in turn would add it to the selling price of the book, so that the ultimate result would be an increase in the price of New York books to a purchaser in Mobile. In order to avoid the payment of exchange charges banks receiving out-of-town checks would often send them for collection to city correspondents, with whom they may have had an agreement for full credit for checks sent in. In this way, checks instead of going direct from the bank where they were deposited to that upon which they were drawn, would travel around through many hands seeking to avoid the exchange charge. This indirect routing of checks resulted in a loss of time and in needless expense and was one of the evils that the check-clearing service of the reserve banks was intended to correct.

The exchange charges with which the check-clearing system is concerned should not be confused with exchange charges by a bank upon checks on other cities deposited with it. It is customary and fair that a bank in Washington receiving on deposit a check for $10 on a San Francisco bank should withhold credit for the check until collection at San Francisco has been made and the proceeds received, and possibly also charge something for the service involved in the correspondence and the handling of the check. There has been no controversy about charges by banks which make distant collections. The difficulty is concerned with the charges made by banks for honoring checks of their own depositors who have made out-of-town payments and whose checks are presented for collection by representatives of the out-of-town payees.

The Par Clearance Controversy.—The Federal Reserve Act contains the following clause:

> That nothing in this or any other section of this Act shall be construed as prohibiting a member or non-member bank from making reasonable exchange charges to be determined and regulated by the Federal Reserve Board, but in no case to exceed 10 cents on $100 or fraction thereof, based on the total of checks and drafts presented at any one time for collection or payment of checks and drafts and remission therefor by exchange or otherwise; but no such charges shall be made against the Federal reserve banks.

This last clause means that the Federal reserve banks may not pay exchange charges, and therefore, if a member bank charges exchange, the Federal reserve bank must either refuse to collect checks upon that bank, or must collect them through other banks or by presenting them over the counter. The handling of such checks involves considerable trouble and expense to the reserve banks. This was the incentive for a campaign for universal par collection, which was actively pursued by the reserve banks and the Reserve Board in 1919 and 1920. One reason was that it was troublesome and expensive for banks clearing through the reserve banks to sort out checks on banks not remitting at par and to collect such checks by other methods. The Board also felt that it would be a decided step in the direction of greater smoothness and efficiency in our business machinery, if the banks were enabled to deposit with the reserve banks for clearing and collection all the checks brought to them by their customers. This effort, however, encountered a determined opposition on the part of many small banks, and the legislatures of some states passed bills making the collection of checks through the Federal reserve system more difficult. Such acts were passed by the legislatures of Mississippi, North Carolina, Louisiana, South Dakota, Georgia, and Alabama.

One point involved in the matter is this: If a check upon a bank is brought to it and presented over the counter, the bank is obliged to cash it so long as the drawer of the check has a balance to meet the amount of the check, since otherwise the bank would be defaulting upon its lawful liabilities. The Federal reserve banks in some districts made use of this obligation to honor checks presented over the counter and made it a practice to have agents in the small towns, and when checks would come in on banks which refused to remit at par by draft, the reserve banks sent these checks to their local agents who would present them for payment at the drawee banks. In this way the reserve banks expected to encourage the small banks to join the par collection system by agreeing to remit at par. The banks, however, took exception to this action. They accused the reserve banks of using unfair means by saving up large amounts of checks and presenting them at times when this was embarrassing to the bank. The matter came to trial in the well-known Atlanta case, in which certain banks in Fulton County, Georgia, were endeavoring to restrain the Federal Reserve Bank of Atlanta from collecting, otherwise then through the mails, checks drawn on the plaintiff banks. This suit was tried in the lower courts and decided in favor of the reserve bank. When it reached the Supreme Court, this court held that if the facts in the case indicated a malicious intent on the part of the reserve bank its action may not have been lawful, even though the collection of each individual check by the method of direct presentation be entirely legitimate. The case was remanded to the Court of Appeals of the Fifth Circuit which sustained the position of the reserve bank, holding that no evidence of malicious intent had been presented and that the reserve bank had acted within the law and in the public interest. Upon this finding the Supreme Court sustained the action of the Federal Reserve Bank of Atlanta and dismissed the complaint.[1]

There has also been litigation to determine the constitutionality of check collection acts passed by the state legislatures. The legislature of North Carolina in 1921 passed a law entitled "An Act to Promote the Solvency of State Banks," Sec. 2 of which reads as follows:

> That in order to prevent accumulation of unnecessary amounts of currency in the vaults of the banks and trust companies chartered by this State, all checks drawn on said banks and trust companies, shall, unless specified on the face thereof to the contrary by the maker or makers thereof, be payable at the option of the drawee bank, in exchange drawn on the reserve deposits of said drawee bank when any such check is presented by or through any Federal reserve bank, post office, or express company, or any respective agents thereof.

The Act also authorizes banking institutions chartered by the state to charge a fee not in excess of one-eighth of 1 per cent on remittances covering checks, the minimum fee on any remittance therefor to be 10 cents. The constitutionality of this act was questioned on several grounds. It was claimed that it violates the constitutional provision prohibiting a state from making anything except gold and silver coins a tender in payment of

[1] *American Bank and Trust Company et al., Appellants, vs. Federal Reserve Bank of Atlanta et al.* No. 717, October Term, 1922. Decision rendered on June 11, 1923.

debts, that it is contrary to the due process and the equal protection clauses of the constitution, and that it is in conflict with the Federal Reserve Act because it prevents the Federal reserve banks from collecting checks of such state banks as do not acquiesce in the plan for par clearance, and interferes with the duty of the Federal Reserve Board to establish in the United States a universal system of par clearance and collection of checks. The court's opinion in this case was delivered by Justice Brandeis.[1] The court held on the principal issue that par collection was not obligatory on the Federal Reserve Board or the reserve banks, and that the North Carolina Act did not interfere with any but optional activities of the Federal reserve system, and was, therefore, not contrary to the constitution of the United States. This decision by the Supreme Court of the United States means that the reserve banks, in the absence of additional legislation, will have to refuse to handle checks drawn upon banks not remitting at par. It also means that adherence to the par collection system on the part of any non-member bank is voluntary and that the further spread of the system will have to depend upon an increasing realization by the banks that it is to their ultimate advantage to further the prompt and economical clearance and collection of checks.

Volume of Business.—In order to give an idea of the amount of business done by the reserve banks in the collection of checks, the following table is introduced showing the total number of checks handled and the amounts collected during 1920–1923. Another table shows the number of banks on the par list and the number that had not joined the par list in July, 1924. To be on the par list a bank must signify its willingness to remit at par for any check drawn upon it and presented for collection by a reserve bank either by mail or otherwise.

[1] Reprinted in Appendix F.

CLEARING OPERATIONS OF FEDERAL RESERVE BANKS: 1920–1923
(Numbers in thousands. Amounts in thousands of dollars)

Class of item	Number of items handled				Amount of items handled			
	1920	1921	1922	1923	1920	1921	1922	1923
Total items handled..........	452,116	522,676	584,882	639,204	$156,509,264	$119,160,048	$150,506,500	$196,636,073
Items drawn on banks in:								
Federal reserve bank city....	63,599	78,374	97,517	94,643	72,494,620	58,365,284	87,698,642	108,479,604
Federal reserve branch cities	23,447	33,142	39,544	42,842	20,228,821	16,297,746	17,320,887	35,411,949
Same district outside Federal reserve bank and branch cities....................	337,628	377,856	413,679	465,736	57,083,187	38,825,254	40,423,947	48,146,789
Other Federal reserve districts..................	75	104	162	190	23,593	22,017	48,641	85,996
Items drawn on United States Treasurer.................	27,367	33,200	33,980	35,803	6,679,043	5,649,747	5,014,383	4,511,735

NUMBER OF MEMBER BANKS AND OF NON-MEMBER BANKS ON PAR LIST AND NOT ON PAR LIST: JULY, 1924

Federal reserve district	Member banks	Non-member banks	
		On par list	Not on par list
Boston	422	231	
New York	849	370	
Philadelphia	731	519	
Cleveland	874	1,076	5
Richmond	627	793	691
Atlanta	527	379	1,109
Chicago	1,428	3,988	187
St. Louis	629	2,273	306
Minneapolis	930	1,682	664
Kansas City	1,097	2,765	201
Dallas	842	886	136
San Francisco	785	858	54
Total	9,741	15,820	3,353

Fiscal Agency Operations and Other Services.—Another important function that the Federal reserve banks perform is their operations as fiscal agents of the government. The banks during the war acted as the agents of the government in issuing bonds and certificates, in paying coupons, etc. Recently the sub-treasuries of the United States have been abolished and the reserve banks are now the sole fiscal agents of the government. This involves the redemption of all classes of government currency, the cashing of coupons, and the redemption of maturing government obligations. The government keeps most of its funds at member banks and calls on these banks when it requires funds. The banks then turn over the amount called for to the reserve bank, the government paying its obligations by check on the reserve bank. The Treasury compensates the reserve banks for part of the expense involved in these fiscal agency functions, but much of the work for the government is done gratuitously and is absorbed into the reserve banks' expenses.

The reserve banks also perform an important service in supplying currency to all member and non-member banks. Any bank desirous of obtaining cash can do so by applying to the reserve bank and offering suitable payment for the cash. The banks also send surplus money to the Federal reserve banks and in return receive credit on the books of the reserve bank, or else receive new currency. Receipts and shipments of currency by the reserve banks total about $7,000,000,000 a year.

The reserve banks also examine the condition of member banks in their district, particularly of non-national member banks, since the national banks are under the general supervision of the Comptroller of the Currency who has a large examining force of his own. In the examination of state bank and trust company members the reserve banks generally cooperate with the state authorities and in many cases accept the result of examinations made by these authorities, but the reserve banks retain the privilege of independent examinations and not infrequently make use of this privilege.

Still another service performed by the reserve banks is their acting as collection agents for member banks in connection with items other than checks. This service is free, except that a small charge is made on items returned unpaid and unprotested. The charge is for the purpose of discouraging the use of the reserve banks' collection facilities for the presentation of mere "dunning drafts." In cases where a reserve bank collects an item through some other bank any reasonable collection charge made by that bank is deducted by the reserve bank from the face amount of the item before remitting the proceeds to the member bank from which the item was received for collection. The reserve banks also act as custodians of securities. This function grew out of the fact that the banks had to undertake the custody of securities offered by the member banks as collateral for discounts. Since the reserve banks had to take care of these securities and had to have adequate facilities for their safekeeping, the banks undertook to take care of any other securities that the member banks wished to entrust to their care. The reserve banks clip and cash the coupons attached to the securities held in custody for their customers, thus saving the owners the trouble of doing it. These services involve a large amount of work and of expenditure without being related to the volume of earning assets of the reserve banks.

In the next chapter there is presented a discussion of the earnings and expenses of the Federal reserve banks.

CHAPTER X

EARNINGS AND EXPENSES

Federal reserve banks, like most central banks, are owned by their stockholders. But the stock of the reserve banks, in contrast to most other banks of issue, is held entirely by the member banks, which are required by law to subscribe 6 per cent of their own capital and surplus as their share of the stock of the Federal reserve bank. Three per cent of this subscription has been paid in and the other three per cent is subject to call. Thus the reserve banks are owned by their member banks, which are required by law to supply their share of the reserve banks' capital. The earnings of the reserve banks, after current expenses and a 6 per cent cumulative dividend on the capital stock has been met, are divided between the government and the surplus account. The present law provides that the banks may build up surplus accounts equal to their subscribed capital before they need to turn over any part of their earnings to the government. When the surplus equals the subscribed capital, 10 per cent of net earnings continues to be added to this account and the remainder is paid to the government as a franchise tax.

Distribution of Earnings.—The following table shows gross and net earnings of the twelve Federal reserve banks combined and their distribution from 1914 to 1923. The surplus account of all the banks, with the exception of Dallas, has equaled their subscribed capital and consequently they have all paid franchise taxes. In 1920 and 1921 the total franchise tax amounted to $60,000,000, but in 1922, owing to a much smaller volume of discounts, it amounted to only $11,000,000, and in 1923 to only $3,600,000. In the latter year the earnings of three reserve banks, those of Cleveland, Dallas, and San Francisco, did not exceed their expenses and dividends and their payments into surplus account and these banks, therefore, paid no franchise tax for that year. In 1924, with earning assets at the lowest

Gross and Net Earnings of the 12 Federal Reserve Banks, Also Disposition Made of Net Earnings, 1914–1923

Year	Earnings		Disposition of net earnings			
	Gross	Net	Dividend payments	Transferred to surplus	Franchise tax paid to United States government	Profit (+) or loss (−) carried forward
1914	$ 63,145	$ 310,287	....	....	....	−$ 310,287
1915	2,110,107	168,828	$ 217,463	....	....	− 48,635
1916	5,217,937	2,750,998	1,742,774	....	....	+ 1,008,224
1917	16,128,339	9,579,607	6,801,726	$ 1,134,234	$ 1,134,234	+ 509,413
1918	67,584,417	52,716,310	5,540,684	48,334,341	....	− 1,158,715
1919	102,380,583	78,367,504	5,011,832	70,651,778	2,703,894	
1920	181,297,338	149,294,774	5,654,018	82,916,014	60,724,742	
1921	122,864,605	82,087,225	6,119,673	15,993,086	59,974,466	
1922	50,490,739	16,497,736	6,307,035	−659,904	10,850,605	
1923	50,708,566	12,711,286	6,552,717	2,545,513	3,613,056	
Total	$598,845,776	$403,863,981	$43,947,922	$220,915,062	$139,000,997	

level since 1917, several reserve banks may have to pay no franchise tax and it is uncertain how many of the banks will be able to meet their expenses and dividend requirements out of current earnings.

Sources of Earnings of the Reserve Banks.—Income-producing operations of the reserve banks are largely of three kinds—the discount of bills for member banks, and the purchase in the open market of acceptances and of government securities. Other sources, including the receipt of penalties imposed on member banks for deficient reserves and miscellaneous earnings, are relatively unimportant. In the following table are shown the earnings of the reserve banks from different sources for the years 1920–1923, and for the first 6 months of 1924.

Sources of Earnings of the Federal Reserve Banks
(In thousands of dollars)

Source	1920	1921	1922	1923	1924 (6 months)
Discounted bills	$149,060	$109,599	$26,523	$32,956	$10,709
Purchased acceptances	22,020	5,234	5,629	9,371	3,815
United States securities	7,141	6,254	16,682	7,444	5,035
Deficient reserve penalties	1,573	1,178	603	521	214
Miscellaneous	1,503	600	1,053	416	630
Total earnings	$181,297	$122,865	$50,490	$50,708	$20,403

Discounts for member banks were the principal source of income of the reserve banks throughout the period shown in the table, and also for earlier years, with the exception of the period prior to our entry into the World War when acceptances and government securities were the chief source of earnings. The part played by acceptances as a source of earnings varied considerably from year to year, and government securities also furnished a different proportion of earnings in different years. The latter proportion was larger in 1922 than in any of the other complete years shown in the table, but during the first 6 months of 1924 this proportion increased continuously and indications are that more than one-half of the reserve banks' earnings during that year will be derived from government securities.

Factors Affecting Earnings of Reserve Banks.—In view of the sources of the reserve banks' earnings, as they have been shown above, it is evident that the amount of these earnings depends on the volume of discounts and open-market purchases made by the banks and on the rate of discount or interest earned by the bills and securities. The average daily holdings of the different classes of earning assets and the average rate of earnings thereon are shown in the table on the following page for the years 1920–1923 and the first 6 months of 1924.

In 1920 and 1921 the large earnings of the reserve banks were the result chiefly of the large volume of discounts for member banks and the prevailing high level of discount rates. Holdings of acceptances and government securities were relatively small, and the rate of earnings on the latter was low, owing to the fact that these earnings consisted, to a large extent, of 2 per cent Pittman certificates held as cover for Federal reserve bank notes. In 1922 and 1923 the average holdings of discounts were much smaller and the average earnings on discounted paper declined from about 6 to about 4½ per cent. In 1922 government securities were a more important source of earnings, both because their holdings increased and because the yield was considerably higher. During the first half of 1924 the rate of earnings was lower and the average volume of earning assets was smaller than in any of the years from 1920 to 1923. Government securities constituted a larger part of the earning assets than at any other time except in 1922.

Can the Reserve Banks Control Their Own Earnings?—With these factors determining the amount of earnings of the Federal reserve banks, the question arises: To what extent can these banks increase their annual income by adding to one or the other class of earning assets? The volume of discounts held by the reserve banks depends on the demand for reserve bank credit by the member banks, which in turn reflects chiefly the demand for currency by the public. The reserve banks cannot directly influence this demand, and the volume of discounts they hold is, therefore, controlled largely by influences other than their own

AVERAGE HOLDINGS OF EARNING ASSETS AND RATE OF EARNINGS OF THE FEDERAL RESERVE BANKS

Class of earning assets	Daily average holdings (millions of dollars)					Annual rate of earnings (per cent)				
	1920	1921	1922	1923	1924 (6 months)	1920	1921	1922	1923	1924 (6 months)
Discounted bills.........	$2,530	$1,804	$ 573	$ 738	$480	5.88	6.07	4.63	4.46	4.47
Purchased acceptances...	389	92	159	227	185	5.66	5.70	3.54	4.14	4.14
United States securities..	324	264	455	186	251	2.21	2.37	3.67	4.01	4.02
Total earning assets[1]...	$3,243	$2,160	$1,187	$1,151	$916	5.50	5.61	4.11	4.33	4.28

[1] Including small amount of municipal warrants and Federal Intermediate Credit Bank debentures.

desires in the matter. The rate of discount, which is the other factor determining the amount of earnings, is fixed with reference to credit conditions and with no consideration whatever of its effect upon the reserve banks' earnings. The situation in respect to acceptances is somewhat similar. Though the reserve banks have authority to purchase acceptances in the open market on their own initiative, the volume of acceptances available for purchase depends upon the volume executed, which in turn is affected by the condition of our foreign trade, and upon the level of rates prevailing in the money market, which influences dealers in acceptances in their decision whether to sell their bills to the reserve banks or to the investing public. In actual practice the reserve banks have, as a rule, purchased such acceptances as have been offered to them, and have only, to a relatively small extent, entered the acceptance market upon their own initiative. In acceptance operations, as in discount operations, the reserve banks are, therefore, conducted with a view to "accommodating commerce and business" rather than with reference to their own earnings.

It is by the purchase of United States obligations that reserve banks can more directly increase their earnings, as the supply of these securities under present conditions is abundant, and as the reserve banks have no direct responsibility for the government security market. But even in this class of operations the reserve banks, under ordinary conditions, can influence their own earnings only to a limited extent. As has been pointed out in another chapter,[1] the purchase of securities by the reserve banks, both in 1922 and in 1924, has had the effect of placing funds at the disposal of member banks which used these funds to reduce their borrowings at the reserve banks, so that the total volume of earning assets of the reserve banks and of their earnings was not materially affected by the purchases. So long as the total volume of reserve bank credit in use adjusts itself to the market demand for reserve bank funds, the reserve banks can influence the volume of their earning assets, and consequently of their earnings, only to an extremely limited extent. Only at a time when the member banks are practically out of debt to the reserve banks, so that funds placed in the market by the reserve banks

[1] P. 58.

through the purchase of securities cannot be returned to them in reduction of discounts, can these banks make substantial additions to their earnings by purchases in the open market.

In view of these considerations, it becomes evident that the criticism directed against the reserve banks on account of their large earnings in 1920 and 1921 is based on a misunderstanding of the Federal reserve system. The factors determining the income of reserve banks are so largely the outcome of general credit conditions, that the banks' own attitude toward earnings has been, during most of the time since the establishment of the system, a negligible factor in the situation. It will be remembered also, that net earnings above the 6 per cent dividend are turned over to the government, so that the reserve banks have but a small incentive to make efforts to increase their income, especially at a time when it exceeds their requirements for dividends and expenses. A discussion of the volume and character of the reserve banks' expenses is presented in the following pages.

Expenses of the Federal Reserve Banks.—Federal reserve bank activities increased rapidly as the volume of their operations expanded, especially after 1917, and expenses of the reserve banks assumed large proportions in the past 6 years. In round figures the total expenses have been as follows:

1914	$ 373,000
1915	1,941,000
1916	2,467,000
1917	6,549,000
1918	14,848,000
1919	24,013,000
1920	32,003,000
1921	40,777,000
1922	33,993,000
1923	37,997,000
1924 (6 months)	14,703,000

Expenses of the reserve banks were at their maximum of over $40,000,000 in 1921, and declined somewhat after that year, but in 1923 the total was still about $38,000,000. Thus, in spite of a decrease in reserve bank credit in use from about $3,000,000,000 to about $1,000,000,000 and a decline in the total volume of discount and open-market operations from $96,000,000,000 in 1920 to $29,000,000,000 in 1922 and $44,000,000,000 in 1923, expenses of the reserve banks have been only slightly reduced from the level reached at the time of the largest demand for reserve bank credit. This relative constancy of expenditures is due to the fact that a large part of the reserve banks' outlays is in departments not directly related to the loaning operations of the banks. Following is a condensed table showing the principal items of expense at the Federal Reserve Bank of New York in 1923. A more detailed statement of these expenses is shown on page 280.

Maintaining the accounts of the bank		$ 211,363
Supplying currency and coin		1,919,226
Making loans		418,017
Collecting checks, etc		2,207,061
Supplementary services		447,207
Services in connection with government loans		648,310
General or supervisory expenses		1,028,952
Executive salaries	$203,640	
Work of the Federal reserve agent	352,575	
Maintaining the general audit	260,226	
Directors' fees and traveling expenses	21,664	
Share of the expenses of the Federal Reserve Board	190,847	
Total		$6,880,136

The statement brings out the fact that the check-clearing service accounts for the largest item of expense and the supplying of currency for the next largest, while the cost of making loans is one of the minor items amounting to only about 6 per cent of the total expenses. It is because the banks' expenses are due largely to other activities than credit extension that they continue heavy in years of relatively small demand for reserve bank credit.

Cost of Services Rendered by the Reserve Banks.—Mention has already been made of the reserve banks' work in connection with check clearing and collection, and with the supplying of banks with currency and coin. In addition the reserve banks perform for their members many of the services that as city banks render to their country correspondents. The reserve banks store securities for their member banks and cash the coupons attached to these securities; they collect many non-cash items, making a small charge only in case of non-collection in order to discourage member banks from using the reserve banks as dunning agents; they make wire transfers of money between member banks in different districts; and they supply member banks with information on credit and business developments by issuing monthly reviews of economic and banking conditions. In addition to their services for the member banks the reserve banks act as fiscal agents of the government and are reimbursed only for a small part of their expenditures in this connection.

These large expenditures of the reserve banks for gratuitous services have become a matter of serious consideration, particularly since the earnings of the banks have declined materially in the past few years. The question has been raised whether the reserve banks should not curtail some of these services, and certain minor moves in this direction have been effected. No substantial economy, however, is likely to be brought about by this method so long as the banks continue to perform the most expensive services, namely, the collection of checks and the supplying of currency to member and non-member banks. The desirability of charging for some of the services now rendered gratuitously has also been considered, but here again relatively little can be accomplished, unless a charge is made for the collection of checks. The adoption of such a policy, however, is unlikely, as the check collection service is one rendered to the whole community and one that has resulted in the disappearance of numerous delays and undesirable practices, such as the indirect routing of checks, which prevailed prior to the establishment of the system's clearing and collection service, and would reappear again if this service were to be curtailed or ceased to be gratuitous. While certain economies may be effected in the system's expenditures through the curtailment of certain non-essential services and through the imposition of cost-covering charges for certain others, no large reduction in expenses is likely to be accomplished by these methods. It is through the development of more efficient methods of operation that the largest reduction in the system's costs is likely to be brought about.

Economy and Efficiency.—Considerable progress in the direction of economy and efficiency of operation has been made by the system in recent years. The reserve banks and the Reserve Board are making every effort toward performing their functions as economically as is consistent with good service. The growth of the banks' operations was very rapid, and while they have been administered as efficiently as was possible under the circumstances, there was not time thoroughly to systematize their operations and to avoid unnecessary motion and duplication of effort in every detail. The appointment by the Board of a joint committee of Board Members and operating officials on economy and efficiency and the careful scrutiny of the expenses of the different departments of the banks, with unit cost comparisons, etc., has already resulted in a material reduction in operating costs, and continued efforts along these lines are expected still further to curtail the system's expenses.

There has been a great deal of criticism of the reserve banks for extravagance, especially in the payment of salaries and in the construction of buildings. A thorough study of the subject of salary payments made by the Board and presented to the Senate showed that the banks do not pay salaries as high as member banks of similar size in the same districts.[1] The Board's report points out that the reserve banks, in order to compete with the member banks for the services of men competent to bear the heavy responsibilities of conducting the affairs of the reserve banks, must pay sufficient salaries to induce these men to remain at their posts. The reserve banks are able to retain their personnel, notwithstanding somewhat lower salaries than those paid by member banks, because positions with the reserve bank carry a certain amount of security and prestige which makes able men willing to serve for lower compensations than they could obtain elsewhere, but the banks cannot afford to adopt a level of salaries that would result in a constantly shifting and a less efficient personnel than is had by other important banking institutions. True economy does not lie in that direction.

Another phase of Federal reserve bank expenditures which has been subject to serious attack is the construction of Federal reserve bank buildings. This kind of criticism has led to the enactment of a law limiting the expenditures of a reserve bank in the construction of branch bank buildings, without consent of

[1] 67th Congress 1st Session Senate Document No. 75.

Congress, to \$250,000. In this respect, also, the rapid growth of the banks created a serious situation by making it difficult for them to secure adequate quarters, with the consequence that they suffered seriously from overcrowding. The banks, therefore, have deemed it expedient to build quarters of their own with sufficient capacity to take care of the peaks of their business, in some cases with the intention of renting unused portions of the buildings during times of lessened activity. It so happened that reserve bank building operations were at their height when business was going through a period of depression in 1920 and 1921 and the banks were, therefore, criticized for extravagance at a time of general distress. Criticism on this score has, however, largely subsided, and the efficiency of the banks' operations has increased since they have become established in more adequate quarters.

How Can the Reserve Banks Meet Their Expenses?—The Federal reserve system, even after all possible economies of operation will have been effected, will require a large annual budget for carrying on its activities. The system's earnings, on the other hand, since they depend on the extent of the demand for reserve bank credit, are likely to undergo considerable fluctuations and in some years to fall below the amount required to cover the expenses and dividends of the reserve banks. The banks can do but little to increase their income through open-market operations, as has been explained already, though at times, when member banks have liquidated practically their entire indebtedness to the reserve banks, security purchases by these banks may result in a net increase of their earning assets. In view of the position taken by the Federal Reserve Board, however, that open-market operations shall be conducted solely with a view to their effect on credit conditions,[1] it is not to be anticipated that the reserve banks will endeavor to maintain their earning assets for the sole purpose of being able to meet expenses. It is, therefore, probable that there will be years when some of the banks will show a deficit as a result of their year's operations. A means for reducing the likelihood of such an occurrence would be the development of methods of allotting earning assets to the various reserve banks in accordance with

[1] See p. 61.

their requirements; in other words, in time of need to treat the system as a unit in the matter of meeting expenses, just as it is considered as a unit in meeting the demand for credit when the limits of lending power at some of the banks are exceeded. Steps in this direction have been made by the appointment and through the activities of the inter-reserve bank committee on open-market operations.

In case, however, the earnings of the system as a whole for a given year should fall below its expenses, the system would have no choice other than to meet the deficit out of surplus.[1] It has been ruled by the Attorney-General of the United States that such a procedure is permissible under the law, and it is entirely consistent with Federal reserve policy. In serving the business community the system, in years of heavy credit demand, has made large earnings, a part of which has been set aside in a reserve fund which now amounts to $220,000,000. Upon this fund the system can legitimately draw at times when the demand for reserve bank credit is not sufficient to result in adequate earnings for the reserve banks. By pursuing this policy, the system can continue to perform its functions in years of large and of small demand for credit without departing from the principle of conducting its operations solely with a view to their effect on general credit conditions, and without reference to their effect on the earnings of the reserve banks.

[1] In 1924 six of the reserve banks failed to have sufficient earnings to meet their expenses and dividends and were given authority by the Federal Reserve Board to cover the deficiency, amounting to about $3,250,000, out of surplus.

CHAPTER XI

MEMBERSHIP IN THE FEDERAL RESERVE SYSTEM[1]

Membership in the Federal reserve system consists of all national banks, which must join the system or give up their national charters, and of such state banks and trust companies as are eligible for membership and voluntarily avail themselves of this eligibility. State banks may leave the system at any time on 6 months' notice.

Growth of Membership.—A practically continuous increase in the number of member banks has taken place since the organization of the system, so that at the present time approximately 33 per cent of all the banks, representing over 70 per cent of the total banking resources of the country, are members of the system. The annual growth of membership and its distribution between national and non-national banks are shown in the

End of year	Member banks		
	Total	National	Non-national
1914	7,582	7,574	8
1915	7,631	7,600	31
1916	7,614	7,577	37
1917	7,907	7,657	250
1918	8,692	7,762	930
1919	9,066	7,885	1,181
1920	9,606	8,125	1,481
1921	9,779	8,165	1,614
1922	9,859	8,220	1,639
1923	9,774	8,179	1,595
1924 (June)	9,650	8,080	1,570

[1] Based largely on "Review of the Month," published in the *Federal Reserve Bulletin* for November, 1923.

table on preceding page. On June 30, 1924, of the total of 9,650 members, 8,080 were national banks and 1,570 state banks and trust companies. The more rapid growth in non-national membership occurred during the years 1917 and 1918, state bank and trust company members increasing from 37 at the end of 1916 to 930 at the end of 1918 and to 1,570 at the present time. During the war, joining the Federal reserve system was considered a patriotic act, and the President of the United States issued a letter urging state banks to become members.

Membership in the Federal reserve system was largest in 1922, and between the end of that year and the middle of 1924 there was a decrease in membership of 209. This decrease was the net result of 519 banks dropping out of the system in various ways and of 310 other banks becoming members. In order to show a clearer picture of the character of changes in membership the following table gives an analysis of these changes for the 18-month period after the peak in membership was reached.

CHANGES IN MEMBERSHIP IN THE FEDERAL RESERVE SYSTEM
(December 31, 1922–June 30, 1924)

Losses	Number	Additions	Number
Total losses to membership...	519	Total additions to membership..................	310
Voluntary liquidation......	50	Primary organization of national banks.........	136
Suspension of operation....	34	State institutions joining, as such................	97
Insolvency—national banks,	150	Conversion of non-member state institutions into national banks....	64
non-national banks......	21	Reopened after suspension	12
Mergers between member banks..................	138	Other....................	1
Absorption by non-member banks..................	82		
Withdrawal..............	44		

Of the 519 losses of members to the system during the period, 171 were caused by insolvencies, as 1923 and 1924 were years during which an unusually large number of banks failed as the result of unfavorable conditions in the agricultural districts. There were also 138 mergers between member banks which resulted in a decrease in the number of members without changing the banking power of the system. During the entire period only 44 state banks voluntarily withdrew from membership and this loss was considerably more than made up by the addition of 97 other state banks and the conversion of 64 state banks into national banks which automatically made them members of the system.

Distribution of Membership.—A survey of the distribution of membership by Federal reserve districts shows that the largest number of member banks is in the four middle-western districts, which have nearly half the member banks, while the larger proportion of member bank resources, as is to be expected, is in the eastern districts, nearly a third of the total resources being in the New York district alone. The table following shows the number and total resources of member banks, separating national and non-national, by Federal reserve districts. An important fact brought out by the figures is that non-national banks, which constitute less than one-sixth of the number of member banks, represent more than one-third of the resources. This reflects the much larger average size of state bank and trust company members than of national banks. In fact, the total resources of the more than 8,000 national banks are about

MEMBER BANKS, JUNE 30, 1924

Federal reserve bank	Number			Resources (millions of dollars)		
	All banks	National banks	Non-national banks	All banks	National banks	Non-national banks
Boston	421	385	36	$ 2,570	$ 1,770	$ 800
New York	840	696	144	11,227	6,008	5,220
Philadelphia	730	660	70	2,524	1,934	590
Cleveland	873	753	120	3,499	2,050	1,449
Richmond	624	559	65	1,517	1,287	230
Atlanta	518	385	133	1,245	830	414
Chicago	1,422	1,058	364	5,210	2,993	2,217
St. Louis	627	497	130	1,471	913	558
Minneapolis	895	794	101	1,089	994	95
Kansas City	1,087	1,054	33	1,464	1,327	138
Dallas	837	651	186	1,000	898	102
San Francisco	776	588	188	2,960	1,552	1,408
Total	9,650	8,080	1,570	$35,777	$22,556	$13,221

$22,000,000,000, or an average of about $2,500,000, while the total for the 1,600 state bank and trust company members is about $13,000,000,000, or an average of about $7,500,000.

Banking Power Outside the Federal Reserve System.—For the country as a whole, two-thirds of all the banks, both eligible and ineligible, are still outside the system, but the geographic distribution of non-member banks is far from uniform. The largest number of such banks is concentrated in the agricultural districts, while in the eastern financial and industrial districts the proportion of non-membership is relatively low. In the New York district it is only 30 per cent, while in the St. Louis district it is 81 per cent, and in nearly all of the middle-western and southern districts it is more than 70 per cent. Following are the percentages of non-member banks by districts:

	Per Cent		Per Cent
Boston	35	Chicago	75
New York	30	St. Louis	81
Philadelphia	41	Minneapolis	73
Cleveland	55	Kansas City	73
Richmond	71	Dallas	55
Atlanta	74	San Francisco	54

When measured in terms of total banking resources, the proportion of banking power outside the system is much less than is indicated by these percentages based on the number of non-member banks. These banks are on the average much smaller than member banks, so that non-member banks, which constitute about two-thirds of the total number of banks, represent less than one-third of the total banking resources. In resources, however, as in the case of numbers, the proportions outside the system are, in general, largest in the agricultural districts, and particularly in the Middle Western States. Five States—North and South Dakota, Kansas, Nebraska, and Iowa—in each of which more than half of the banking resources are outside the system, have 7 per cent of the total population and more than 20 per cent of all the banks in the country. This is the region with a large number of small banks doing a business largely local in character and serving chiefly rural communities. In some of the southern states which have a large percentage of banks outside the system the proportion of resources held by non-member banks is relatively low, as, for example, in Louisiana, where non-members are 82 per cent of all banks but hold only 33 per cent of the total banking resources. The percentage of total bank resources held by non-member banks on June 30, 1923, is shown by states in the following table, and is graphically presented in the map (Fig. 14) on page 129.

PERCENTAGE OF TOTAL BANK RESOURCES HELD BY NON-MEMBER BANKS, JUNE 30, 1923

	Per cent		Per cent
Maine	42.8	Indiana	52.7
New Hampshire	36.1	Illinois	30.6
Vermont	55.3	Michigan	22.1
Massachusetts	12.0	Wisconsin	45.1
Rhode Island	8.8	Minnesota	39.6
Connecticut	41.2	Iowa	54.9
		Missouri	34.8
New York	10.8		
New Jersey	28.3	North Dakota	55.8
Pennsylvania	29.8	South Dakota	59.9
Delaware	40.5	Nebraska	51.5
Maryland	45.9	Kansas	55.8
District of Columbia	46.8	Montana	29.9
		Wyoming	29.4
Virginia	28.2	Colorado	22.4
West Virginia	45.6	New Mexico	30.2
North Carolina	45.9	Oklahoma	18.6
South Carolina	46.4		
Georgia	31.5	Washington	22.9
Florida	40.6	Oregon	22.2
Alabama	25.8	California	28.5
Mississippi	68.4	Idaho	22.7
Louisiana	33.0	Utah	32.8
Texas	18.9	Nevada	57.5
Arkansas	40.2	Arizona	52.7
Kentucky	34.1		
Tennessee	39.1	Total United States	28.0
Ohio	26.4		

BANKING RESOURCES OUTSIDE OF FEDERAL RESERVE SYSTEM

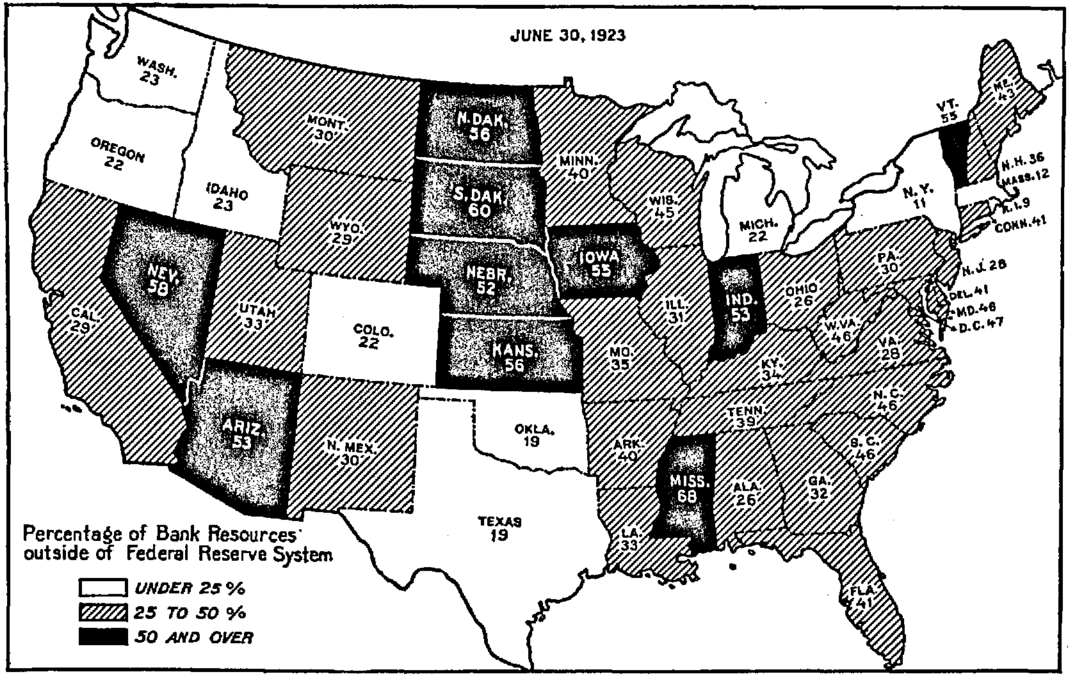


FIG. 14.—On June 30, 1923, the proportion of banking resources outside the Federal reserve system varied from 9 per cent in Rhode Island and 11 per cent in New York to 68 per cent in Mississippi.

Relation of Non-member Banks to the Federal Reserve System.—The relation of the smaller non-member banks in the agricultural districts to the financial centers is through their correspondents, with whom they carry balances and from whom they secure accommodation, and most of these city correspondents are members of the system. In fact, member banks hold over 90 per cent of the total bankers' balances of all banks. When the resources of these non-member banks are not sufficient to meet the needs of their customers, they turn for assistance to their city correspondents who are members of the system, and therefore the demand arising from non-member banks indirectly reaches the Federal reserve banks. This procedure, however, does not give the Federal reserve banks an immediate contact with the sources of the demand for credit which they help to supply, and provides only an indirect relationship between the non-member bank and the Federal reserve system. Such a relationship can hardly be regarded as a substitute for membership. Non-member banks have less assurance of accommodation during periods of unusual demand for credit than they would have if they joined the Federal reserve system, whose function it is to furnish the additional credit required to meet the seasonal and emergency needs of its members.

In commenting upon the indirect relation between non-member banks and the Federal reserve banks, the Joint Committee of Agricultural Inquiry in its report to Congress stated that:

> . . . banks outside the Federal reserve system are without direct access to the general reservoir of credit, consequently must rely for the expansion necessary in times of stress or business expansion upon the accommodation which it is possible to secure from their correspondents. These banks contribute little to the general reserves of the country, as those reserves are now represented principally by deposits in the Federal reserve banks. Consequently, if they are permitted to borrow either directly or indirectly from the Federal reserve banks, in times of stress or business expansion they must do so at the expense of the reserves contributed by the banks which are members of the Federal reserve system.

The attitude of Congress toward the desirability of direct relationship between the rural banks and the Federal reserve banks was apparently indicated by the provision in the agricultural credits act that the Federal reserve banks shall not discount for Federal intermediate credit banks paper bearing the indorsement of such banks as are eligible but are not members of the Federal reserve system. In June, 1923, the Federal Reserve Board withdrew the general authority granted to member banks during the war and post-war emergency period to discount with Federal reserve banks paper acquired from non-members, so that now this practice is permitted only upon specific approval by the Federal Reserve Board.

Eligible Non-member Banks.—Under the present law most of the banks outside the system are eligible for membership. While in passing upon applications for membership the Federal Reserve Board gives consideration to the financial condition of the applying bank, the general character of its management, and whether or not the corporate powers exercised are consistent with the purposes of the Federal Reserve Act, the most definite provision with regard to eligibility is in connection with capital requirements. Until recently the capital required for admission was the same for state banks and trust companies as was required for the organization of national banks, but the agricultural credits act of 1923 made eligible for membership state banks and trust companies whose capital was 60 per cent of that required for national banks, with the provision that the difference in capital requirements shall be made up out of net earnings. At the time of the amendment, of the 19,200 non-member banks (exclusive of mutual savings and private banks) about half were already eligible to membership, and as a result of the reduction in capital requirements about 4,200 additional banks became eligible, while about 5,300 banks remained ineligible. The eligible banks outside the system are largely concentrated in the agricultural states of the middle West and South. It is in these sections that the largest additions to eligible banks were made by the amendment, and where also there remains the largest number of ineligible banks. So far only 7 applications for membership have been received from banks made eligible by the amendment, and it is clear that the provisions regarding capital requirements have not been the decisive influence operating against the increase of membership.

Reserve Requirements, Member and Non-member.—An important factor affecting the status of member and non-member banks and entering into the consideration of the advantages and disadvantages of joining the system is the difference in reserve requirements under Federal and state laws. The balances carried with the reserve banks are the entire legally required reserves of member banks, corresponding to the vault reserve and the balances with reserve city banks formerly required by the national bank act. In comparing the required balances which bear no interest under the present law with cash in vault, which constituted the non-interest-bearing portion of the reserves under the old law, it may be pointed out that cash in vault carried by member banks has been much reduced. In fact, the total required balances with the Federal reserve banks, plus the till money now carried by member banks, is considerably less than the cash they formerly carried in vault. While combined demand and time deposits of national banks increased by $8,500,000,000 between 1913 and 1923, the amount of cash in vault declined by $650,000,000. This reduction in cash holdings is not merely a result of the changes in the law, but also of the fact that under the Federal reserve system currency to meet the demands of depositors is at all times more readily and more promptly available.

In deciding upon the advantages and disadvantages of joining the reserve system from the standpoint of reserve requirements the non-member banks compare their existing status under state laws with the requirements under the Federal Reserve Act. The lower reserve requirements prescribed in the Federal Reserve Act were predicated upon membership in the system, but subsequent to the passage of this act many of the states also enacted legislation reducing reserve requirements, so that while at the present time there is no uniformity in the state requirements, in general the reserves required of non-member banks are lower than they were prior to the establishment of the system. Thus the state banks have benefited by the establishment of the reserve system without joining it and the inducement for joining has thereby become less apparent. A further phase of the legislative situation with regard to reserves is that 30 states have authorized state member banks to be governed entirely by the requirements of the Federal Reserve Act, while in 18 states, in the absence of such legislation, the state banks which become members must conform to both the Federal and the state law.

Interest on Reserve Balances.—As an explanation why a larger number of the eligible banks have not joined the system, the point is frequently raised that the Federal reserve banks do not pay interest upon reserve balances carried with them by member banks. In any consideration of the payment of interest on these reserve balances it must be borne in mind that the Federal reserve banks are the custodians of the ultimate banking reserves of the country. In their capacity as reserve banks they should be free to shape their policies with a view to the proper administration of credit and their management should not be influenced by the necessity of making profits sufficient to pay interest on reserve balances. Furthermore, since these balances may be maintained by borrowing from the reserve banks, the payment of interest upon them would tend to interfere with the effectiveness of discount policy. The experience with reserve banking in other countries has shown the wisdom of managing the central banking reserve and of determining discount policy without the necessity of considering interest payments. It is a pertinent fact that central banks of issue do not pay interest on deposits in any country.

The payment of interest at the rate of 2 per cent on reserve balances would amount to between $35,000,000 and $40,000,000 a year, and in ordinary times the Federal reserve banks have not had sufficient earnings to make such payments. In order to meet payments of such an amount the reserve banks would have to make large additional investments in competition with the member banks which would receive the interest. This would more than offset the return to the member banks and would also tend to bring pressure upon the reserve banks to pursue an open-market policy with a view to making earnings rather than to influencing the general credit situation. The Federal Reserve Board has consequently placed itself on record as opposed to the payment of interest on member bank balances and has been supported in this position by the Federal Advisory Council.

Among other plans for increased participation of member banks in the earnings of Federal reserve banks is one that would provide for payment, after the 6 per cent dividend to members, of an equal amount to the government, and then of an additional 3 per cent to the members. Another plan would, after meeting the 6 per cent dividend, pay to the government a 2 per cent tax on Federal reserve note circulation not covered by gold, and would distribute the balance of earnings among member banks in proportion to their balances. Those advocating this proposal base their argument on the principle that the reserve banks, instead of paying to the government as a franchise tax all their net earnings above 6 per cent on their capital, should make their payments to the government in proportion to the use they make of the privilege of fiduciary note issue. In the writer's opinion, no plan of increased participation by member banks in the earnings of the reserve banks is desirable because any such plan would tend to increase the pressure on the reserve banks to make earnings without regard to credit policy. The farther the reserve banks become removed from the commercial, as against the public, point of view, the more likely will they be to be guided in their policies solely by the credit requirements of the country, regardless of the effect of their policies upon their own earnings.

The Agricultural Credits Act of 1923 contained a clause creating a congressional committee for the purpose of investigating the reasons why eligible banks remain outside of the Federal reserve system and of recommending changes in the law or in the regulations of the Federal Reserve Board which would induce additional banks to join the system. The committee held hearings in Washington and outside and listened to testimony by members of the Federal Reserve Board, and of the Federal Advisory Council, by the Director of the War Finance Corporation, by members of the Farm Loan Board, and by representatives of banking and farm organizations. The committee's report is not yet available. A questionnaire recently sent out by a committee of the American Bankers' Association to all the state banks brought out the fact that the principal objections to joining the system on the part of these banks are the non-payment of interest on reserve balances, insufficient participation of members in the earnings of the reserve banks, resentment of the par collection system, and the opinion that the reserve banks are of service only to city institutions and not to country banks. The questionnaire contained also the following inquiry: "If your not being a member should contribute to the destruction of the system, would you join?" Of those replying to this question 80 per cent answered in the affirmative. These replies indicate that, though many state banks feel that they can afford to remain outside of the Federal reserve system so long as it is in operation without their participation, an overwhelming majority of the banks realize that they benefit by the existence of the system and would do whatever was in their power to prevent its termination.[1]

Effect of Increased Membership on Federal Reserve System.—While in certain respects it would be desirable to increase the membership in the Federal reserve system, it would be distinctly inadvisable to give consideration to any plan for this purpose that is at variance with the principles and policies which experience has demonstrated are sound bases for reserve banking. Larger membership in the reserve system would undoubtedly increase its usefulness by enabling it to reach more directly a greater number of banks particularly in the rural communities. Since the addition to membership of the smaller rural banks would add little to the reserves of the system, while it would increase its responsibilities, the desirability of their admission rests not upon their contribution to the strength of the system but upon the fact that through their admission the benefits of the reserve system would be more widely distributed. The strength and effectiveness of the Federal reserve banks are not dependent upon increased membership, and the desirability of further growth arises from the advantages of membership to the banks that join and to the communities which they serve.

[1] See *Journal of the American Bankers' Association*, August, 1924, p. 79.

CHAPTER XII

ORGANIZATION OF THE FEDERAL RESERVE BOARD

In the nature of its functions the Federal Reserve Board represents a compromise between the views of those who believed in establishing a central bank and of those who favored autonomous regional banks having control over the details of their own operations and of the relationship between themselves and their member banks. The Federal Reserve Board has no authority to interfere in these matters of internal management, but has general supervision over the Federal reserve banks, in addition to having three representatives on the Board of Directors of each bank. Broadly speaking, the principal functions of the Board are, in addition to general supervision of the operations of the twelve regional banks, the definition of the eligibility of paper for discount or purchase by the reserve banks, the approval or determination of discount rates, the coordination of open-market operations, and the general control over dealings between the twelve reserve banks.

Composition of the Board.—The Board consists of eight members, two of whom are members ex-officio, namely, the Secretary of the Treasury, who acts as chairman of the board, and the Comptroller of the Currency. These two officials constitute the link between the Treasury and the Federal Reserve Board. It is fitting that the Secretary of the Treasury be represented on the Board, as the reserve banks are fiscal agents of the government and as credit policies, particularly discount rates, are an important influence in the money market where the Treasury is a large borrower. The Secretary of the Treasury, though he acts as chairman of the Board, has no privileges not possessed by other members, and has only one vote. The Board is not a bureau of the Treasury. The Act provides, to be sure, that the Secretary of the Treasury may assign quarters to the Board in the Treasury Building, and the members of the Board and its Secretary with his staff are located in the Treasury

Building, but several other divisions of the Board are located elsewhere, and the connection with the Treasury is not organic but merely one of convenience.

The other representative of the Treasury on the Board is the Comptroller of the Currency, who has charge of all the national banks, which apply to him for charters, and over whose operations he exercises direct supervision. The Comptroller also issues calls on certain dates on which all national banks report to him upon their condition in accordance with prescribed schedules of information. The state bank and trust company members of the system report directly to the Board and are in certain respects under its supervision. It will be remembered that all national banks are by law obliged to be members of the Federal reserve system, so that the Comptroller supervises the operations of the great majority of the member banks of the Federal reserve system, for out of the total membership of 9,650 banks, 8,080 are national banks and but 1,570 state banks and trust companies. It may be said, therefore, that the Comptroller of the Currency is a link between the Federal Reserve Board and the main body of the member banks of the system.

The other six members of the Board are nominated by the President and confirmed by the Senate. They hold office for 10 years and receive a compensation of $12,000 per annum, equal to that of cabinet officers. The length of the term of office emphasizes the strictly non-political character of the positions. The section of the law regarding membership of the Board was amended on June 3, 1922, and those portions of it relating to the six appointive members now read as follows:

> In selecting the six appointive members of the Federal Reserve Board, not more than one of whom shall be selected from any one Federal reserve district, the President shall have due regard to a fair representation of the financial, agricultural, industrial, and commercial interests, and geographic divisions of the country. The six members of the Federal Reserve Board appointed by the President and confirmed as aforesaid shall devote their entire time to the business of the Federal Reserve Board. They are ineligible during the time they are in office and for two years thereafter to hold any office, position, or employment in any member bank, except that this restriction shall not apply to a member who has served the full time for which he was appointed.

The Federal Reserve Board is thus intended to consist, in addition to the two ex-officio members, of six men of the highest rank in the official hierarchy and with long terms of office. The salary, to be sure, is relatively small considering the caliber of men it is intended to attract, but that is characteristic of all high offices in Washington and does not generally operate as a hindrance in the selection of members, since the prestige and responsibility of the positions is such that able men are willing to accept them regardless of the amount of compensation. It was the intention of the Federal Reserve Act to have the membership of the Federal Reserve Board change slowly and gradually. The first five appointive members were designated by the President to serve 2, 4, 6, 8, and 10 years, respectively, so that the term of one member would terminate every 2 years. In addition to these regular changes, however, there has been a considerable number of changes in membership owing to death and resignations so that the average term of office of Board members during the first decade of the Board's existence has not been so long as had been contemplated by the Act. A list of all the members of the Board with their terms of office from 1914 to date is shown on page 283.

Leaving out of account the ex-officio members, whose terms of office are not prescribed by the Federal Reserve Act, the membership of the Federal Reserve Board will normally change very slowly, barring death and resignations, and furthermore there is nothing in the law to prevent the reappointment of members when their terms expire. As a matter of fact, in two instances Board members have been reappointed at the termination of their original terms of office, and one member, under two appointments, will have an official life extending over the entire twenty years of the original charter of the Federal reserve system. The law and precedent, therefore, combine so far as membership on the Federal Reserve Board is concerned, to preserve the continuity of reserve credit policy.

Functions of Governor and Other Members.—The active head of the Federal Reserve Board is the Governor, who is designated by the President from among the appointive members for a period of one year subject to reappointment. As a matter of fact, this position has been occupied in the history of the system by only three persons. Charles S. Hamlin, who was the first

Governor and continued in office until 1916, W. P. G. Harding, who was then designated and remained as Governor until his term on the Board expired in August, 1922, and D. R. Crissinger, the present incumbent, who took office on May 1, 1923. Edmund Platt, the Vice-governor, acted as Governor between the time of Mr. Harding's retirement and Mr. Crissinger's inauguration. The Governor is the executive head of the Federal Reserve Board. He presides over the Board meetings when the Secretary of the Treasury is not in attendance; determines the general plan of discussion; appoints committees and passes upon administrative matters. In his work he is assisted by the Secretary who has a considerable staff to carry out the administrative details of the work. The other appointive members are formed into various standing and special committees of the Board, such as the committee on economy and efficiency, the committee on research and statistics, the committee on discount and open-market policy, and in addition they generally act as links between the Board and the districts from which they come, since the business interests of a district from which a member comes ordinarily turn to him for advice and assistance.

As a body the Board meets not less than 3 times a week and sometimes as often as twice a day, the meetings lasting from 1 to 3 or 4 hours. Every important ruling of the Board and every change in discount rates, and countless other matters, are considered and passed upon by the Board as a whole. The Board passes upon the appointment of officers of the reserve banks and their salaries, upon the compensation of national bank examiners, and upon a considerable number of applications of member banks for authority to accept bills up to 100 per cent of their capital and to act in a fiduciary capacity. In the case of non-national members the Board passes on applications for permission to open branches or additional offices.

Federal Reserve Board's Relation to Problem of Branch Banking.—In recent years the problem of branch banking has become of considerable importance to the banking community of the United States. The number of banks having branches has rapidly increased and this has raised the question whether banking in this country is to continue, as in the past, to be conducted largely by numerous independent banking units, or is gradually to be converted into a system of branch banking with a relatively small number of banks having a vast system of branches scattered over the continent, as is the case in most foreign countries. The following table shows the extent of branch banking in the United States and the states in which it has reached the greatest development:

NUMBER OF BANKS WITH BRANCHES AND NUMBER OF BRANCHES ON JUNE 30, 1924

State	Number of banks having branches	Number of branches			
		Total	National banks	State banks	
				Member	Non-member
Total United States	681	2,233	248	1,137	848
California	99	538	29	300	209
New York	74	359	71	229	59
Michigan	63	332	23	267	42
Pennsylvania	59	82	15	19	48
Ohio	51	203	4	138	61
Massachusetts	44	74	31	24	19
Other states	291	645	75	160	410

In the summer of 1924 there were thus 681 banks in the United States having branches, and the number of branches was 2,233, or on the average about 3 branches for each parent bank. The importance of these branch banking systems is greater than their number would indicate since about 30 per cent of the total banking resources of the country was held by banks having branches. The table shows that only 248 branches belonged to national banks, while state bank members had 1,137 branches and non-member banks had 848. The branches of national banks were practically all in the same city with the head office and constituted merely additional offices or "teller windows," as they have been called, while of the branches of state banks about one-third were outside of the home city and were thus branch banks in a wider sense of the word. California is the state where branch banking has had the greatest development, but there are many branch banks also in New York, Michigan, Massachusetts, Ohio, and Pennsylvania and in many sections of the South.

Among American bankers there exists a sharp difference of opinion on the desirability of branch banking. The connection of the Federal Reserve Board with the problem arises from the fact that, while national banks are prohibited by law from opening branches except (under certain restrictions) in the same city where the head office is located, there is nothing in the Federal Reserve Act to prevent member banks with state charters from engaging in branch banking. The law provides, in fact, that state banks upon joining the Federal reserve system retain all the powers and privileges granted them by their states, unless these powers are in conflict with the terms of the Federal Reserve Act. The question, whether a state bank member is to be permitted to open a branch is, therefore, left in each case to the determination of the Federal Reserve Board. In view of the fact that the two classes of members of the Federal reserve system, national banks and state banks, have a different status in regard to branch banking, the problem of formulating a policy in this matter has been particularly difficult. In dealing with it the Federal Reserve Board has issued regulations by which state member banks are governed in the matter of opening branches. These regulations are reprinted on page 200. The Board has also undertaken a comprehensive study of the extent and legal status of branch banking in the United States and of the experience with branch and unit banking in this country and abroad.[1]

Other Functions of the Federal Reserve Board.—There are many other matters which the law has left to the discretion of the Federal Reserve Board, and upon which it must act currently. An important function of the Board is the supervision of foreign branches of non-national member banks and of corporations organized to finance foreign trade, known as Edge law corporations from the name of the author of the amendment to the reserve act authorizing their organization. The Board recently

[1] A discussion of the branch banking problem, a summary of the Board's policy in regard to branch banking and complete statistics of branch banking appeared in the Federal Reserve Bulletin for December, 1924, p. 925.

passed on the question of granting authority to the reserve banks of Boston and Atlanta to establish branches in Cuba, and worked out regulations for the operation of these branches. The Board is also entrusted with the administration of the Clayton Act which limits interlocking directorates among member banks. In addition the Board has deemed it an important function to study the problems arising out of the operation of the system and to recommend to Congress such amendments to the Federal Reserve Act as appear from time to time to be desirable as the result of experience. Most of the amendments enacted since the original passage of the Act have, in fact, been adopted upon the recommendation of the Federal Reserve Board.

The Board's Secretary attends the meetings of the Board, keeps the minutes, acts as Secretary of the executive committee and of other important committees, and prepares most of the Board's correspondence on matters of policy. The Secretary also has charge of the administrative work of the Board in its relation both with the reserve banks and with its staff.

The Gold Settlement Fund.—Under the Secretary comes the administration of the gold settlement fund and of the Federal reserve agents' gold fund, the operations of which require some description. The gold settlement fund is the keystone of the arch of check collection, as through this fund are settled the daily balances between the reserve banks arising from the clearing and collection of checks. When a member bank receives from a customer a batch of checks to be credited to his account, the member bank forwards the checks to its reserve bank which credits it with the face value of the checks to become available as deposits after the expiration of a sufficient time to collect the checks, in accordance with a definite time schedule. Immediate credit is given for checks on banks in the Federal reserve bank city, while for checks on out-of-town banks the length of time before the amount becomes available varies with the distance that the checks have to travel. For checks in the same city the reserve banks act in the same way as do other clearing houses, while checks on out-of-town banks in the same district are sorted and sent for collection to the cities where the drawee banks are located, the settlement between the member banks being made on the books of the reserve bank. Checks on banks in another reserve district are mailed to the Federal reserve bank of that district for collection. Each day every Federal reserve bank and participating branch bank wires to the Federal Reserve Board the amount it owes each other Federal reserve bank or branch on account of checks received from such banks for collection, or for wire transfers sold. The net debits or credits are calculated in Washington and debited or credited to the bank's account in the gold settlement fund and the reserve bank is informed by wire of the net result. It is mainly for this purpose that the reserve banks keep large balances with the Reserve Board in the gold settlement fund, the amount on Aug. 27, 1924 being $608,000,000. The reserve banks have a leased system of telegraph wires and the settlements are effected without delay, the Board notifying each reserve bank every day what change has been made in the amount of gold held to its credit. The reserve banks in this connection also perform an additional service for their member banks by permitting them to transfer money to other member banks and through them to individuals in other cities by wire without charge, the amount of the draft being charged to the member's reserve account.

Through the gold settlement fund also are settled the accounts of the reserve banks in connection with each other's Federal reserve notes. If a traveler from Kansas City spends notes of his home reserve bank during a stay in New York, these notes find their way into the Federal Reserve Bank of New York, which is not permitted by law to pay them out over the counter. If the notes are in usable condition they are returned to the issuing bank, if not, they are forwarded to the Treasury for redemption and destruction. In either case the Federal Reserve Bank of New York receives a credit against the Federal Reserve Bank of Kansas City in the gold settlement fund. Thus Federal reserve notes of other banks are handled by the reserve banks in much the same way as checks and the balances are daily settled through the gold settlement fund.

Another agency participating in the operations of the gold settlement fund is the Treasury, which transfers its funds from one reserve bank to another through the fund. These transfers by the Treasury sometimes involve large amounts and have an important influence on the gold holdings of the several reserve banks. The volume of operations through the gold settlement fund from 1920 to 1923 is shown below:

VOLUME OF TRANSACTIONS THROUGH GOLD SETTLEMENT FUND: 1920–1923

1920	$85,074,220,000
1921	64,934,801,000
1922	75,335,987,000
1923	89,614,733,000

The Federal Reserve Agents' Gold Fund.—Operations through the Federal reserve agents' gold fund cover transactions between a reserve agent and the reserve bank of the same district. When a reserve bank returns to the agent Federal reserve notes that are unfit for use, the agent credits the bank with the face value of the notes. On the other hand, when the agent issues notes to a reserve bank and the bank wishes to use gold as collateral it is likely to do so by transferring gold from its holdings in the gold settlement fund to the credit of the agent in the agents' gold fund. It is by charges against this fund, also, that the agent keeps his redemption fund with the United States Treasurer at the customary 5 per cent of the volume of gold-covered Federal reserve notes outstanding. The volume of operations through the agents' gold fund is shown below:

VOLUME OF TRANSACTIONS THROUGH AGENTS' GOLD FUND: 1920–1923

1920	$1,559,285,000
1921	2,176,872,000
1922	1,533,502,000
1923	1,320,704,000

The Counsel and the Chief Examiner.—As its legal adviser the Board has a general counsel, with several assistants, who prepare opinions upon the legal phases of the work under the Board's consideration. In view of the fact that a great deal of the Board's work is of a legal character, because the Board must interpret the Federal Reserve Act and apply its provisions to actual conditions as they arise, the functions of the Board's counsel are of great importance. The opinions of counsel must be approved by the Board's law committee and by the entire Board, but the preparation of opinions and decisions devolves upon the counsel's office.

Another division of the Board has charge of bank examinations. The head of this division is the chief examiner who has a number of assistants who examine the Federal reserve banks and branches. This work of examination is an essential part of a supervisory machinery, and though it is not much in the public eye, it is an important part of the Board's organization.

Division of Bank Operations.—In addition to these administrative divisions the Board has a Division of Bank Operations, which draws up the forms upon which the Federal reserve banks make the weekly reports to the Federal Reserve Board required by law, as well as daily and other regular and occasional reports requested by the Board. State member banks make full condition reports to this division on call dates of which there are generally four every year. In addition to these function the division obtains a large amount of information from member banks in order to keep the Board informed of current banking developments. About 800 member banks in selected cities report to the division weekly through the Federal reserve banks upon their principal resources and liabilities. In addition a large number of banks report, also weekly, the total volume of debits to individual accounts, which indicate the amount of payments by check or otherwise charged by these banks against individual deposits. The division also has general supervision over the records of earnings and expenses and the accounting systems of the reserve banks; it makes recommendations to the Board upon requests for depreciation allowances, surplus and reserve funds, and other matters of bank operation. It is in this division also that the recently inaugurated work of the committee on economy and efficiency is centered. This committee keeps records of the volume and cost of work done by the different departments of the twelve reserve banks in aggregates and per unit of product. Every transaction of a reserve bank in discounting notes or in purchasing acceptances and government securities is reported to this division on sheets mailed daily by the banks, and these items are tabulated to ascertain in detail the volume of each class of operation, as well as the average discount rate charged and the average maturity of paper discounted or purchased. Through these channels the division keeps in close touch with the operations of the reserve banks, and the Federal Reserve Board depends on this division for information about unusual developments requiring attention. The intimate acquaintanceship of this division with the details of the operation of each reserve bank and branch makes it possible for the Board to consider problems that arise in any district with a background of detailed knowledge of the conditions prevailing at the Federal reserve bank of that district.

CHAPTER XIII

RULINGS AND REGULATIONS OF THE FEDERAL RESERVE BOARD

Activities of the Federal Reserve Board in connection with the determination of discount rates and the formulation of open-market policies have been described in earlier chapters dealing with the operations of the Federal reserve banks. In the present chapter there is presented a brief discussion of the work of the Federal Reserve Board in making rulings and issuing regulations for the guidance of the Federal reserve banks.

Eligibility and Acceptability of Paper.—In accordance with provisions of the Federal Reserve Act, the Federal Reserve Board shall have the right "to determine or define the character of the paper thus eligible for discount within the meaning of this Act." In discussing this subject it is important to keep in mind clearly the distinction between the eligibility of paper and its acceptability, and between the definition of the character of paper eligible for discount and the decision as to whether a given piece of paper qualifies under the definition. The Federal Reserve Board's function is confined to the definition of eligibility in general terms, while the question of acceptability and the application to individual offerings for discount or purchase of the principles laid down by the Board is left to the reserve banks. In order to be eligible for discount the paper must conform to the conditions laid down in the Act as interpreted by the Board, while in order to be acceptable the paper must be such as to convince the loan committee of a reserve bank that it is a good risk either on the strength of the names attached to it or of the security back of it. Paper that is entirely eligible under the law may nevertheless be unacceptable because the loan committee may know that the parties who borrowed the money are not financially dependable, but paper ineligible under the law, though it may be perfectly good and would be acceptable to the loan committee, cannot be lawfully acquired by a reserve bank. The Federal Reserve Board does not come in contact with the borrowing member banks and does not pass upon the eligibility of individual pieces of paper offered to the reserve banks for discount or purchase.

Loans for Productive Purposes.—Section 13 of the Federal Act provides that

> . . . upon the endorsement of any of its member banks . . . any Federal reserve bank may discount notes, drafts, and bills of exchange arising out of actual commercial transactions; that is, notes, drafts, and bills of exchange issued or drawn for agricultural, industrial, or commercial purposes, or the proceeds of which have been used, or are to be used for such purposes.

This defines in general the principle upon which rests the eligibility of paper for discount. In accordance with the provision of the law just cited, in order to be eligible the paper must arise out of a current business transaction directly related to the production or distribution of commodities. The law specifically prohibits loans, the proceeds of which are to be used for investment purposes, or for the purpose of trading in or carrying stocks or bonds or investment securities. The principle upon which the Federal reserve banks must operate is thus to supply only the short-term credit needs and not the capital needs of industry. An exception to this rule is made in favor of paper created for the purpose of carrying or trading in government securities. This exception was in the original law, but even if it had not been, an amendment to that effect would have had to be adopted during the war, because it was necessary to carry out the war financing program of the government. It is this exception that for a long time diverted the Federal reserve banks from their function as commercial central banks to that of institutions helping to finance the government, and it was only after the war was over that the banks gradually began to devote most of their efforts to supplying credit to industry, commerce and agriculture.

Another class of paper that the banks are not permitted to discount, though this restriction is implied in the law rather than stated directly, is paper arising out of speculative loans. The Federal reserve banks are not permitted to engage in speculation or to encourage speculative activity by discounting notes of speculators. It should be borne in mind, however, that there is an element of speculation in nearly all business activity, and that consequently much of the eligible paper discounted by the reserve banks contains an element of speculative risk. It is against loans made for the purpose of gambling in commodities or securities rather than against loans involving inevitable business risks that the Federal reserve system raises a barrier.

Still another general class of paper that is excluded from discount by the reserve banks is paper the proceeds of which are to be used for lending to other borrowers. That is, if a person borrows money from a member bank in order to lend it to other people, then the member bank is not permitted to rediscount this paper with a reserve bank. This is for the purpose of keeping the paper in the hands of the reserve banks in direct relation to the production and distribution of goods. Money borrowed for the purpose of lending may be ultimately used in a productive way, but the process is indirect and the reserve banks are not permitted to participate in the transaction. There are, however, two exceptions made to this general rule: first, in the case of factors who borrow money from the banks for the purpose of lending it to producers of agricultural staples. Under the original Act the Board ruled that such paper was not eligible for discount, the technical term applied to it being "finance paper." But the Agricultural Credits Act of 1923 specifically authorized the discount of such paper by the reserve banks on the ground that such authority would be of great assistance to agriculture. Another exception to the rule, also in the interests of agriculture, is made for the benefit of cooperative marketing associations. Paper of such associations, the proceeds of which are to be used to lend to the members of the association for their productive agricultural operations, is made eligible for discount by the reserve banks. This provision is also part of the Agricultural Credits Act of 1923.

The Board's Regulations.—The Federal Reserve Board has from time to time issued regulations defining the character of eligible paper and explaining the application of the Act. The latest set of regulations, series of 1924, is reprinted in Appendix B. Much of the work of the Board has consisted in applying the principles of the Act to the great variety of cases that arise in actual practice. The Board has held, for instance, that the purchase or sale of foods is a commercial transaction from the point of view of the seller, and the note of a buyer given to the seller in payment for articles purchased is a note which has been issued for a commercial purpose, regardless of the use to which the funds thus obtained are put. A note for the purchase of articles intended for resale is also a note for a commercial purpose, even though the article be one that represents a permanent investment for the ultimate purchaser. When, however, an article is purchased not for resale but for use, the eligibility of the note given in payment depends on the character of the article. If a farmer buys an article for permanent use, for instance, a pump or an electric generator, his note is neither agricultural nor commercial paper and is not eligible for discount, but if he buys fertilizer, or twine, the paper is agricultural and eligible for discount as such.

Water sold by an irrigation company to farmers, and delivered through the company's ditches, may be classed as "goods sold," and a note for the water is eligible for discount. But a silo is a permanent improvement and a note given for the purchase of a silo is not eligible.

During the war it was held that a note given by a non-member bank to a member bank, when secured by government obligations was eligible for rediscount with a reserve bank, when approved by the Federal Reserve Board. This ruling, which was made as a part of the Board's policy of helping the Treasury in every possible way to float its war loans, was recently rescinded, since it provided a method by which non-member banks, though contributing in no way to the strength of the reserve system, might nevertheless obtain reserve bank credit.

Maturity of Paper.—Much of the work of definition has arisen out of the Act's provisions in regard to the length of time for which paper is eligible for discount. The law provides that commercial and industrial paper is eligible for a period not exceeding 90 days, exclusive of days of grace. Agricultural paper, on the other hand, was made eligible by the original Act for 6 months and by recent amendments for as long as 9 months. This distinction in favor of agricultural paper was made because agricultural operations are, as a rule, slower than industrial operations; and because the turnover in agriculture is much less rapid and that, in order to serve agriculture, paper of longer maturity must be discounted. This extension of maturity for agricultural paper is not inconsistent with the principle that the reserve banks' assets must be self-liquidating, since the fundamental requirement is that the period for which the paper is discounted do not exceed the length of time required to complete the operation for which the loan is made. If, therefore, the operation of feeding livestock for market requires 9 months, the paper arising out of that operation is essentially no less self-liquidating than 3 months' paper of a retail store, and in principle, as well as in law, is no less acceptable for discount at the reserve bank.

In defining agricultural, as distinct from commercial paper, many fine points have had to be determined in practice. It has been held, for instance, that the note of a packing company, the proceeds of which are used for the purchase of livestock for slaughter, is not livestock paper within the meaning of the Act, and is eligible for discount only when its maturity do not exceed 90 days. A note of a grain dealer given to a grower for grain purchased for resale is commercial paper, even though the grower subsequently discounts the note and uses the proceeds for an agricultural purpose. This is on the principle that the classification of paper depends upon the transaction out of which it originally arises, irrespective of the nature of any further transaction in which the paper may be subsequently negotiated. A note given by a farmer in payment for a motor truck is agricultural paper, but notes of motor distributing companies given for the purchase of motors are commercial paper eligible for discount for a period not exceeding 90 days.[1]

A statement of the credit facilities offered to agricultural interests by the Federal Reserve Act and its amendments, has been issued by the Federal Reserve Board and printed in the *Federal Reserve Bulletin* for August, 1923. This statement is reprinted in Appendix E.

[1] Many of the examples of interpretations here presented are taken from a paper on "Eligibility for Discount" by CHARLES L. POWELL, Counsel for the Federal Reserve Bank of Chicago, published in the *Annals of the American Academy of Political and Social Science* for January, 1922, p. 105.

While ordinarily paper eligible for discount under the law must have a definite maturity in no case exceeding 9 months, the maximum permissible period being dependent upon the character of the paper, there is a section of the law as amended in 1923 which provides for the discount or purchase of bills of exchange payable at sight or on demand. This proviso was also made for the benefit of agriculture and is limited to paper drawn for the purpose of financing the domestic shipment of agricultural products secured by shipping documents conveying title to the staples. The law provides that demand for repayment of such paper must be made within a reasonable length of time after the arrival of the staples at their destination and that the reserve banks must not hold such paper for more than 90 days.

Rulings on Open-market Operations.—In addition to the problems arising in connection with the discounting functions of the Federal reserve banks, which have been by far the most important from the point of view of the supply of credit, many problems arise also in connection with the open-market functions of the banks. By Sec. 14 of the Federal Reserve Act the reserve banks are permitted to purchase from, or sell to, practically anybody, cable transfers and bankers' acceptances and bills of exchange of the kinds and maturities made eligible by the Act for rediscount, with or without the endorsement of a member bank. In general the Board's regulations provide that in order to be eligible for discount or purchase an acceptance must arise from: (1) the shipment of goods between the United States and a foreign country, or between the United States and one of its dependencies, or between foreign countries, or between dependencies of the United States and foreign countries; (2) the shipment of goods within the United States; (3) the storage of readily marketable staples, provided the bill is secured by a warehouse receipt conveying title to the staple. The Board also authorizes the discount or purchase of acceptances drawn by banks outside of the United States for the purpose of furnishing dollar exchange.

The Board has ruled that bankers' acceptances in order to be eligible for purchase must have a maturity not exceeding 3 months, except that acceptances arising out of foreign trade may have a maturity up to 6 months. The Agricultural Credits Act of 1923 provides that acceptances arising out of agricultural transactions are eligible for purchase with a maturity up to 6 months.

The subject of acceptances has always received a great deal of attention at the hands of the Federal Reserve Board, partly because the existence of acceptances as a credit instrument in the United States has been made possible by the Federal Reserve Act, and partly because some of the members of the Board have taken particular interest in the development of an acceptance market in this country in the belief that it will establish more stable and flexible credit conditions. In the earlier days the definitions of eligibility of acceptances for discount or purchase were stated in much detail and it was generally considered that the red tape involved was a handicap in the development of an acceptance market. As the practice of acceptance credit developed, however, and as member banks became more familiar with these instruments the Board gradually simplified the regulations in connection with acceptance credit, so that at the present time they are fairly simple and direct.

The Board's semi-judicial and semi-legislative function in defining the conditions with which paper acquired by the reserve banks must comply has had a direct relation to the formation of the system's credit policies. By barring loans for capital or speculative purposes from the portfolios of the reserve banks, and by limiting the use of reserve bank credit to strictly productive purposes, the Board has not only embodied into reserve bank practice the letter and the spirit of the Federal Reserve Act, but has also laid the foundation of a policy of withholding the support of the Federal reserve system from a growth of credit not arising out of the requirements of productive business activity.

CHAPTER XIV

CONFERENCE AND RESEARCH WORK

In its capacity as the central supervising agency over the credit institutions of the country, the Federal Reserve Board is obliged to keep in close touch with developments in different sections of the country and at the twelve Federal reserve banks. The necessity for this was recognized by the Act in providing for a Federal Advisory Council, which consists of one representative from each Federal reserve district.

The Federal Advisory Council.—The members of the council are selected by the boards of directors of the twelve Federal reserve banks and, as a rule, receive no compensation other than their expenses in attending meetings in Washington. The law provides that at least four meetings of the council shall be held each year and additional meetings when called by the Federal Reserve Board. As a matter of fact, the practice has been to hold four quarterly meetings.

The Federal Advisory Council has power: (1) to confer directly with the Federal Reserve Board on general business conditions; (2) to make oral or written representations concerning matters within the jurisdiction of the Board; and (3) to call for information and make recommendations in regard to discount rates, rediscount business, note issues, reserve conditions in the various districts, the purchase and sale of securities by reserve banks, and the general affairs of the reserve banking system. The Federal Advisory Council is a body of experienced men, generally engaged in banking, who meet four times a year and canvass the entire field of problems with which the reserve system has to deal. They consult the Federal Reserve Board and at the conclusion of their meetings submit their recommendations, generally accompanied with a brief statement to the press of their views upon the current situation. The Federal Advisory Council has no authority over the Board, and its importance is entirely dependent upon the prestige of the membership and the influence that its judgment may have with the Board. On many occasions the advice and counsel of this body has been of great service to the Federal Reserve Board. In 1920, for instance, when the Federal reserve system was faced with a number of extremely difficult problems the Federal Advisory Council carefully considered these problems and submitted a series of recommendations upon the policy to be pursued.[1]

Conferences with Governors and Federal Reserve Agents.— In addition to the conferences with the Advisory Council the Federal Reserve Board at least twice a year calls meetings of the governors of the Federal reserve banks and once a year also of the Federal reserve agents. Sometimes it calls in some of the directors of the banks, on some occasions the banking directors (Class A), on other occasions the representatives of business or agriculture in the different districts (Class B). At these conferences the Board discusses in detail the problems that confront the operating officials, as well as the more general credit problems of the system. The governors and the agents at these conferences meet by themselves, as well as with the Board, talk over their own more important detailed problems, and submit to the Board their general conclusions and recommendations.

These conferences, in addition to keeping the Board in touch with conditions in the several districts, serve the important purpose of bringing the operating officials together and making them acquainted with each other and with the problems that confront the different banks. It is a clearing house of Federal reserve information and serves the purpose of developing a common language and a common understanding of the matters that concern the system. For instance, the question of the effect of security purchases by a reserve bank in the interior on the credit conditions in the New York district is one that would not, in the ordinary course of affairs, be clear or present itself with much force to the officials of the interior bank in question, and yet the purchase of a security by the Dallas Bank, for instance, in the New York district has the effect of bringing Federal reserve funds into that district and is likely to result in a corresponding reduction in the discounts of the New York reserve bank. And

[1] See *Annual Report of the Federal Reserve Board*, 1920, p. 597.

conversely, the sale of securities by interior banks in the New York market has the effect of creating a shortage of credit in the New York market and consequently an increased use of reserve bank credit in that district. It is such relationships as this between the different districts that become more clearly understood through the conferences among the governors.

The Conference of May, 1920.—In this connection, one particular conference between governors and members of the Board should be mentioned. It is the conference held in May, 1920, the minutes of which were later printed as a Senate Document (310, Sixty-seventh Congress, Fourth Session). This conference was held at a time when the reserves of the system were at a low ebb, when the post-war boom had reached its peak, and the banks of the country were greatly worried about the inevitable liquidation that would follow the rapid expansion. At this conference the Governor of the Board presented his views of the situation, showing clearly that some check of credit expansion was necessary, and yet that too drastic action would do more harm than good by unduly alarming the business community. After a thorough discussion of the whole problem at this meeting the governors of the reserve banks upon returning to their homes recommended to their boards of directors the raising of discount rates, and, as a matter of fact, the rates in most of the districts were presently advanced. This conference has become famous as the "deflation conference," which was described by many critics of the system as a conspiracy among the high officials of the system and the bankers of Wall Street to deflate business, and especially the farmers. Ordinarily the minutes of such conferences are not published, as they are chiefly of interest to the participants and represent a free exchange of opinion within the Federal reserve family. But in this case, in view of the accusations, the minutes of the conference were published, and afford an interesting insight into the character of the conferences between the Board members and the representatives of the reserve banks. The substance of these minutes is such as to convince all fair-minded students of the system that, at this conference, responsible officials of the system discussed in a temperate manner the difficulties confronting the banks of the country and the best way of meeting these difficulties, and that there was no foundation for the charge that a policy of drastic deflation was adopted.

In addition to the regular meetings with the governors held twice a year, the Board is in frequent contact with many of the governors and other officials, and there are standing committees of governors which cooperate with the Board on certain subjects. For instance, there is a committee on functional expenses, which has been making a study of the cost of operation of the different banks and has made efforts to increase the efficiency and reduce the cost of many of the functions of the banks. There is also a governors' committee on open-market sales and purchases which differ from discounts in that they cannot be handled satisfactorily by the twelve reserve banks acting independently but must be coordinated with reference to a policy adopted for the system as a whole.

Division of Research and Statistics.—In a previous chapter there was given a description of the work of the Board's Division of Bank Operations and of the lines of statistics which it compiles primarily from reports obtained from reserve banks and member banks. This phase of the Board's statistical work is so closely allied to the operation of the banks that it is handled by the Division of Bank Operations. The results of these tabulations, however, constitute the main source of information about credit developments and, therefore, are the foundation of the work of the Division of Research and Statistics which is a separate branch of the Federal Reserve Board's organization. This Division on the basis of all the available banking statistics studies the credit problems confronting the system and the relationship of these problems to general business developments. For this purpose it collects information about the physical volume of production, distribution, and employment, price movements, about discount and interest rates in effect in different sections of the country and abroad, and about foreign exchange rates in the New York market. In addition, the division makes studies of international gold movements and of foreign developments in the banking and financial field in so far as they have a bearing upon the problems with which the Federal reserve system must deal. Broadly speaking, the work of the Division may be grouped under three general heads: (1) bank credit; (2) domestic business conditions; and

(3) international business and financial conditions. The bank credit work, in addition to a close scrutiny of the available banking figures, comprises a group of intensive studies intended to furnish the Board with information about the credit and currency requirements of different districts and different industries at different seasons of the year. These studies when completed will make it possible for the Board to see more clearly what movements in the demand for credit can be anticipated and to what extent actual developments depart from these expectations. These studies include an analysis of interest rates in different markets and their relationship to one another and to reserve bank discount rates. The Division is also making a study of branch banking in this country and abroad. In its study of business conditions in the United States the Division obtains information from a large number of sources, including government departments, individual business concerns and trade organizations. Much information for this purpose is supplied also by Federal reserve agents of the several districts. The Board has been a pioneer in undertaking this kind of work and continues to collect much data of use not only to itself and the banks, but to business men in general.

On the basis of this information the Division, in cooperation with a committee of Federal reserve agents, prepares each month a summary of business conditions in the United States, usually under the general headings of production, trade, wholesale prices, and bank credit. Before the summary is released to the press it receives the approval of the Board and of the committee of reserve agents; it is subsequently printed in the *Federal Reserve Bulletin* and in the twelve monthly bulletins issued by the Federal reserve banks. It constitutes, therefore, the joint judgment of the banks and the Board upon current business conditions. The statement avoids predictions and interpretations, but endeavors to give a clear and unbiased presentation of the principal economic facts as they are reflected in available statistical and other sources. This general summary is followed in the *Federal Reserve Bulletin* by a more detailed discussion of developments in different industries in the different districts.

In addition to publishing many of the price index numbers collected in the various foreign countries, the Federal Reserve

Board has constructed index numbers of its own for five of the leading countries in order to make possible international price comparisons on a substantially uniform basis. The Board's index numbers are classified as to the stage of manufacture of the product and as to the origin of the goods. These index numbers make it possible to watch from month to month changes in price levels in different countries from figures that are closely comparable and are classified into the same commodity groups.[1]

In the foreign field the Federal Reserve Board also collects and publishes information about banking developments, foreign exchange rates, and financial conditions in different countries. A brief summary of the most important developments abroad is published monthly in the *Bulletin*. Particular attention is paid to central banking conditions abroad and to current monetary developments. Special problems in foreign countries having a bearing either by analogy or by actual relationship upon domestic credit conditions are investigated and presented in special memoranda to the Federal Reserve Board or in articles in the *Federal Reserve Bulletin*.

Much of the work of the Division of Research and Statistics is employed in the preparation of reports and memoranda for the use of the Federal Reserve Board on problems which it has under consideration. The Division also works closely with the Board's committees on discount and open-market policies and on agricultural credits. It is the Division's task in general to present to the Board all the available information on economic developments that have a bearing upon reserve bank policy.

The Federal Reserve Bulletin.—The various groups of activities of the Division of Research and Statistics are reflected in the *Federal Reserve Bulletin*, the official organ of the Federal Reserve Board, which prints monthly figures on the condition and operation of the Federal reserve and member banks, and statistics of business and credit conditions at home and abroad, as well as the rulings of the Federal Reserve Board and an account of the Treasury's current financial operations. The Division of Research and Statistics prepares every month, in consultation

[1] The Board's price indexes, together with other data on prices and exchange rates, have been published in a separate bulletin entitled *Prices in the United States and Abroad:* 1919–1923.

with the Federal Reserve Board, a review of current credit and economic conditions, which is published as the leading article in the *Federal Reserve Bulletin*. This monthly review is frequently the vehicle used by the Board for making a public statement of policy, and for this reason it is closely watched by the financial press. Three of the reviews of the month prepared in 1923 are reprinted in the appendix.

Each of the twelve reserve banks also has a statistical organization which collects current data for the use of the Federal reserve banks, the Federal Reserve Board, and the member banks. The banks issue monthly reviews of economic conditions which have a wide circulation in their respective districts.

The information collected by the Board and the Federal reserve banks is thus published and put at the disposal of the business community throughout the United States. It contributes to a better understanding of business conditions both by the banks and the general public and paves the way toward a closer cooperation between business men, bankers, and the reserve system in the continuous adjustment of the flow of credit to the needs of productive industry.

CHAPTER XV

ELEMENTS OF RESERVE BANK CREDIT POLICY

In this brief study an attempt has been made to present a simplified picture of the operation of the Federal reserve system and to point out some of the problems with which the system has been confronted in the past few years. It has been shown what rôle in the system is played by the twelve Federal reserve banks and by the Federal Reserve Board. The ultimate aims of the banks and of the Board are the same, namely, to "accommodate commerce and business," that is, to work for the best interests of those engaged in the production and distribution of goods in the United States and through them to serve the nation as a whole. Out of the plan of the system's structure, however, there arise certain differences between the Federal Reserve Board and the Federal reserve banks in their approach to the problems of credit policy.

The Federal Reserve Board and the Federal Reserve Banks.—These differences arise, in the main, from three causes: first, the officials of each reserve bank are in daily contact with business developments in their own districts and are, therefore, inclined to view the financial situation from a local standpoint, while the Federal Reserve Board endeavors to keep in touch with developments in all the twelve districts and in foreign countries, so that it is in a position to consider current problems from a national point of view, and with a perspective of economic trends throughout the world. Second, the operating officials of the reserve banks, confronted as they are every day with the problem of economical and efficient operation of their banks, are inevitably somewhat influenced in their viewpoint by a desire to have sufficient earnings to meet expenses, while the Federal Reserve Board, viewing the system as a whole, is much less interested in the earnings of individual reserve banks, particularly when the earnings of one reserve bank are derived from operations which tend to reduce the income of another reserve bank, as is often the case with open-market purchases. It is easier for the Reserve Board to free itself from a consideration of reserve bank earnings and to base its credit policy solely upon the credit requirements of business. Third, the reserve banks are managed by their boards of directors, two-thirds of whom are selected by the member banks and represent their viewpoint, while the members of the Federal Reserve Board are appointed by the President of the United States and represent the public at large. From these differences arises a continuous adjustment within the Federal reserve system between the local and the national, the commercial and the non-commercial, the business and the public service point of view.

This statement does not mean that reserve bank officials lack appreciation of national problems, nor that they are indifferent to the welfare of reserve banks other than their own, or unconcerned about the public aspects of their work. On the contrary, these officials are fully aware of the broader phases of the problem of administering the Federal reserve system. Nevertheless, the closeness of the banks' officials to their detailed operating problems tends to magnify in their minds the weightiness of these problems and makes it helpful to them to have the opportunity of consulting with the Federal Reserve Board, whose attention is directed entirely to the national and the public view upon credit conditions.

In the concluding section of the present study there is presented a brief analysis of the main channels through which the Federal reserve system exerts an influence upon the credit situation, and of the allocation of functions between the banks and the Board, or more accurately, the degree of responsibility attaching to the reserve banks and the Federal Reserve Board in the performance of the different functions. Broadly speaking, there are three principal ways through which the reserve system can influence the character and volume of bank credit in use: (1) the use of discretion in the granting of loans; (2) the determination of discount rates, and (3) open-market policy.

Discretion in the Granting of Loans.—In the exercise of discretion in the granting of loans the responsibility rests largely upon the reserve banks which are familiar with the operations of their member banks and are in close touch with local business developments. In formulating their judgment upon credit extension to their member banks, the reserve banks consider themselves as holders of trust funds belonging to the entire membership, and consequently they discourage a disproportionate use of reserve bank credit by one member bank or by a group of member banks. In following developments in this respect the reserve banks find it convenient to keep a record of the line of credit to which each member bank is entitled on the basis of its contribution to the lending power of the reserve banks, and to compare the bank's actual borrowings with this so-called basic line. No attempt is made to limit a member bank's borrowings to this theoretical quota, since such a procedure would be both impracticable and unreasonable, and would not be consistent with the exercise of discretion. In passing upon a member bank's application for a loan, a reserve bank does, however, consider whether under prevailing credit conditions the member is entitled to additional credit "when due regard is paid to the claims of other member banks." In practice many member banks constantly exceed their basic lines of credit, as under ordinary conditions it is perfectly proper that they should, but in times of a rapidly growing demand for credit these lines serve as one of the useful guides upon which the reserve banks base their credit judgment in regard to each individual borrowing bank.

A more important basis for the exercise of discretion in all cases would be the use to which a member bank puts the funds obtained from a reserve bank. It is frequently difficult, however, to ascertain the manner in which a member bank uses the proceeds of its discounts, as the bank may borrow on its own note or may rediscount customers' paper drawn for one purpose, and use the funds obtained for an entirely different purpose. Nevertheless, reserve bank officials, through their close personal contact with officers of member banks, have a fairly accurate knowledge of their policies, and can supplement this information by referring to reports of examinations made of the condition of the members. Even though a member bank's condition may be perfectly sound and its operations in accordance with prudent banking practice, a reserve bank may deem it wise to restrict the credit granted to a bank and even to request it to reduce its outstanding indebtedness to the reserve bank, if there is reason to believe that the member is using reserve bank funds as a means of increasing its operating capital. Since the lending power of reserve banks has its origin in the cooperation of member banks it is intended for use in meeting exceptionally heavy seasonal or other temporary requirements, and not to afford the opportunity to a member bank of increasing the regular volume of its operations by drawing upon the common fund, held by the reserve bank in trust for the entire membership. It may not always be easy to discover such a course of action by a member bank, but it is one of the circumstances which the reserve bank considers in the exercise of its discretion.

It should be clearly understood that the lines of inquiry here suggested are intended to be merely illustrative and are not in any sense an exhaustive survey of the kinds of evidence upon which the reserve banks base their credit judgment.

Determination of Discount Rates.—The determination of discount rates is generally considered to be the most important part of the credit policy of the reserve banks and the Reserve Board. While there is much that is still unknown in the relation of discount rates to the rate on loans to the public and to the volume of bank credit in use, there is no doubt about the importance of the reserve bank rate as a factor in the credit situation, at a time when there is a demand for reserve bank credit. At the financial centers, where the large commercial banks keep in close touch with the market and use their funds to the best advantage with almost mathematical precision, a change in the rate which member banks must pay for reserve bank funds is obviously an important consideration. The discount rate also bears a definite relationship to open-market rates for money and cannot be changed in ordinary times without affecting these rates. As an important factor in the money market at financial centers, the discount rate has a bearing upon the general credit situation.

Experience points to the fact that conditions in the money market in financial centers are an influence on financial conditions elsewhere. For it is in these centers that the surplus funds of smaller banks throughout the country are held.

Changes in the discount rate, by influencing the general level of money rates affect the rate of earnings on funds invested by city banks for country correspondents, and thus exert an influence on the movement of funds from and to financial centers. The balances kept by the country banks with their city correspondents are the real operating banking reserves of the country, since the lawful reserves kept with the reserve banks must be kept intact, and in practice remain practically stable at the ratio to deposits required by law. The use made of balances with correspondents, which constitute the active secondary reserves of country banks, depends on these banks, and they shift the funds to and from their correspondents in accordance with money conditions at the financial centers and with the volume of credit demand in their own localities. Consequently, money rates at financial centers, and hence reserve bank discount rates, which have a definite relationship to these open-market rates, exert an influence upon the movement of funds between the financial centers and the interior of the country. The level of discount rates, furthermore, has an effect upon the use to which marginal funds are put by country banks. When a bank has satisfied the immediate needs of its regular customers and still has funds available, its decision whether to invest these funds in securities, to keep them on deposit in the city, or to lend them to a new customer or to an old customer for a new purpose, is affected by prevailing open-market money rates, and the discount rate is a factor influencing these rates. Changes in the discount rate have, therefore, a widespread influence on credit conditions throughout the country, and the determination of these rates is one of the principal responsibilities resting upon the Federal reserve system. Since in making changes in discount rates the reserve banks are required by law to obtain the approval of the Federal Reserve Board, this responsibility devolves jointly upon the Federal Reserve Board and the reserve banks.

Open-market Policy.—In giving the Federal reserve banks authority to deal in the open market the Federal Reserve Act enabled them to take the initiative in credit operations, so that they have a means of adding to the total volume of credit in use or of reducing this volume, depending upon the character of prevailing credit conditions. Open-market purchases by the reserve banks, however, as has been pointed out, do not always result in an equivalent increase in the volume of reserve bank credit in use, since the additional funds not infrequently find their way back, at least in part, to the reserve banks through the repayment of discounts, as was the case, for instance, in the first half of 1922, and again in 1924. Similarly, sales of securities by reserve banks do not at all times result in a reduction of the volume of credit in use, since the shortage created by the sales is in many cases made up by additional borrowing by the member banks, as was the case in the early part of 1923. These limitations upon the power of the reserve banks to influence the volume of their credit in use through open-market purchases or sales does not, however, diminish the importance of open-market operations. The evidence for the view that in 1922 and 1923 discount operations tended to offset open-market purchases and sales is that the total volume of reserve bank earning assets, which measures the total volume of reserve bank credit in use, remained fairly constant during the period, while the reserve banks first purchased large amounts of government securities and later reduced their holdings of these securities. The fact that earning assets remained relatively stable, however, does not necessarily mean that the reserve banks' operations in the open-market had no effect upon the volume of credit in use. Credit conditions are constantly changing in response to a large variety of influences. The total credit in use is not like a reservoir of water which is full to the brim and has only one ingoing and one outgoing pipe. It is rather like a lake with numerous streams entering and leaving it and with many hidden springs and outlets affecting the prevailing level. Adding credit to the total in use or withdrawing credit from this total is like pouring water into or pumping it out of a lake; the net effect in either case is not the result of any single influence, but of a combination of all the influences at work.

The experience of 1922 and 1923 indicates in a direct way only that in 1922, when the reserve banks purchased securities, member banks continued to liquidate discounts; that in 1923 when the reserve banks sold securities—discounts increased, and that throughout the period total earning assets remained fairly, though by no means entirely, constant. During a part of 1924 security purchases were not so large as reductions in discounts, and total earning assets declined. There is nothing in this experience to show what would have happened if the reserve banks' open-market operations had been different. There is no direct evidence to show that had the reserve banks not purchased securities in 1922, the liquidation of discounts would have correspondingly slowed down, or that if they had not sold securities in 1923 discounts would not have increased. It is quite possible, on the contrary, that the compensatory tendencies were only partially effective and that the constancy of the volume of reserve bank credit in 1922–1923 was maintained in part because of, rather than in spite of, the open-market activities of the reserve banks. It seems reasonable to believe that the stream of reserve bank credit arising from security purchases in 1922 was only partly drained off by increased liquidation of discounts, and that the balance was instrumental in hastening the turn in credit conditions which occurred in mid-summer of that year. It is also possible that security sales by the reserve banks in the latter part of 1922 and the early part of 1923, while they led to increased discounts, also exerted an influence toward tightening the money market and contributing to the cautious attitude of the business community in the spring of 1923.

It is too early, on the basis of the system's brief experience, to generalize upon the consequences of its open-market operations. The importance to the system, however, of a definite and consistent open-market policy is beyond dispute. In view of the fact that such a policy must be national rather than local in scope, it has been the function of the Federal Reserve Board, and of representatives of several of the reserve banks, acting as a body, to formulate the system's open-market policy and to devise machinery for its execution.

Growth of American Banking Tradition.—Discount and open-market policies of the Federal reserve banks, as has been seen, directly affect the credit situation, but in addition they exert an indirect influence through the effect they have upon the mental attitude of the business community. A stricter scrutiny of member bank credit lines, an advance in the discount rate, or a considerable sale of securities by the reserve banks is notice to the public that the Federal reserve system considers it necessary to exert a moderating influence on the growth of bank credit, and the realization that the system takes this view tends in itself to encourage a more cautious attitude on the part of the banks and of business enterprises. At times when there is little demand for reserve bank credit this psychological influence is in fact the most important means possessed by the system for maintaining its position as a factor in the credit situation.

Realizing the importance of this element of reserve bank credit policy, the Federal Reserve Board has from the beginning adopted the plan of publishing an official bulletin in which it explains its views upon the credit situation and the policies which it is pursuing. By giving publicity to its actions and to the reasons underlying credit policy the system has made its policies more effective. In addition to statements of policy the system assembles and publishes information on the business and credit situation which helps the member banks and the business public to understand the system's actions and to formulate their own policies with reference to existing conditions. This work of the Federal reserve system is important particularly because it establishes a common basis of understanding and encourages cooperation between business men, bankers, and the Federal reserve system in the endeavor to moderate the swings of the economic pendulum from depression to prosperity, and from prosperity to depression. The development of such cooperation is a step in the direction of establishing an American banking tradition, based on conditions as they exist in this country and on the accumulated experience of past years. A firmly established and rational banking tradition is in the long run the greatest safeguard against continuous or widespread practices leading to unhealthy credit expansion.

Some progress in the development of such a tradition has been made by the Federal reserve system during the past 3 years of relatively normal business and credit conditions. In fostering the growth of the American banking tradition the Federal reserve system builds a strong public support for its policies and increases its ability to be of service to the country.

APPENDIX A

PRINCIPAL PROVISIONS OF THE FEDERAL RESERVE ACT

(Approved Dec. 23, 1913)

In the following summary of the Federal Reserve Act the wording of the law has been followed literally, but certain sections dealing with the organization period have been omitted as no longer of importance, and in some cases minor details have also been left out for the sake of brevity. An attempt has been made to arrange the Act topically and to bring together all the provisions bearing on the same subject. The references given at the end of each provision are to sections of the Act and to the pages on which these sections appear in the Act as published by the Federal Reserve Board in 1923.

Title

An Act to provide for the establishment of Federal reserve banks, to furnish an elastic currency, to afford means of rediscounting commercial paper, to establish a more effective supervision of banking in the United States, and for other purposes.

FEDERAL RESERVE DISTRICTS

The Reserve Bank Organization Committee shall designate not less than eight nor more than twelve cities to be known as Federal reserve cities, and shall divide the continental United States, excluding Alaska, into districts, each district to contain only one of such Federal reserve cities. *Provided*, That the districts shall be apportioned with due regard to the convenience and customary course of business and shall not necessarily be coterminous with any State or States. The districts thus created may be readjusted and new districts may from time to time be created by the Federal Reserve Board, not to exceed twelve in all. Such districts shall be known as Federal reserve districts and may be designated by number (*Sec.* 2, *page* 1).

CORPORATE POWERS OF FEDERAL RESERVE BANKS

Each Federal reserve bank shall have power:

First. To adopt and use a corporate seal.

Second. To have succession for a period of twenty years from its organization unless it is sooner dissolved by an Act of Congress, or unless its franchise becomes forfeited by some violation of law.

Third. To make contracts.

Fourth. To sue and be sued, complain and defend, in any court of law or equity.

Fifth. To appoint by its board of directors such officers and employees as are not otherwise provided for in this Act, to define their duties, require bonds of them and fix the penalty thereof, and to dismiss at pleasure such officers or employees.

Sixth. To prescribe by its board of directors, by-laws not inconsistent with law, regulating the manner in which its general business may be conducted, and the privileges granted to it by law may be exercised and enjoyed.

Seventh. To exercise by its board of directors, or duly authorized officers or agents, all powers specifically granted by the provisions of this Act and such incidental powers as shall be necessary to carry on the business of banking within the limitations prescribed by this Act (*Sec.* 4, *page* 6).

SHAREHOLDERS OF THE FEDERAL RESERVE BANKS

National Banks.—Every national banking association shall be required to subscribe to the capital stock of such Federal reserve bank in a sum equal to six percentum of the paid-up capital stock and surplus of such bank, one-sixth of the subscription to be payable on call of the organization committee, one-sixth within three months, and one-sixth within six months thereafter, and the remainder of the subscription, or any part thereof, shall be subject to call when deemed necessary by the Federal Reserve Board, said payments to be in gold or gold certificates.

The shareholders of every Federal reserve bank shall be held individually responsible, equally and ratably, and not one for another, for all contracts, debts, and engagements of such bank to the extent of the amount of their subscriptions to such stock at the par value thereof in addition to the amount subscribed, whether such subscriptions have been paid up in whole or in part, under the provisions of this Act (*Sec.* 2, *page* 2).

State Banks.—Any bank incorporated by special law of any State, or organized under the general laws of any State or of the United States, desiring to become a member of the Federal Reserve System, may make application to the Federal Reserve Board, under such rules and regulations as it may prescribe, for the right to subscribe to the stock of the Federal reserve bank organized within the district in which the applying bank is located.

Such application shall be for the same amount of stock that the applying bank would be required to subscribe to as a national bank. The Federal Reserve Board, subject to such conditions as it may prescribe, may permit the applying bank to become a stockholder of such Federal reserve bank.

In acting upon such application the Federal Reserve Board shall consider the financial condition of the applying bank, the general character of its management, and whether or not the corporate powers exercised are consistent with the purposes of this act.

Whenever the Federal Reserve Board shall permit the applying bank to become a stockholder in the Federal reserve bank of the district its stock subscription shall be payable on call of the Federal Reserve Board, and stock issued to it shall be held subject to the provisions of this act.

All banks admitted to membership under authority of this section shall be required to comply with the reserve and capital requirements of this act and to conform to those provisions of law imposed on national banks which prohibit such banks from lending on or purchasing their own stock, which relate to the withdrawal or impairment of their capital stock, and which relates to the payment of unearned dividends. Such banks and the officers, agents, and employees thereof shall also be subject to the provisions of and to the penalties prescribed by section fifty-two hundred and nine of the revised Statutes, and shall be required to make reports of condition and of the payment of dividends to the Federal reserve bank of which they become a member. Not less than three of such reports shall be made annually on call of the Federal reserve bank on dates to be fixed by the Federal Reserve Board. Failure to make such reports within ten days after the date they are called for shall subject the offending bank to a penalty of $100 a day for each day that it fails to transmit such report; such penalty to be collected by the Federal reserve bank by suit or otherwise.

As a condition of membership such banks shall likewise be subject to examinations made by direction of the Federal Reserve Board or of the Federal reserve bank by examiners selected or approved by the Federal Reserve Board.

Whenever the directors of the Federal reserve bank shall approve the examinations made by the State authorities, such examinations and the reports thereof may be accepted in lieu of examinations made by examiners selected or approved by the Federal Reserve Board: *Provided, however,* That when it deems it necessary the board may order special examinations by examiners of its own selection and shall in all cases approve the form of the report. The expenses of all examinations, other than those made by State authorities, shall be assessed against and paid by the banks examined.

If at any time it shall appear to the Federal Reserve Board that a member bank has failed to comply with the provisions of this section or the regulations of the Federal Reserve Board made pursuant thereto, it shall be within the power of the board after hearing to require such bank to surrender its stock in the Federal reserve bank and to forfeit all rights and privileges of membership. The Federal Reserve Board may restore membership upon due proof of compliance with the conditions imposed by this section.

Any State bank or trust company desiring to withdraw from membership in a Federal reserve bank may do so, after six months' written notice shall have been filed with the Federal Reserve Board, upon the surrender and cancellation of all of its holdings of capital stock in the Federal reserve bank: *Provided, however,* That no Federal reserve bank shall, except under express authority of the Federal Reserve Board, cancel within the same calendar year more than twenty-five per centum of its capital stock for the purpose of effecting voluntary withdrawals during that year. All such applications shall be dealt with in the order in which they are filed with the board. Whenever a member bank shall surrender its stock holdings in a Federal reserve bank, or shall be ordered to do so by the Federal Reserve Board, under authority of law, all of its rights and privileges as a member bank shall thereupon cease and determine, and after due provision has been made for any indebtedness due or to become due to the Federal reserve bank it shall be entitled to a refund of its cash paid subscription with interest at the rate of one-half of one per centum per month from date of last dividend, if earned, the amount refunded in no event to exceed the book value of the stock at that time, and shall likewise be entitled to repayment of deposits and of any other balance due from the Federal reserve bank.

No applying bank shall be admitted to membership in a Federal reserve bank unless (a) it possesses a paid-up, unimpaired capital sufficient to entitle it to become a national banking association in the place where it is situated under the provisions of the National Bank Act, or (b) it posesses a paid-up, unimpaired capital of at least 60 per centum of the amount sufficient to entitle it to become a national banking association in the place where it is situated under the provisions of the National Bank Act and, under penalty of loss of membership complies with rules and regulations which the Federal Reserve Board shall prescribe fixing the time within which and the method by which the unimpaired capital of such bank shall be increased out of net income to equal the capital which would have been required if such bank had been admitted to membership under the provisions of clause (a) of this paragraph: *Provided,* That every such rule or regulation shall require the applying bank to set aside annually not less than 20 per centum of its net income of the preceding year as a fund exclusively applicable to such capital increase.

Subject to the provisions of this act and to the regulations of the board made pursuant thereto, any bank becoming a member of the Federal Reserve System shall retain its full charter and statutory rights as a State bank or trust company, and may continue to exercise all corporate powers granted it by the State in which it was created, and shall be entitled to all privileges of member banks: *Provided, however,* That no Federal reserve bank shall be permitted to discount for any State bank or trust company notes, drafts, or bills of exchange of any one borrower who is liable for borrowed money to such State bank or trust company in an amount greater than that which could be borrowed lawfully from such State bank or trust company were it a national banking association. The Federal reserve bank, as a condition of the discount of notes, drafts, and bills of exchange for such

State bank or trust company, shall require a certificate or guaranty to the effect that the borrower is not liable to such bank in excess of the amount provided by this section, and will not be permitted to become liable in excess of this amount while such notes, drafts, or bills of exchange are under discount with the Federal reserve bank (*Sec.* 9, *page* 14).

CAPITAL STOCK OF THE FEDERAL RESERVE BANKS

The capital stock of each Federal reserve bank shall be divided into shares of $100 each. The outstanding capital stock shall be increased from time to time as member banks increase their capital stock and surplus or as additional banks become members, and may be decreased as member banks reduce their capital stock or surplus or cease to be members. Shares of the capital stock of Federal reserve banks owned by member banks shall not be transferred or hypothecated. When a member bank increases its capital stock or surplus, it shall thereupon subscribe for an additional amount of capital stock of the Federal reserve bank of its district equal to six per centum of the said increase, one-half of said subscription to be paid in the manner hereinbefore provided for original subscription, and one-half subject to call of the Federal Reserve Board. A bank applying for stock in a Federal reserve bank at any time after the organization thereof must subscribe for an amount of the capital stock of the Federal reserve bank equal to six per centum of the paid-up capital stock and surplus of said applicant bank, paying therefor its par value plus one-half of one per centum a month from the period of the last dividend. When the capital stock of any Federal reserve bank shall have been increased either on account of the increase of capital stock of member banks or on account of the increase in the number of member banks, the board of directors shall cause to be executed a certificate to the Comptroller of the Currency showing the increase in capital stock, the amount paid in, and by whom paid. When a member bank reduces its capital stock it shall surrender a proportionate amount of its holdings in the capital of said Federal reserve bank, and when a member bank voluntarily liquidates it shall surrender all of its holdings of the capital stock of said Federal reserve bank and be released from its stock subscription not previously called. In either case the shares surrendered shall be canceled and the member bank shall receive in payment therefor, under regulations to be prescribed by the Federal Reserve Board, a sum equal to its cash-paid subscriptions on the shares surrendered and one-half of one per centum a month from the period of the last dividend, not to exceed the book value thereof, less any liability of such member bank to the Federal reserve bank (*Sec.* 5, *page* 11).

If any member bank shall be declared insolvent and a receiver appointed therefor, the stock held by it in said Federal reserve bank shall be canceled, without impairment of its liability, and all cash-paid subscriptions on said stock, with one-half of one per centum per month from the period of last dividend, not to exceed the book value thereof, shall be first applied to all debts of the insolvent member bank to the Federal reserve bank, and the balance, if any, shall be paid to the receiver of the insolvent bank. Whenever the capital stock of a Federal reserve bank is reduced, either on account of a reduction in capital stock of any member bank or of the liquidation or insolvency of such bank, the board of directors shall cause to be executed a certificate to the Comptroller of the Currency showing such reduction of capital stock and the amount repaid to such bank (*Sec.* 6, *page* 12).

BOARD OF DIRECTORS OF FEDERAL RESERVE BANKS AND FEDERAL RESERVE AGENT

Every Federal reserve bank shall be conducted under the supervision and control of a board of directors.

The board of directors shall perform the duties usually appertaining to the office of directors of banking associations and all such duties as are prescribed by law.

Said board shall administer the affairs of said bank fairly and impartially and without discrimination in favor of or against any member bank or banks and shall, subject to the provisions of law and the orders of the Federal Reserve Board, extend to each member bank such discounts, advancements and accommodations as may be safely and reasonably made with due regard for the claims and demands of other member banks.

Such board of directors shall be selected as hereinafter specified and shall consist of nine members, holding office for three years, and divided into three classes, designated as classes A, B, and C.

Class A shall consist of three members, who shall be chosen by and be representative of the stock-holding banks.

Class B shall consist of three members, who at the time of their election shall be actively engaged in their district in commerce, agriculture or some other industrial pursuit.

Class C shall consist of three members who shall be designated by the Federal Reserve Board. When the necessary subscriptions to the capital stock have been obtained for the organization of any Federal reserve bank, the Federal Reserve Board shall appoint the class C directors and shall designate one of such directors as chairman of the board to be selected.

No Senator or Representative in Congress shall be a member of the Federal Reserve Board or an officer or a director of a Federal reserve bank.

No director of class B shall be an officer, director, or employee of any bank.

No director of class C shall be an officer, director, employee, or stockholder of any bank.

Directors of class A and class B shall be chosen in the following manner:

The Federal Reserve Board shall classify the member banks of the district into three general groups or divisions, designating each group by number. Each group shall consist as nearly as may be of banks of similar capitalization. Each member bank shall be permitted to nominate to the chairman of the board of directors of the Federal reserve bank of the district one candidate for director of class A and one candidate for director of class B. The candidates so nominated shall be listed by the chairman, indicating by whom nominated, and a copy of said list shall, within fifteen days after its completion, be furnished by the chairman to each member bank. Each member bank by a resolution of the board or by an amendment to its by-laws shall authorize its president, cashier, or some other officer to cast the vote of the member bank in the elections of class A and class B directors.

Within fifteen days after receipt of the list of candidates the duly authorized officer of a member bank shall certify to the chairman his first, second, and other choices for director of class A and class B, respectively, upon a preferential ballot upon a form furnished by the chairman of the board of directors of the Federal reserve bank of the district. Each such officer shall make a cross opposite the name of the first, second, and other choices for a director of class A and for a director of class B, but shall not vote more than one choice for any one candidate. No officer or director of a member bank shall be eligible to serve as a class A director unless nominated and elected by banks which are members of the same group as the member bank of which he is an officer or director.

Any person who is an officer or director of more than one member bank shall not be eligible for nomination as a class A director except by banks in the same group as the bank having the largest aggregate resources of any of those of which such person is an officer or director.

Any candidate having a majority of all votes cast in the column of first choice shall be declared elected. If no candidate have a majority of all the votes in the first column, then there shall be added together the votes cast by the electors for such candidates in the second column and the votes cast for the several candidates in the first column. If any candidate then have a majority of the electors voting, by adding together the first and second choices, he shall be declared elected. If no candidate have a majority of electors voting when the first and second choices shall have been added, then the votes cast in the third column for other choices shall be added together in like manner, and the candidate then having the highest number of votes shall be declared elected. An immediate report of election shall be declared.

Class C directors shall be appointed by the Federal Reserve Board. They shall have been for at least two years residents of the district for which they are appointed. One of the class C directors shall be designated by said board as chairman of the board of directors of the Federal reserve bank and as "Federal reserve agent." He shall be a person of tested banking experience, and in addition to his duties as chairman of the board of directors of the Federal reserve bank he shall be required to maintain, under regulations to be established by the Federal Reserve Board, a local office of said board on the premises of the Federal reserve bank. He shall make regular reports to the Federal Reserve Board and shall act as its official representative for the performance of the functions conferred upon it by this act. He shall receive an annual compensation to be fixed by the Federal Reserve Board and paid monthly by the Federal reserve bank to which he is designated.

One of the directors of class C shall be appointed by the Federal Reserve Board as deputy chairman to exercise the powers of the chairman of the board when necessary. In case of the absence of the chairman and deputy chairman, the third-class C director shall preside at meetings of the board.

Subject to the approval of the Federal Reserve Board the Federal reserve agent shall appoint one or more assistants. Such assistants, who shall be persons of tested banking experience, shall assist the Federal reserve agent in the performance of his duties and shall also have power to act in his name and stead during his absence or disability. The Federal Reserve Board shall require such bonds of the assistant Federal reserve agents as it may deem necessary for the protection of the United States. Assistants to the Federal reserve agent shall receive an annual compensation, to be fixed and paid in the same manner as that of the Federal reserve agent.

Directors of Federal reserve banks shall receive, in addition to any compensation otherwise provided, a reasonable allowance for necessary expenses in attending meetings of their respective boards, which amount shall be paid by the respective Federal reserve banks. Any compensation that may be provided by boards of directors of Federal reserve banks for directors, officers or employees shall be subject to the approval of the Federal Reserve Board.

Every director of a Federal reserve bank chosen as hereinbefore provided shall hold office for a term of three years. Vacancies that may occur in the several classes of directors of Federal reserve banks may be filled in the manner provided for the original selection of such directors, such appointees to hold office for the unexpired terms of their predecessors (*Sec.* 4, *page* 7).

POWERS OF FEDERAL RESERVE BANKS

Discounts.—Upon the indorsement of any of its member banks, which shall be deemed a waiver of demand, notice and protest by such bank as to its own indorsement exclusively, any Federal reserve bank may discount notes, drafts, and bills of exchange arising out of actual commercial transactions; that is, notes, drafts, and bills of exchange issued or drawn for agricultural, industrial, or commercial purposes, or the proceeds of which have been used, or are to be used, for such purposes, the Federal Reserve Board to have the right to determine or define the character of the paper thus eligible for discount, within the meaning of this Act. Nothing in this Act contained shall be construed to prohibit such notes, drafts, and bills of exchange, secured by staple agricultural products, or other goods, wares, or merchandise from being eligible for such discount, and the notes, drafts, and bills of exchange of factors issued as such making advances exclusively to producers of staple agricultural products in their raw state shall be eligible for such discount; but such definition shall not include notes, drafts, or bills covering merely investments or issued or drawn for the purpose of carrying or trading in stocks, bonds, or other investment securities, except bonds and notes of the Government of the United States. Notes, drafts, and bills admitted to discount under the terms of this paragraph must have a maturity at the time of discount of not more than 90 days, exclusive of grace.

Upon the indorsement of any of its member banks, which shall be deemed a waiver of demand, notice, and protest by such bank as to its own indorsement exclusively, and subject to regulations and limitations to be prescribed by the Federal Reserve Board, any Federal reserve bank may discount or purchase bills of exchange payable at sight or on demand which are drawn to finance the domestic shipment of nonperishable, readily marketable staple agricultural products and are secured by bills of lading or other shipping documents conveying or securing title to such staples: *Provided*, That all such bills of exchange shall be forwarded promptly for collection, and demand for payment shall be made with reasonable promptness after the arrival of such staples at their destination: *Provided further*, That no such bill shall in any event be held by or for the account of a Federal reserve bank for a period in excess of 90 days. In discounting such bills Federal reserve banks may compute the interest to be deducted on the basis of the estimated life of each bill and adjust the discount after payment of such bills to conform to the actual life thereof.

The aggregate of such notes, drafts, and bills bearing the signature or indorsement of any one borrower, whether a person, company, firm, or corporation, rediscounted for any one bank shall at no time exceed ten per centum of the unimpaired capital and surplus of said bank; but this restriction shall not apply to the discount of bills of exchange drawn in good faith against actually existing values.

Any Federal reserve bank may discount acceptances of the kinds hereinafter described, which have a maturity at the time of discount of not more than 90 days' sight, exclusive of days of grace, and which are indorsed by at least one member bank: *Provided*, That such acceptances if drawn for an agricultural purpose and secured at the time of acceptance by warehouse receipts or other such documents conveying or securing title covering readily marketable staples may be discounted with a maturity at the time of discount of not more than six months' sight exclusive of days of grace (*Sec.* 13, *page* 25).

Upon the indorsement of any of its member banks, which shall be deemed a waiver of demand, notice, and protest by such bank as to its own indorsement exclusively, any Federal reserve bank may, subject to regulations and limitations to be prescribed by the Federal Reserve Board, discount notes, drafts, and bills of exchange issued or drawn for an agricultural purpose, or based upon live stock, and having a maturity, at the time of discount, exclusive of days of grace, not exceeding nine months, and such notes, drafts, and bills of exchange may be offered as collateral security for the issuance of Federal reserve notes under the provisions of section 16 of this Act: *Provided*, That notes, drafts, and bills of exchange with maturities in excess of six months shall not be eligible as a basis for the issuance of Federal reserve notes unless secured by warehouse receipts or other such negotiable documents conveying or securing title to readily marketable staple agricultural products or by chattel mortgage upon live stock which is being fattened for market.

That any Federal reserve bank may, subject to regulations and limitations to be prescribed by the Federal Reserve Board, rediscount such notes, drafts, and bills for any Federal Intermediate Credit Bank, except that no Federal reserve bank shall rediscount for a Federal Intermediate Credit Bank any such note or obligation which bears the indorsement of a nonmember State bank or trust company which is eligible for membership in the Federal reserve system, in accordance with section 9 of this Act.

Notes, drafts, bills of exchange or acceptances issued or drawn by cooperative marketing associations composed of producers of agricultural products shall be deemed to have been issued or drawn for an agricultural purpose, within the meaning of this section, if the proceeds thereof have been or are to be advanced by such association to any members thereof for an agricultural purpose, or have been or are to be used by such association in making payments to any members thereof on account of agricultural products delivered by such members to the association, or if such proceeds have been or are to be used by such association to meet expenditures incurred or to be incurred by the association in connection with the grading, processing, packing, preparation for market, or marketing of any agricultural product handled by such association for any of its members: *Provided*, That the express enumeration in this paragraph of certain classes of paper of cooperative marketing associations as eligible for rediscount shall not be construed as rendering ineligible any other class of paper of such associations which is now eligible for rediscount (*Sec.* 13(*a*), *page* 30).

Establishment of Discount Rates.—Each Federal reserve bank shall have the power to establish, from time to time, subject to review and determination of the Federal Reserve Board, rates of discount to be charged by the Federal reserve bank for each class of paper, which shall be fixed with a view of accommodating commerce and business (*Sec.* 14(*d*), *page* 32).

Advances to Member Banks.—Any Federal reserve bank may make advances to its member banks on their promissory notes for a period not exceeding 15 days at rates to be established by such Federal reserve banks, subject to the review and determination of the Federal Reserve Board, provided such promissory notes are secured by such notes, drafts, bills of exchange, or bankers' acceptances as are eligible for rediscount or for purchase by Federal reserve banks under the provisions of this Act, or by the deposit or pledge of bonds or notes of the United States (*Sec.* 13, *page* 28).

Open-market Operations.—Any Federal reserve bank may, under rules and regulations prescribed by the Federal Reserve Board, purchase and sell in the open market, at home or abroad, either from or to domestic or foreign banks, firms, corporations, or individuals, cable transfers and bankers' acceptances and bills of exchange of the kinds and maturities by this Act made eligible for rediscount, with or without the indorsement of a member bank.

Every Federal reserve bank shall have power:

(*a*) To deal in gold coin and bullion at home or abroad, to make loans thereon, exchange Federal reserve notes for gold, gold coin, or gold certificates, and to contract for loans of gold coin or bullion, giving therefor, when necessary, acceptable security, including the hypothecation of United States bonds or other securities which Federal reserve banks are authorized to hold;

(b) To buy and sell, at home or abroad, bonds and notes of the United States, and bills, notes, revenue bonds, and warrants with a maturity from date of purchase of not exceeding six months, issued in anticipation of the collection of taxes or in anticipation of the receipt of assured revenues by any State, county, district, political subdivision, or municipality in the continental United States, including irrigation, drainage and reclamation districts, such purchases to be made in accordance with rules and regulations prescribed by the Federal Reserve Board;

(c) To purchase from member banks and to sell, with or without its indorsement, bills of exchange arising out of commercial transactions, as hereinbefore defined;

(e) To establish accounts with other Federal reserve banks for exchange purposes and, with the consent or upon the order and direction of the Federal Reserve Board and under regulations to be prescribed by said board, to open and maintain accounts in foreign countries, appoint correspondents, and establish agencies in such countries wheresoever it may be deemed best for the purpose of purchasing, selling, and collecting bills of exchange, and to buy and sell, with or without its indorsement, through such correspondents or agencies, bills of exchange (or acceptances) arising out of actual commercial transactions which have not more than ninety days to run, exclusive of days of grace, and which bear the signature of two or more responsible parties, and, with the consent of the Federal Reserve Board, to open and maintain banking accounts for such foreign correspondents or agencies. Whenever any such account has been opened or agency or correspondent has been appointed by a Federal reserve bank, with the consent of or under the order and direction of the Federal Reserve Board, any other Federal reserve bank may, with the consent and approval of the Federal Reserve Board, be permitted to carry on or conduct, through the Federal reserve bank opening such account or appointing such agency or correspondent, any transaction authorized by this section under rules and regulations to be prescribed by the board.

(f) To purchase and sell in the open market, either from or to domestic banks, firms, corporations, or individuals, acceptances of Federal Intermediate Credit Banks and of National Agricultural Credit Corporations, whenever the Federal Reserve Board shall declare that the public interest so requires (*Sec.* 14, *page* 32).

Any Federal reserve bank may also buy and sell debentures and other such obligations issued by a Federal Intermediate Credit Bank or by a National Agricultural Credit Corporation, but only to the same extent, and subject to the same limitations, as those upon which it may buy and sell bonds issued under Title I of the Federal Farm Loan Act (*Sec.* 13(*a*), *page* 31).[1]

[1] The provision of the Federal Farm Loan Act referred to is as follows: Section 27. Any Federal reserve bank may buy and sell farm loan bonds issued under this Act to the same extent and subject to the same limitations placed upon the purchase and sale by said banks of state, county, district, and municipal bonds under subsection (b) of section 14 of the Federal Reserve Act approved Dec. 23, 1913.

Note Issues: Federal Reserve Notes.—Federal reserve notes, to be issued at the discretion of the Federal Reserve Board for the purpose of making advances to Federal reserve banks through the Federal reserve agents as hereinafter set forth and for no other purpose, are hereby authorized. The said notes shall be obligations of the United States and shall be receivable by all national and member banks and Federal reserve banks and for all taxes, customs, and other public dues. They shall be redeemed in gold on demand at the Treasury Department of the United States, in the city of Washington, District of Columbia, or in gold or lawful money at any Federal reserve bank.

Any Federal reserve bank may make application to the local Federal reserve agent for such amount of the Federal reserve notes hereinbefore provided for as it may require. Such application shall be accompanied with a tender to the local Federal reserve agent of collateral in amount equal to the sum of the Federal reserve notes thus applied for and issued pursuant to such application. The collateral security thus offered shall be notes, drafts, bills of exchange, or acceptances acquired under the provisions of section thirteen of this act, or bills of exchange indorsed by a member bank of any Federal reserve district and purchased under the provisions of section fourteen of this act, or bankers' acceptances purchased under the provisions of said section fourteen, or gold or gold certificates; but in no event shall such collateral security, whether gold, gold certificates, or eligible paper, be less than the amount of Federal reserve notes applied for. The Federal reserve agent shall each day notify the Federal Reserve Board of all issues and withdrawals of Federal reserve notes to and by the Federal reserve bank to which he is accredited. The said Federal Reserve Board may at any time call upon a Federal reserve bank for additional security to protect the Federal reserve notes issued to it.

Every Federal reserve bank shall maintain reserves in gold or lawful money of not less than thirty-five per centum against its deposits and reserves in gold of not less than forty per centum against its Federal reserve notes in actual circulation: *Provided, however,* That when the Federal reserve agent holds gold or gold certificates as collateral for Federal reserve notes issued to the bank such gold or gold certificates shall be counted as part of the gold reserve which such bank is required to maintain against its Federal reserve notes in actual circulation. Notes so paid out shall bear upon their faces a distinctive letter and serial number which shall be assigned by the Federal Reserve Board to each Federal reserve bank. Whenever Federal reserve notes issued through one Federal reserve bank shall be received by another Federal reserve bank, they shall be promptly returned for credit or redemption to the Federal reserve bank through which they were originally issued or, upon direction of such Federal reserve bank, they shall be forwarded direct to the Treasurer of the United States to be retired. No Federal reserve bank shall pay out notes issued through another under penalty of a tax of ten per centum upon the face value of notes so paid out. Notes presented for redemption at the Treasury of the United States shall be paid out of the redemption fund and returned to the Federal reserve banks through which they were originally issued, and thereupon such Federal reserve bank shall, upon demand of the Secretary of the Treasury, reimburse such redemption fund in lawful money or, if such Federal reserve notes have been redeemed by the Treasurer in gold or gold certificates, then such funds shall be reimbursed to the extent deemed necessary by the Secretary of the Treasury in gold or gold certificates. Federal reserve notes received by the Treasurer otherwise than for redemption may be exchanged for gold out of the redemption fund hereinafter provided and returned to the reserve bank through which they were originally issued, or they may be returned to such bank for the credit of the United States. Federal reserve notes unfit for circulation shall be returned by the Federal reserve agents to the Comptroller of the Currency for cancellation and destruction.

The Federal Reserve Board shall require each Federal reserve bank to maintain on deposit in the Treasury of the United States a sum in gold sufficient in the judgment of the Secretary of the Treasury for the redemption of the Federal reserve notes issued to such bank, but in no event less than five per centum of the total amount of notes issued less the amount of gold or gold certificates held by the Federal reserve agent as collateral security; but such deposit of gold shall be counted and included as part of the forty per centum reserve hereinbefore required. The board shall have the right, acting through the Federal reserve agent, to grant in whole or in part, or to reject entirely the application of any Federal reserve bank for Federal reserve notes; but to the extent that such application may be granted the Federal Reserve Board shall, through its local Federal reserve agent, supply Federal reserve notes to the banks so applying, and such bank shall be charged with the amount of notes issued to it and shall pay such rate of interest as may be established by the Federal Reserve Board on only that amount of such notes which equals the total amount of its outstanding Federal reserve notes less the amount of gold or gold certificates held by the Federal reserve agent as collateral security. Federal reserve notes issued to any such bank shall, upon delivery, together with such notes of such Federal reserve bank as may be issued under section eighteen of this act upon security of United States two per centum Government bonds, become a first and paramount lien on all the assets of such bank.

Any Federal reserve bank may at any time reduce its liability for outstanding Federal reserve notes by depositing with the Federal reserve agent its Federal reserve notes, gold, gold certificates, or lawful money of the United States. Federal reserve notes so deposited shall not be reissued, except upon compliance with the conditions of an original issue.

The Federal reserve agent shall hold such gold, gold certificates, or lawful money available exclusively for exchange for the outstanding Federal reserve notes when offered by the reserve bank of which he is a director. Upon the request of the Secretary of the Treasury the Federal Reserve Board shall require the Federal reserve agent to transmit to the Treasurer of the United States so much of the gold held by him as collateral security for Federal reserve notes as may be required for the exclusive purpose of the redemption of such Federal reserve notes, but such gold when deposited with the

Treasurer shall be counted and considered as if collateral security on deposit with the Federal reserve agent.

Any Federal reserve bank may at its discretion withdraw collateral deposited with the local Federal reserve agent for the protection of its Federal reserve notes issued to it and shall at the same time substitute therefor other collateral of equal amount with the approval of the Federal reserve agent under regulations to be prescribed by the Federal Reserve Board. Any Federal reserve bank may retire any of its Federal reserve notes by depositing them with the Federal reserve agent or with the Treasurer of the United States, and such Federal reserve bank shall thereupon be entitled to receive back the collateral deposited with the Federal reserve agent for the security of such notes. Federal reserve banks shall not be required to maintain the reserve or the redemption fund heretofore provided for against Federal reserve notes which have been retired. Federal reserve notes so deposited shall not be reissued except upon compliance with the conditions of an original issue.

All Federal reserve notes and all gold, gold certificates, and lawful money issued to or deposited with any Federal reserve agent under the provisions of the Federal reserve act shall hereafter be held for such agent, under such rules and regulations as the Federal Reserve Board may prescribe, in the joint custody of himself and the Federal reserve bank to which he is accredited. Such agent and such Federal reserve bank shall be jointly liable for the safe-keeping of such Federal reserve notes, gold, gold certificates, and lawful money. Nothing herein contained, however, shall be construed to prohibit a Federal reserve agent from depositing gold or gold certificates with the Federal Reserve Board, to be held by such board subject to his order, or with the Treasurer of the United States for the purposes authorized by law.

In order to furnish suitable notes for circulation as Federal reserve notes, the Comptroller of the Currency shall, under the direction of the Secretary of the Treasury, cause plates and dies to be engraved in the best manner to guard against counterfeits and fraudulent alterations, and shall have printed therefrom and numbered such quantities of such notes of the denominations of $5, $10, $20, $50, $100, $500, $1,000, $5,000, $10,000 as may be required to supply the Federal reserve banks. Such notes shall be in form and tenor as directed by the Secretary of the Treasury under the provisions of this Act and shall bear the distinctive numbers of the several Federal reserve banks through which they are issued.

When such notes have been prepared, they shall be deposited in the Treasury, or in the subtreasury or mint of the United States nearest the place of business of each Federal reserve bank and shall be held for the use of such bank subject to the order of the Comptroller of the Currency for their delivery, as provided by this Act.

The plates and dies to be procured by the Comptroller of the Currency for the printing of such circulating notes shall remain under his control and direction, and the expenses necessarily incurred in executing the laws relating to the procuring of such notes, and all other expenses incidental to their issue and retirement, shall be paid by the Federal reserve banks, and the Federal Reserve Board shall include in its estimate of expenses levied against the Federal reserve banks a sufficient amount to cover the expenses herein provided for.

Any appropriation heretofore made out of the general funds of the Treasury for engraving plates and dies, the purchase of distinctive paper, or to cover any other expense in connection with the printing of national-bank notes or notes provided for by the Act of May thirtieth, nineteen hundred and eight, and any distinctive paper that may be on hand at the time of the passage of this Act may be used in the discretion of the Secretary for the purposes of this Act, and should the appropriations heretofore made be insufficient to meet the requirements of this Act in addition to circulating notes provided for by existing law, the Secretary is hereby authorized to use so much of any funds in the Treasury not otherwise appropriated for the purpose of furnishing the notes aforesaid: *Provided, however*, That nothing in this section contained shall be construed as exempting national banks or Federal reserve banks from their liability to reimburse the United States for any expenses incurred in printing and issuing circulating notes (*Sec.* 16, *page* 34).

Federal Reserve Bank Notes.—Upon deposit with the Treasurer of the United States of any bonds of the United States in the manner provided by existing law relating to national banks, the Federal reserve banks shall have authority to receive from the Comptroller of the Currency circulating notes in blank, registered and countersigned as provided by law, equal in amount to the par value of the bonds so deposited, such notes to be issued under the same conditions and provisions of law as relate to the issue of circulating notes of national banks secured by bonds of the United States bearing the circulating privilege, except that the issue of such notes shall not be limited to the capital stock of such Federal reserve bank (*Sec.* 4, *page* 7).

After two years from the passage of this Act, and at any time during a period of twenty years thereafter, any member bank desiring to retire the whole or any part of its circulating notes, may file with the Treasurer of the United States an application to sell for its account, at par and accrued interest, United States bonds securing circulation to be retired.

The Treasurer shall, at the end of each quarterly period, furnish the Federal Reserve Board with a list of such applications, and the Federal Reserve Board may, in its discretion, require the Federal reserve banks to purchase such bonds from the banks whose applications have been filed with the Treasurer at least ten days before the end of any quarterly period at which the Federal Reserve Board may direct the purchase to be made: *Provided*, That Federal reserve banks shall not be permitted to purchase an amount to exceed $25,000,000 of such bonds in any one year, and which amount shall include bonds acquired under section four of this Act by the Federal reserve bank.

Provided further, That the Federal Reserve Board shall allot to each Federal reserve bank such proportion of such bonds as the capital and surplus of such bank shall bear to the aggregate capital and surplus of all the Federal reserve banks.

Upon notice from the Treasurer of the amount of bonds so sold for its account, each member bank shall duly assign and transfer, in writing, such bonds to the Federal reserve bank purchasing the same, and such Federal reserve bank shall, thereupon, deposit lawful money with the Treasurer of the United States for the purchase price of such bonds, and the Treasurer shall pay to the member bank selling such bonds any balance due after deducting a sufficient sum to redeem its outstanding notes secured by such bonds, which notes shall be canceled and permanently retired when redeemed.

The Federal reserve banks purchasing such bonds shall be permitted to take out an amount of circulating notes equal to the par value of such bonds.

Upon the deposit with the Treasurer of the United States of bonds so purchased, or any bonds with the circulating privilege acquired under section four of this Act, any Federal reserve bank making such deposit in the manner provided by existing law, shall be entitled to receive from the Comptroller of the Currency circulating notes in blank, registered and countersigned as provided by law, equal in amount to the par value of the bonds so deposited.[1] Such notes shall be the obligations of the Federal reserve bank procuring the same, and shall be in form prescribed by the secretary of the Treasury, and to the same tenor and effect as national-bank notes now provided by law. They shall be issued and redeemed under the same terms and conditions as national-bank notes except that they shall not be limited to the amount of the capital stock of the Federal reserve bank issuing them.

Upon application of any Federal reserve bank, approved by the Federal Reserve board, the Secretary of the Treasury may issue, in exchange for United States two per centum gold bonds bearing the circulation privilege, but against which no circulation is outstanding, one-year gold notes of the United States without the circulation privilege, to an amount not to exceed one-half of the two per centum bonds so tendered for exchange, and thirty-year three per centum gold bonds without the circulation privilege for the remainder of the two per centum bonds so tendered: *Provided*, That at the time of such exchange the Federal reserve bank obtaining such one-year gold notes shall enter into an obligation with the Secretary of the Treasury binding itself to purchase from the United States for gold at the maturity of such one-year notes, an amount equal to those delivered in exchange for such bonds, if so requested by the Secretary, and at each maturity of one-year notes so purchased by such Federal reserve bank, to purchase from the United States such an amount of one-year notes as the Secretary may tender to such bank, not to exceed the amount issued to such bank in the first instance, in exchange for the two per centum United States gold bonds; said obligation to purchase at maturity such notes shall continue in force for a period not to exceed thirty years.

[1] Under act of Apr. 23, 1918, Federal reserve banks may issue Federal reserve bank notes in any denomination, including $1 and $2, against the security of United States certificates of indebtedness to the extent permitted by that act.

For the purpose of making the exchange herein provided for, the Secretary of the Treasury is authorized to issue at par Treasury notes in coupon or registered form as he may prescribe in denominations of one hundred dollars, or any multiple thereof, bearing interest at the rate of three per centum per annum, payable quarterly, such Treasury notes to be payable not more than one year from the date of their issue in gold coin of the present standard value, and to be exempt as to principal and interest from the payment of all taxes and duties of the United States except as provided by this Act, as well as from taxes in any form by or under State, municipal, or local authorities. And for the same purpose, the Secretary is authorized and empowered to issue United States gold bonds at par, bearing three per centum interest payable thirty years from date of issue, such bonds to be of the same general tenor and effect and to be issued under the same general terms and conditions as the United States three per centum bonds without the circulation privilege now issued and outstanding.

Upon application of any Federal reserve bank, approved by the Federal Reserve Board, the Secretary may issue at par such three per centum bonds in exchange for the one-year gold notes herein provided for (*Sec.* 18, *page* 41).

Check Clearing.—Any Federal reserve bank may receive from any of its member banks, and from the United States, deposits of current funds in lawful money, national-bank notes, Federal reserve notes, or checks, and drafts, payable upon presentation, and also, for collection, maturing notes and bills; or, solely for purposes of exchange or of collection, may receive from other Federal reserve banks deposits of current funds in lawful money, national-bank notes, or checks upon other Federal reserve banks, and checks and drafts, payable upon presentation within its district, and maturing notes and bills payable within its district; or, solely for the purposes of exchange or of collection, may receive from any nonmember bank or trust company deposits of current funds in lawful money, national-bank notes, Federal reserve notes, checks and drafts payable upon presentation, or maturing notes and bills: *Provided*, Such nonmember bank or trust company maintains with the Federal reserve bank of its district a balance sufficient to offset the items in transit held for its account by the Federal reserve bank: *Provided, further*, That nothing in this or any other section of this act shall be construed as prohibiting a member or nonmember bank from making reasonable charges, to be determined and regulated by the Federal Reserve Board, but in no case to exceed 10 cents per $100 or fraction thereof, based on the total of checks and drafts presented at any one time, for collection or payment of checks and drafts and remission therefor by exchange or otherwise; but no such charges shall be made against the Federal reserve banks (*Sec.* 13, *page* 25).

Every Federal reserve bank shall receive on deposit at par from member banks or from Federal reserve banks checks and drafts drawn upon any of its depositors, and when remitted by a Federal reserve bank, checks and drafts drawn by any depositor in any other Federal reserve bank or member bank upon funds to the credit of said depositor in said reserve bank or member bank. Nothing herein contained shall be construed as prohibiting a member bank from charging its actual expense incurred in collecting and remitting funds, or for exchange sold to its patrons. The Federal Reserve Board shall, by rule, fix the charges to be collected by the member banks from its patrons whose checks are cleared through the Federal reserve bank and the charge which may be imposed for the service of clearing or collection rendered by the Federal reserve bank.

The Federal Reserve Board shall make and promulgate from time to time regulations governing the transfer of funds and charges therefor among Federal reserve banks and their branches, and may at its discretion exercise the functions of a clearing house for such 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 (*Sec.* 16, *page* 39).

Government Deposits.—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, or any Government funds, shall be deposited in the continental United States in any bank not belonging to the system established by this Act: *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 depositories.

The Federal reserve banks are hereby authorized to act as depositories for and fiscal agents of any National Agricultural Credit Corporation or Federal Intermediate Credit Bank (*Sec.* 15, *page* 33).

RESERVES OF THE FEDERAL RESERVE BANKS

Every Federal reserve bank shall maintain reserves in gold or lawful money of not less than thirty-five per centum against its deposits and reserves in gold of not less than forty per centum against its Federal reserve notes in actual circulation (*Sec.* 16, *page* 35).

The Federal Reserve Board shall have authority 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 requirements specified in this Act (*Sec.* 11, *page* 20, *see also page* 191).

RESERVES OF MEMBER BANKS

Demand deposits within the meaning of this Act shall comprise all deposits payable within thirty days, and time deposits shall comprise all deposits payable after thirty days, all savings accounts and certificates of deposit which are subject to not less than thirty days' notice before payment, and all postal savings deposits.

Every bank, banking association, or trust company which is or which becomes a member of any Federal reserve bank shall establish and maintain reserve balances with its Federal reserve bank as follows:

(*a*) If not in a reserve or central reserve city, as now or hereafter defined, it shall hold and maintain with the Federal reserve bank of its district an actual net balance equal to not less than seven per centum of the aggregate amount of its demand deposits and three per centum of its time deposits.

(*b*) If in a reserve city, as now or hereafter defined, it shall hold and maintain with the Federal reserve bank of its district an actual net balance equal to not less than ten per centum of the aggregate amount of its demand deposits and three per centum of its time deposits: *Provided, however,* That if located in the outlying districts of a reserve city or in territory added to such a city by the extension of its corporate charter, it may, upon the affirmative vote of five members of the Federal Reserve Board, hold and maintain the reserve balances specified in paragraph (*a*) hereof.

(*c*) If in a central reserve city, as now or hereafter defined, it shall hold and maintain with the Federal reserve bank of its district an actual net balance equal to not less than thirteen per centum of the aggregate amount of its demand deposits and three per centum of its time deposits: *Provided, however,* That if located in the outlying districts of a central reserve city or in territory added to such city by the extension of its corporate charter, it may, upon the affirmative vote of five members of the Federal Reserve Board, hold and maintain the reserve balances specified in paragraphs (*a*) or (*b*) thereof.

No member bank shall keep on deposit with any State bank or trust company which is not a member bank a sum in excess of ten per centum of its own paid-up capital and surplus. No member bank shall act as the medium or agent of a nonmember bank in applying for or receiving discounts from a Federal reserve bank under the provisions of this Act, except by permission of the Federal Reserve Board.

The required balance carried by a member bank with a Federal reserve bank may, under the regulations and subject to such penalties as may be prescribed by the Federal Reserve Board, be checked against and withdrawn by such member bank for the purpose of meeting existing liabilities: *Provided, however,* That no bank shall at any time make new loans or shall pay any dividends unless and until the total balance required by law is fully restored.

In estimating the balances required by this Act, the net difference of amounts due to and from other banks shall be taken as the basis for ascertaining the deposits against which required balances with Federal reserve banks shall be determined.

National banks, or banks organized under local laws, located in Alaska or in a dependency or insular possession or any part of the United States outside the continental United States may remain nonmember banks, and shall in that event maintain reserves and comply with all the conditions now provided by law regulating them; or said banks may, with the consent of the Reserve Board, become member banks of any one of the reserve districts, and shall in that event take stock, maintain reserves, and be subject to all the other provisions of this Act (*Sec.* 19, *page* 43).

BANK EXAMINATIONS

Section fifty-two hundred and forty, United States Revised Statutes, is amended to read as follows:

The Comptroller of the Currency, with the approval of the Secretary of the Treasury, shall appoint examiners who shall examine every member bank at least twice in each calendar year and oftener if considered necessary: *Provided, however,* That the Federal Reserve Board may authorize examination by the State authorities to be accepted in the case of State banks and trust companies and may at any time direct the holding of a special examination of State banks or trust companies that are stockholders in any Federal reserve bank. The examiner making the examination of any national bank, or of any other member bank, shall have power to make a thorough examination of all the affairs of the bank, and in doing so he shall have power to administer oaths and to examine any of the officers and agents thereof under oath and shall make a full and detailed report of the condition of said bank to the Comptroller of the Currency.

The Federal Reserve Board, upon the recommendation of the Comptroller of the Currency, shall fix the salaries of all bank examiners and make report thereof to Congress. The expense of the examinations herein provided for shall be assessed by the Comptroller of the Currency upon the banks examined in proportion to assets or resources held by the banks upon the dates of examination of the various banks.

In addition to the examinations made and conducted by the Comptroller of the Currency, every Federal reserve bank may, with the approval of the Federal reserve agent or the Federal Reserve Board, provide for special examination of member banks within its district. The expense of such examinations shall be borne by the bank examined. Such examinations shall be so conducted as to inform the Federal reserve bank of the condition of its member banks and of the lines of credit which are being extended by them. Every Federal reserve bank shall at all times furnish to the Federal Reserve Board such information as may be demanded concerning the condition of any member bank within the district of the said Federal reserve bank.

No bank shall be subject to any visitatorial powers other than such as are authorized by law, or vested in the courts of justice or such as shall be or shall have been exercised or directed by Congress, or by either House thereof or by any committee of Congress or of either House duly authorized.

The Federal Reserve Board shall, at least once each year, order an examination of each Federal reserve bank, and upon joint application of ten member banks the Federal Reserve Board shall order a special examination and report of the condition of any Federal reserve bank (*Sec.* 21, *page* 45).

DIVISION OF EARNINGS

After all necessary expenses of a Federal reserve bank have been paid or provided for, the stockholders shall be entitled to receive an annual dividend of six per centum on the paid-in capital stock, which dividend shall be cumulative. After the aforesaid dividend claims have been fully met, the net earnings shall be paid to the United States as a franchise tax except that the whole of such net earnings shall be paid into a surplus fund until it shall amount to one hundred per centum of the subscribed capital stock of such bank, and that thereafter ten per centum of such net earnings shall be paid into the surplus.

The net earnings derived by the United States from Federal reserve banks shall, in the discretion of the Secretary, be used to supplement the gold reserve held against outstanding United States notes, or shall be applied to the reduction of the outstanding bonded indebtedness of the United States under regulations to be prescribed by the Secretary of the Treasury. Should a Federal reserve bank be dissolved or go into liquidation, any surplus remaining, after the payment of all debts, dividend requirements as hereinbefore provided, and the par value of the stock, shall be paid to and become the property of the United States and shall be similarly applied.

Federal reserve banks, including the capital stock and surplus therein, and the income derived therefrom shall be exempt from Federal, State, and local taxation, except taxes upon real estate (*Sec.* 7, *page* 12).

FEDERAL RESERVE BOARD

A Federal Reserve Board is hereby created which shall consist of eight members, including the Secretary of the Treasury and the Comptroller of the Currency, who shall be members ex officio, and six members appointed by the President of the United States, by and with the advice and consent of the Senate. In selecting the six appointive members of the Federal Reserve Board, not more than one of whom shall be selected from any one Federal reserve district, the President shall have due regard to a fair representation of the financial, agricultural, industrial and commercial interests, and geographical divisions of the country. The six members of the Federal Reserve Board appointed by the President and confirmed as aforesaid shall devote their entire time to the business of the Federal Reserve Board and shall each receive an annual salary of $12,000, payable monthly, together with actual necessary traveling expenses, and the Comptroller of the Currency, as ex officio member of the Federal Reserve Board, shall, in addition to the salary now paid him as Comptroller of the Currency, receive the sum of $7,000 annually for his services as a member of said board.

The Secretary of the Treasury and the Comptroller of the Currency shall be ineligible during the time they are in office, and for two years thereafter to hold any office, position, or employment in any member bank. The appointive members of the Federal Reserve Board shall be ineligible during the time they are in office and for two years thereafter to hold any office, position, or employment in any member bank, except that this restriction shall not apply to a member who has served the full term for which he was appointed. Of the six members thus appointed by the President one shall be designated by the President to serve for two, one for four, one for six, one for eight and the balance of the members for ten years, and thereafter each member so appointed shall serve for a term of ten years, unless sooner removed for cause by the President. Of the six persons thus appointed, one shall be designated by the President as governor and one as vice governor of the Federal Reserve Board. The governor of the Federal Reserve Board, subject to its supervision, shall be the active executive officer. The Secretary of the Treasury may assign offices in the Department of the Treasury for the use of the Federal Reserve Board. Each member of the Federal Reserve Board shall within fifteen days after notice of appointment make and subscribe to the oath of office.

The Federal Reserve Board shall have power to levy semiannually upon the Federal reserve banks, in proportion to their capital stock and surplus an assessment sufficient to pay its estimated expenses and the salaries of its members and employees for the half year succeeding the levying of such assessment, together with any deficit carried forward from the preceding half year.

The Secretary of the Treasury shall be ex officio chairman of the Federal Reserve Board. No member of the Federal Reserve Board shall be an officer or director of any bank, banking institution, trust company, or Federal reserve bank nor hold stock in any bank, banking institution, or trust company; and before entering upon his duties as a member of the Federal Reserve Board he shall certify under oath to the Secretary of the Treasury that he has complied with this requirement. Whenever a vacancy shall occur, other than by expiration of term, among the six members of the Federal Reserve Board appointed by the President, as above provided, a successor shall be appointed by the President, with the advice and consent of the Senate, to fill such vacancy, and when appointed he shall hold office for the unexpired term of the member whose place he is selected to fill.

The President shall have power to fill all vacancies that may happen on the Federal Reserve Board during the recess of the Senate by granting commissions which shall expire with the next session of the Senate.

Nothing in this Act contained shall be construed as taking away any powers heretofore vested by law in the Secretary of the Treasury which relate to the supervision, management, and control of the Treasury Department and bureaus under such department, and wherever any power vested by this Act in the Federal Reserve Board or the Federal reserve agent appears to conflict with the powers of the Secretary of the Treasury, such powers shall be exercised subject to the supervision and control of the Secretary.

The Federal Reserve Board shall annually make a full report of its operations to the Speaker of the House of Representatives, who shall cause the same to be printed for the information of the Congress (*Sec.* 10, *page* 17).

POWERS OF THE FEDERAL RESERVE BOARD

The Federal Reserve Board shall be authorized and empowered:

(a) To examine at its discretion the accounts, books and affairs of each Federal reserve bank and of each member bank and to require such statements and reports as it may deem necessary. The said board shall publish once each week a statement showing the condition of each Federal reserve bank and a consolidated statement for all Federal reserve banks. Such statements shall show in detail the assets and liabilities of the Federal reserve banks, single and combined, and shall furnish full information regarding the character of the money held as reserve and the amount, nature and maturities of the paper and other investments owned or held by Federal reserve banks.

(b) 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.

(c) 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 requirements specified in this Act: *Provided*, That it shall establish a graduated tax upon the amounts by which the reserve requirements of this Act may be permitted to fall below the level hereinafter specified: *And provided further*, That when the gold reserve held against Federal reserve notes falls below forty per centum, the Federal Reserve Board shall establish a graduated tax of not more than one per centum per annum upon such deficiency until the reserves fall to thirty-two and one-half per centum, and when said reserve falls below thirty-two and one-half per centum, a tax at the rate increasingly of not less than one and one-half per centum per annum upon each two and one-half per centum or fraction thereof that such reserve falls below thirty-two and one-half per centum. The tax shall be paid by the reserve bank, but the reserve bank shall add an amount equal to said tax to the rates of interest and discount fixed by the Federal Reserve Board.

(d) To supervise and regulate through the bureau under the charge of the Comptroller of the Currency the issue and retirement of Federal reserve notes, and to prescribe rules and regulations under which such notes may be delivered by the Comptroller to the Federal reserve agents applying therefor.

(e) To add to the number of cities classified as reserve and central reserve cities under existing law in which national banking associations are subject to the reserve requirements set forth in section twenty of this Act; or to reclassify existing reserve and central reserve cities or to terminate their designation as such.

(f) To suspend or remove any officer or director of any Federal reserve bank, the cause of such removal to be forthwith communicated in writing by the Federal Reserve Board to the removed officer or director and to said bank.

(g) To require the writing off of doubtful or worthless assets upon the books and balance sheets of Federal reserve banks.

(*h*) 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.

(*i*) To require bonds of Federal reserve agents, to make regulations for the safeguarding of all collateral, bonds, Federal reserve notes, money or property of any kind deposited in the hands of such agents, and said board shall perform the duties, functions, or services specified in this Act, and make all rules and regulations necessary to enable said board effectively to perform the same.

(*j*) To exercise general supervision over said Federal reserve banks.

(*k*) To grant by special permit to national banks applying therefor, when not in contravention of State or local law, the right to act as trustee, executor, administrator, registrar of stocks and bonds, guardian of estates, assignee, receiver, committee of estates of lunatics, or in any other fiduciary capacity in which State banks, trust companies, or other corporations which come into competition with national banks are permitted to act under the laws of the State in which the national bank is located.

(*l*) To employ such attorneys, experts, assistants, clerks, or other employees as may be deemed necessary to conduct the business of the board. All salaries and fees shall be fixed in advance by said board and shall be paid in the same manner as the salaries of the members of said board. All such attorneys, experts, assistants, clerks, and other employees shall be appointed without regard to the provisions of the Act of January sixteenth, eighteen hundred and eighty-three (volume twenty-two, United States Statutes at Large, page four hundred and three), and amendments thereto, or any rule or regulation made in pursuance thereof: *Provided*, That nothing herein shall prevent the President from placing said employees in the classified service.

(*m*) Upon the affirmative vote of not less than five of its members, the Federal Reserve Board shall have power to permit Federal reserve banks to discount for any member banks notes, drafts, or bills of exchange bearing the signature or endorsement of any one borrower in excess of the amount permitted by section 9 and section 13 of this Act, but in no case to exceed 20 per centum of the member bank's capital and surplus: *Provided, however*, That all such notes, drafts, or bills of exchange discounted for any member bank in excess of the amount permitted under such sections shall be secured by not less than a like face amount of bonds or notes of the United States issued since April 24, 1917, for which the borrower shall in good faith prior to January 1, 1921, have paid or agreed to pay not less than the full face amount thereof, or certificates of indebtedness of the United States: *Provided further*, That the provisions of this subsection (*m*) shall not be operative after October 31, 1921 (*Sec.* 11, *page*, 20).

The discount and rediscount and the purchase and sale by any Federal reserve bank of any bills receivable and of domestic and foreign bills of exchange, and of acceptances authorized by this Act, shall be subject to such restrictions, limitations, and regulations as may be imposed by the Federal Reserve Board (*Sec.* 13, *page* 29).

The Federal Reserve Board may, by regulation, limit to a percentage of the assets of the Federal reserve bank the amount of notes, drafts, acceptances, or bills having a maturity in excess of three months, but not exceeding six months, exclusive of days of grace, which may be discounted by such banks, and the amount of notes, drafts, bills, or acceptances having a maturity in excess of six months, but not exceeding nine months, which may be rediscounted by such bank (*Sec.* 13(*a*), *page* 31).

The Federal Reserve Board may permit or require any Federal reserve bank to establish branch banks within the Federal reserve district in which it is located or within the district of any Federal reserve bank which may have been suspended. Such branches, subject to such rules and regulations as the Federal Reserve Board may prescribe, shall be operated under the supervision of a board of directors to consist of not more than seven nor less than three directors, of whom a majority of one shall be appointed by the Federal reserve bank of the district, and the remaining directors by the Federal Reserve Board. Directors of branch banks shall hold office during the pleasure of the Federal Reserve Board (*Sec.* 3, *page* 5).

The discount rates established from time to time by the Federal reserve banks for each class of paper shall be subject to review and determination of the Federal Reserve Board (*Sec.* 14, *page* 32).

The Board shall have the right, acting through the Federal reserve agent, to grant in whole or in part, or to reject entirely the application of any Federal reserve bank for Federal reserve notes (*Sec.* 16, *page* 36).

GOLD DEPOSITS WITH UNITED STATES TREASURY

The Secretary of the Treasury is hereby authorized and directed to receive deposits of gold coin or of gold certificates with the Treasurer or any assistant treasurer of the United States when tendered by any Federal reserve bank or Federal reserve agent for credit to its or his account with the Federal Reserve Board. The Secretary shall prescribe by regulation the form of receipt to be issued by the Treasurer or Assistant Treasurer to the Federal reserve bank or Federal reserve agent making the deposit, and a duplicate of such receipt shall be delivered to the Federal Reserve Board by the Treasurer at Washington upon proper advices from any assistant treasurer that such deposit has been made. Deposits so made shall be held subject to the orders of the Federal Reserve Board and shall be payable in gold coin or gold certificates on the order of the Federal Reserve Board to any Federal reserve bank or Federal reserve agent at the Treasury or at the Subtreasury of the United States nearest the place of business of such Federal reserve bank or such Federal reserve agent: *Provided, however,* That any expense incurred in shipping gold to or from the Treasury or subtreasuries in order to make such payments, or as a result of making such payments, shall be paid by the Federal Reserve Board and assessed against the Federal reserve banks. The order used by the Federal Reserve Board in making such payments shall be signed by the governor or vice governor, or such other officers or members as the board may by regulation prescribe. The form of such order shall be approved by the Secretary of the Treasury.

The expenses necessarily incurred in carrying out these provisions, including the cost of the certificates or receipts issued for deposits received, and all expenses incident to the handling of such deposits shall be paid by the Federal Reserve Board and included in its assessments against the several Federal reserve banks.

Gold deposits standing to the credit of any Federal reserve bank with the Federal Reserve Board shall, at the option of said bank, be counted as part of the lawful reserve which it is required to maintain against outstanding Federal reserve notes, or as a part of the reserve it is required to maintain against deposits (*Sec.* 16, *page* 39).

FEDERAL ADVISORY COUNCIL

There is hereby created a Federal Advisory Council, which shall consist of as many members as there are Federal reserve districts. Each Federal reserve bank by its board of directors shall annually select from its own Federal reserve district one member of said council, who shall receive such compensation and allowances as may be fixed by his board of directors subject to the approval of the Federal Reserve Board. The meetings of said advisory council shall be held at Washington, District of Columbia, at least four times each year, and oftener if called by the Federal Reserve Board. The council may in addition to the meetings above provided for hold such other meetings in Washington, District of Columbia, or elsewhere, as it may deem necessary, may select its own officers and adopt its own methods of procedure, and a majority of its members shall constitute a quorum for the transaction of business. Vacancies in the council shall be filled by the respective reserve banks, and members selected to fill vacancies shall serve for the unexpired term.

The Federal Advisory Council shall have power, by itself or through its officers, (1) to confer directly with the Federal Reserve Board on general business conditions; (2) to make oral or written representations concerning matters within the jurisdiction of said board; (3) to call for information and to make recommendations in regard to discount rates, rediscount business, note issues, reserve conditions in the various districts, the purchase and sale of gold or securities by reserve banks, open-market operations by said banks, and the general affairs of the reserve banking system (*Sec.* 12, *page* 24).

POWER OF MEMBER BANKS TO ACCEPT

Any member bank may accept drafts or bills of exchange drawn upon it having not more than six months' sight to run, exclusive of days of grace, which grow out of transactions involving the importation or exportation of goods; or which grow out of transactions involving the domestic shipment of goods provided shipping documents conveying or securing title are attached at the time of acceptance; or which are secured at the time of acceptance by a warehouse receipt or other such document conveying or securing title covering readily marketable staples. No member bank shall accept, whether in a foreign or domestic transaction, for any one person, company, firm, or corporation to an amount equal at any time in the aggregate to more than ten per centum of its paid-up and unimpaired capital stock and surplus, unless the bank is secured either by attached documents or by some other actual security growing out of the same transaction as the acceptance; and no bank shall accept such bills to an amount equal at any time in the aggregate to more than one-half of its paid-up and unimpaired capital stock and surplus: *Provided, however,* That the Federal Reserve Board, under such general regulations as it may prescribe, which shall apply to all banks alike regardless of the amount of capital stock and surplus, may authorize any member bank to accept such bills to an amount not exceeding at any time in the aggregate one hundred per centum of its paid-up and unimpaired capital stock and surplus: *Provided further,* That the aggregate of acceptances growing out of domestic transactions shall in no event exceed fifty per centum of such capital stock and surplus (*Sec.* 13, *page* 27).

Any member bank may accept drafts or bills of exchange drawn upon it having not more than three months' sight to run, exclusive of days of grace, drawn under regulations to be prescribed by the Federal Reserve Board by banks or bankers in foreign countries or dependencies or insular possessions of the United States for the purpose of furnishing dollar exchange as required by the usages of trade in the respective countries, dependencies, or insular possessions. Such drafts or bills may be acquired by Federal reserve banks in such amounts and subject to such regulations, restrictions, and limitations as may be prescribed by the Federal Reserve Board: *Provided, however,* That no member bank shall accept such drafts or bills of exchange referred to in this paragraph for any one bank to an amount exceeding in the aggregate ten per centum of the paid-up and unimpaired capital and surplus of the accepting bank unless the draft or bill of exchange is accompanied by documents conveying or securing title or by some other adequate security: *Provided further,* That no member bank shall accept such drafts or bills in an amount exceeding at any time the aggregate of one-half of its paid-up and unimpaired capital and surplus (*Sec.* 13, *page* 29).

RIGHT OF NATIONAL BANKS TO GRANT LOANS ON FARM LAND TO ESTABLISH BRANCHES ABROAD, AND TO INVEST IN FOREIGN BANKING CORPORATIONS

Any national banking association not situated in a central reserve city may make loans secured by improved and unencumbered farm land situated within its Federal reserve district or within a radius of one hundred miles of the place in which such bank is located, irrespective of district lines, and may also make loans secured by improved and unencumbered real estate located within one hundred miles of the place in which such bank is located, irrespective of district lines; but no loan made upon the security of such farm land shall be made for a longer time than five years, and no loan made upon the security of such real estate as distinguished from farm land shall be made for a longer time than one year nor shall the amount of any such loan, whether upon such farm land or upon such real estate, exceed fifty per centum of the actual value of the property offered as security. Any such bank may make such loans, whether secured by such farm land or such real estate, in an aggregate sum equal to twenty-five per centum of its capital and surplus or to one-third of its time deposits and such banks may continue hereafter as heretofore to receive time deposits and to pay interest on the same.

The Federal Reserve Board shall have power from time to time to add to the list of cities in which national banks shall not be permitted to make loans secured upon real estate in the manner described in this section (*Sec.* 24, *page* 49).

FOREIGN BRANCHES OF NATIONAL BANKS

Any national banking association possessing a capital and surplus of $1,000,000 or more may file application with the Federal Reserve Board for permission to exercise, upon such conditions and under such regulations as may be prescribed by the said board, either or both of the following powers:

First. To establish branches in foreign countries or dependencies or insular possessions of the United States for the furtherance of the foreign commerce of the United States, and to act if required to do so as fiscal agents of the United States.

Second. To invest an amount not exceeding in the aggregate ten per centum of its paid-in capital stock and surplus in the stock of one or more banks or corporations chartered or incorporated under the laws of the United States or of any State thereof, and principally engaged in international or foreign banking, or banking in a dependency or insular possession of the United States either directly or through the agency, ownership, or control of local institutions in foreign countries, or in such dependencies or insular possessions (*Sec.* 25, *page* 50).

BANKING CORPORATIONS TO DO FOREIGN BANKING BUSINESS

Corporations to be organized for the purpose of engaging in international or foreign banking or other international or foreign financial operations, or in banking or other financial operations in a dependency or insular possession of the United States, either directly or through the agency, ownership, or control of local institutions in foreign countries, or in such dependencies or insular possessions as provided by this section, and to act when required by the Secretary of the Treasury as fiscal agents of the United States, may be formed by any number of natural persons, not less in any case than five (*Sec.* 25(*a*), *page* 52 *et seq., known as the Edge Act*).

SECRETARY OF THE TREASURY TO MAINTAIN PARITY OF ALL FORMS OF MONEY ISSUED OR COINED BY THE UNITED STATES

All provisions of law inconsistent with or superseded by any of the provisions of this Act are to that extent and to that extent only hereby repealed: *Provided*, Nothing in this Act contained shall be construed to repeal the parity provision or provisions contained in an Act approved March fourteenth, nineteen hundred, entitled "An Act to define and fix the standard of value, to maintain the parity of all forms of money issued or coined by the United States, to refund the public debt, and for other purposes," and the Secretary of the Treasury may, for the purpose of maintaining such parity and to strengthen the gold reserve, borrow gold on the security of United States bonds authorized by section two of the Act last referred to or for one-year gold notes bearing interest at a rate of not to exceed three per centum per annum, or sell the same if necessary to obtain gold. When the funds of the Treasury on hand justify, he may purchase and retire such outstanding bonds and notes (*Sec.* 26, *page* 62).

INTERLOCKING BANK DIRECTORATES

Clayton Antitrust Act, approved October 15, 1914, as amended by the Kern amendment, approved May 15, 1916, as amended by the Act approved May 26, 1920.[1]

SEC. 8. That from and after two years from the date of the approval of this Act no person shall at the same time be a director or other officer or employee of more than one bank, banking association, or trust company organized or operating under the laws of the United States, either of which has deposits, capital, surplus, and undivided profits aggregating more than \$5,000,000; and no private banker or person who is a director in any bank or trust company organized and operating under the laws of a State, having deposits, capital, surplus, and undivided profits aggregating more than \$5,000,000, shall be eligible to be a director in any bank or banking association organized or operating under the laws of the United States. The eligibility of a director, officer, or employee under the foregoing provisions shall be determined by the average amount of deposits, capital, surplus, and undivided profits as shown in the official statements of such bank, banking association, or trust company filed as provided by law during the fiscal year next preceding the date set for the annual election of directors, and when a director, officer, or employee has been elected or selected in accordance with the provisions of this Act it shall be lawful for him to continue as such for one year thereafter under said election or employment.

[1] Amended by Sec. 25 of Federal Reserve Act, as amended Sept. 7, 1916; and amended by Act approved Dec. 24, 1919, amending the Federal Reserve Act, as to corporations engaged in foreign banking and financial operations.

No bank, banking association, or trust company organized or operating under the laws of the United States, in any city or incorporated town or village of more than two hundred thousand inhabitants, as shown by the last preceding decennial census of the United States, shall have as a director or other officer or employee any private banker or any director or other officer or employee of any other bank, banking association, or trust company located in the same place: *Provided,* That nothing in this section shall apply to mutual savings banks not having a capital stock represented by shares: *Provided further,* That a director or other officer or employee of such bank, banking association, or trust company may be a director or other officer or employee of not more than one other bank or trust company organized under the laws of the United States or any State where the entire capital stock is owned by stockholders in the other: *And provided further,* That nothing contained in this section shall forbid a director of class A of a Federal reserve bank, as defined in the Federal Reserve Act, from being an officer or director, or both an officer and director, in one member bank: *And provided further,* That nothing in this Act shall prohibit any private banker or any officer, director, or employee of any member bank or class A director of a Federal reserve bank, who shall first procure the consent of the Federal Reserve Board, which board is hereby authorized, at its discretion, to grant, withhold, or revoke such consent, from being an officer, director, or employee of not more than two other banks, banking associations, or trust companies, whether organized under the laws of the United States or any State, if such other bank, banking association, or trust company is not in substantial competition with such banker or member bank.

The consent of the Federal Reserve Board may be procured before the person applying therefor has been elected as a class A director of a Federal reserve bank or as a director of any member bank.

When any person elected or chosen as a director or officer or selected as an employee of any bank or other corporation subject to the provisions of this Act is eligible at the time of his election or selection to act for such bank or other corporation in such capacity his eligibility to act in such capacity shall not be affected and shall not become or be deemed amenable to any of the provisions hereof by reason of any change in the affairs of such bank or other corporation from whatsoever cause, whether specifically excepted by any of the provisions hereof or not, until the expiration of one year from the date of his election or employment.

ABOLITION OF SUBTREASURIES

Appropriation Act, Approved May 29, 1920

Section 3595 of the Revised Statutes of the United States, as amended, providing for the appointment of an Assistant Treasurer of the United States at Boston, New York, Philadelphia, Baltimore, New Orleans, Saint Louis, San Francisco, Cincinnati, and Chicago, and all laws or parts of laws so far as they authorize the establishment or maintenance of offices of such

Assistant Treasurers or of Subtreasuries of the United States are hereby repealed from and after July 1, 1921; and the Secretary of the Treasury is authorized and directed to discontinue from and after such date or at such earlier date or dates as he may deem advisable, such subtreasuries and the exercise of all duties and functions by such assistant treasurers or their offices. The office of each assistant treasurer specified above and the services of any officers or other employees assigned to duty at his office shall terminate upon the discontinuance of the functions of that office by the Secretary of the Treasury.

The Secretary of the Treasury is hereby authorized, in his discretion, to transfer any or all of the duties and functions performed or authorized to to be performed by the assistant treasurers above enumerated, or their offices, to the Treasurer of the United States or the mints or assay offices of the United States, under such rules and regulations as he may prescribe, or to utilize any of the Federal reserve banks acting as depositaries or fiscal agents of the United States, for the purpose of performing any or all of such duties and functions, notwithstanding the limitations of section 15 of the Federal Reserve Act, as amended, or any other provisions of law: *Provided,* That if any moneys or bullion, constituting part of the trust funds or other special funds heretofore required by law to be kept in Treasury offices, shall be deposited with any Federal reserve bank, then such moneys or bullion shall by such bank be kept separate and distinct from the assets, funds, and securities of the Federal reserve bank and to be held in the joint custody of the Federal reserve agent and the Federal reserve bank: *Provided further,* That nothing in this section shall be construed to deny the right of the Secretary of the Treasury to use member banks as depositaries as heretofore authorized by law.

The Secretary of the Treasury is hereby authorized to assign any or all the rooms, vaults, equipment, and safes or space in the buildings used by the subtreasuries to any Federal reserve bank acting as fiscal agent of the United States.

APPENDIX B

REGULATIONS OF THE FEDERAL RESERVE BOARD

REGULATION A, SERIES OF 1924

(Superseding Regulation A of 1923)

DISCOUNTS UNDER SECTIONS 13 AND 13a

ARTICLE A

NOTES, DRAFTS, AND BILLS OF EXCHANGE

SECTION I. GENERAL STATUTORY PROVISIONS

Any Federal reserve bank may discount for any of its member banks any note, draft, or bill of exchange: *Provided*—

(*a*) It has a definite maturity at the time of discount of not more than 90 days, exclusive of days of grace; except that (1) if drawn or issued for an agricultural purpose or based on livestock, it may have a maturity at the time of discount of not more than nine months, exclusive of days of grace, and (2) certain bills of exchange payable at sight or on demand are eligible though they have no definite maturity (see Section VII, below);

(*b*) It has been issued or drawn for an agricultural, industrial, or commercial purpose, or the proceeds have been used or are to be used for such a purpose, or it is a note, draft, or bill of exchange of a factor issued as such making advances exclusively to producers of staple agricultural products in their raw state;

(*c*) It was not issued for carrying or trading in stocks, bonds, or other investment securities, except bonds and notes of the Government of the United States or unless it is secured by bonds or notes of the War Finance Corporation;

(*d*) The aggregate of notes, drafts, and bills bearing the signature or indorsement of any one borrower, whether a person, company, firm, or corporation, discounted for any one member bank, whether State or National, shall at no time exceed 10 per cent of the unimpaired capital and surplus of such bank; but this restriction shall not apply to the discount of bills of exchange drawn in good faith against actually existing values;

(*e*) It is indorsed by a member bank; and

(*f*) It conforms to all applicable provisions of this regulation.

No Federal reserve bank may discount for any member State bank or trust company any of the notes, drafts, or bills of exchange of any one borrower who is liable for borrowed money to such State bank or trust company in an amount greater than that which could be borrowed lawfully from such State bank or trust company under the terms of section 5200 of the United States Revised Statutes, as amended, were it a national banking association.

Any Federal reserve bank may make advances to its member banks on their promissory notes for a period not exceeding 15 days, provided that they are secured by notes, drafts, bills of exchange, or bankers' acceptances which are eligible for discount or for purchase by Federal reserve banks, or by the deposit or pledge of bonds or notes of the United States, or bonds or notes of the War Finance Corporation.

SECTION II. GENERAL CHARACTER OF NOTES, DRAFTS, AND BILLS OF EXCHANGE ELIGIBLE

The Federal Reserve Board, exercising its statutory right to define the character of a note, draft, or bill of exchange eligible for discount at a Federal reserve bank has determined that—

(*a*) It must be a negotiable note, draft, or bill of exchange which has been issued or drawn, or the proceeds of which have been used or are to be used in the first instance, in producing, purchasing, carrying, or marketing goods[1] in one or more of the steps of the process of production, manufacture, or distribution, or for the purpose of carrying or trading in bonds or notes of the United States or of the War Finance Corporation, and the name of a party to such transaction must appear upon it as maker, drawer, acceptor, or indorser: *Provided, however,* That if the purpose is the carrying or trading in bonds or notes of the War Finance Corporation, such note, draft, or bill of exchange must be secured by same.

(*b*) It must not be a note, draft, or bill of exchange the proceeds of which have been or are to be advanced or loaned to some other borrower, except as to paper described below under Sections VI(*b*) and VIII.

(*c*) It must not be a note, draft, or bill of exchange the proceeds of which have been used or are to be used for permanent or fixed investments of any kind, such as land, buildings, or machinery, or for any other capital purpose.

(*d*) It must not be a note, draft, or bill of exchange the proceeds of which have been used or are to be used for investments of a purely speculative character.

(*e*) It may be secured by the pledge of goods or collateral of any nature, including paper which is ineligible for discount, provided it (the note, draft, or bill of exchange) is otherwise eligible.

SECTION III. APPLICATIONS FOR DISCOUNT

Every application for the discount of notes, drafts, or bills of exchange must contain a certificate of the member bank, in form to be prescribed by the Federal reserve bank, that, to the best of its knowledge and belief, such

[1] When used in this regulation the word "goods" shall be construed to include goods, wares, merchandise, or agricultural products, including livestock.

notes, drafts, or bills of exchange have been issued or drawn, or the proceeds thereof have been or are to be used, for such a purpose as to render them eligible for discount under the terms of this regulation, and, in the case of a member State bank or trust company, every application must contain a certificate or guaranty to the effect that the borrower is not liable, and will not be permitted to become liable during the time his paper is held by the Federal reserve bank, to such bank or trust company for borrowed money in an amount greater than that which could be borrowed lawfully from such State bank or trust company under the terms of section 5200 of the United States Revised Statutes, as amended, were it a national banking association.

SECTION IV. PROMISSORY NOTES

(*a*) **Definition.**—A promissory note, within the meaning of this regulation, is defined as an unconditional promise, in writing, signed by the maker, to pay, in the United States, at a fixed or determinable future time, a sum certain in dollars to order or to bearer.

(*b*) **Evidence of Eligibility and Requirement of Statement.**—A Federal reserve bank must be satisfied by reference to the note or otherwise that it is eligible for discount. The member bank shall certify in its application whether the note offered for discount has been discounted for a depositor other than a bank or for a nondepositor and, if discounted for a bank, whether for a member or a nonmember bank. The member bank must also certify whether a financial statement of the borrower is on file with it.

A recent financial statement of the borrower must be on file with the member bank in all cases, unless the note was discounted by a member bank for a depositor (other than a bank) or for another member bank, and—

(1) It is secured by a warehouse, terminal, or other similar receipt covering goods in storage, by a valid prior lien on livestock which is being marketed or fattened for market, or by bonds or notes of the United States; or

(2) The aggregate of obligations of the borrower discounted and offered for discount at the Federal reserve bank by the member bank is less than a sum equal to 10 per cent of the paid-in capital of the member bank and is less than $5,000.

Whenever the borrower has closely affiliated or subsidiary corporations or firms, the borrower's financial statement shall be accompanied by separate financial statements of such affiliated or subsidiary corporations or firms, unless the statement of the borrower clearly indicates that such note is both eligible from a legal standpoint and acceptable from a credit standpoint: *Provided, however,* That the Federal reserve bank to which such note is offered for rediscount may waive this requirement until May 1, 1925, in any case where such borrower and the affiliated or subsidiary corporations or firms have not issued separate financial statements prior thereto.

A Federal reserve bank shall use its discretion in taking the steps necessary to satisfy itself as to eligibility. Compliance of a note with Section II (*c*) may be evidenced by a statement of the borrower showing a reasonable excess of quick assets over current liabilities. A Federal reserve bank may, in all cases, require the financial statement of the borrower to be filed with it.

SECTION V. DRAFTS, BILLS OF EXCHANGE, AND TRADE ACCEPTANCES

(*a*) **Definition.**—A draft or bill of exchange, within the meaning of this regulation, is defined as an unconditional order in writing, addressed by one person to another, signed by the person giving it, requiring the person to whom it is addressed to pay in the United States, at a fixed or determinable future time, a sum certain in dollars to the order of a specified person; and a trade acceptance is defined as a draft or bill of exchange, drawn by the seller on the purchaser of goods sold,[1] and accepted by such purchaser.

(*b*) **Evidence of Eligibility and Requirement of Statements.**—A Federal reserve bank shall take such steps as it deems necessary to satisfy itself as to the eligibility of the draft, bill, or trade acceptance offered for discount and may require a recent financial statement of one or more parties to the instrument. The draft, bill, or trade acceptance should be drawn so as to evidence the character of the underlying transaction, but if it is not so drawn evidence of eligibility may consist of a stamp or certificate affixed by the acceptor or drawer in a form satisfactory to the Federal reserve bank.

SECTION VI. AGRICULTURAL PAPER

(*a*) **Definition.**—Agricultural paper, within the meaning of this regulation, is defined as a negotiable note, draft, or bill of exchange issued or drawn, or the proceeds of which have been or are to be used, for agricultural purposes, including the production of agricultural products, the marketing of agricultural products by the growers thereof, or the carrying of agricultural products by the growers thereof pending orderly marketing, and the breeding, raising, fattening, or marketing of livestock, and which has a maturity at the time of discount of not more than nine months, exclusive of days of grace.

(*b*) **Paper of Cooperative Marketing Associations.**—Under the express terms of section 13a, notes, drafts, bills of exchange, or acceptances issued or drawn by cooperative marketing associations composed of producers of agricultural products are deemed to have been issued or drawn for an agricultural purpose, if the proceeds thereof have been or are to be—

(1) Advanced by such association to any members thereof for an agricultural purpose, or

(2) Used by such association in making payments to any members thereof on account of agricultural products delivered by such members to the association, or

(3) Used by such association to meet expenditures incurred or to be incurred by the association in connection with the grading, processing, packing, preparation for market, or marketing of any agricultural product handled by such association for any of its members.

These are not the only classes of paper of such associations which are eligible for discount, however, and any other paper of such associations

[1] A consignment of goods or a conditional sale of goods can not be considered "goods sold" within the meaning of this clause. The purchase price of goods plus the cost of labor in effecting their installation may be included in the amount for which the trade acceptance is drawn.

which complies with the applicable requirements of this regulation may be discounted on the same terms and conditions as the paper of any other person or corporation.

Paper of cooperative marketing associations the proceeds of which have been or are to be used (1) to defray the expenses of organizing such associations, or (2) for the acquisition of warehouses, for the purchase or improvement of real estate, or for any other permanent or fixed investment of any kind, are not eligible for discount, even though such warehouses or other property are to be used exclusively in connection with the ordinary operations of the association.

(*c*) **Eligibility.**—To be eligible for discount, agricultural paper, whether a note, draft, bill of exchange, or trade acceptance, must comply with the respective sections of this regulation which would apply to it if its maturity were 90 days or less.

(*d*) **Discounts for Federal Intermediate Credit Banks.**—Any Federal reserve bank may discount agricultural paper for any Federal intermediate credit bank; but no Federal reserve bank shall discount for any Federal intermediate credit bank any such paper which bears the indorsement of any nonmember State bank or trust company which is eligible for membership in the Federal reserve system under the terms of section 9 of the Federal reserve act as amended. In discounting such paper each Federal reserve bank shall give preference to the demands of its own member banks and shall have due regard to the probable future needs of its own member banks; and no Federal reserve bank shall discount paper for any Federal intermediate credit bank when its own reserves amount to less than 50 per cent of its own aggregate liabilities for deposits and Federal reserve notes in actual circulation. The aggregate amount of paper discounted by all Federal reserve banks for any one Federal intermediate credit bank shall at no time exceed an amount equal to the paid-up and unimpaired capital and surplus of such Federal intermediate credit bank.

(*e*) **Limitations.**—The Federal Reserve Board prescribes no limitation on the aggregate amount of notes, drafts, bills of exchange, and acceptances with maturities in excess of three months but not exceeding six months, exclusive of days of grace, which may be discounted by any Federal reserve bank; but the aggregate amount of notes, drafts, bills of exchange, and acceptances with maturities in excess of six months, but not exceeding nine months, which may be discounted by any Federal reserve bank shall not exceed 10 per cent of its total assets.

SECTION VII. SIGHT DRAFTS SECURED BY BILLS OF LADING

A Federal reserve bank may discount for any of its member banks bills of exchange payable at sight or on demand which—

(*a*) Are drawn to finance the domestic shipment of nonperishable, readily marketable, staple agricultural products, and

(*b*) Are secured by bills of lading or other shipping documents conveying or securing title to such staples.

All such bills of exchange shall be forwarded promptly for collection, and demand for payment shall be made promptly, unless the drawer instructs that they be held until arrival of car, in which event they must be presented for payment within a reasonable time after notice of arrival of such staples at their destination has been received. In no event shall any such bill be held by or for the account of a Federal reserve bank for a period in excess of 90 days.

In discounting such bills Federal reserve banks may compute the interest to be deducted on the basis of the estimated life of each bill and adjust the amount thus deducted after payment of such bills to conform to the actual life thereof.

SECTION VIII. FACTORS' PAPER

Notes, drafts, and bills of exchange of factors issued as such for the purpose of making advances exclusively to producers of staple agricultural products in their raw state are eligible for discount with maturities not in excess of 90 days, exclusive of days of grace, irrespective of the requirements of Sections II (*a*) and II (*b*).

ARTICLE B

BANKERS' ACCEPTANCES[1]

SECTION IX. DEFINITION

A banker's acceptance within the meaning of this regulation is defined as a draft or bill of exchange, whether payable in the United States or abroad and whether payable in dollars or some other money, of which the acceptor is a bank or trust company, or a firm, person, company, or corporation engaged generally in the business of granting bankers' acceptance credits.

SECTION X. ELIGIBILITY

A Federal reserve bank may discount any such bill bearing the indorsement of a member bank and having a maturity at the time of discount not greater than that prescribed by Section XI (*a*), which has been drawn under a credit opened for the purpose of conducting or settling accounts resulting from a transaction or transactions involving any one of the following:

(1) The shipment of goods between the United States and any foreign country, or between the United States and any of its dependencies or insular possessions, or between foreign countries, or between dependencies or insular possessions and foreign countries;

(2) The shipment of goods within the United States, provided shipping documents conveying security title are attached at the time of acceptance; or

[1] For regulations governing the acceptance by member banks of drafts and bills of exchange drawn on them, see Regulation C, p. 208.

(3) The storage of readily marketable staples,[1] provided that the bill is secured at the time of acceptance by a warehouse, terminal, or other similar receipt, conveying security title to such staples, issued by a party independent of the customer, and provided further that the acceptor remains secured throughout the life of the acceptance. In the event that the goods must be withdrawn from storage prior to the maturity of the acceptance or the retirement of the credit, a trust receipt or other similar document covering the goods may be substituted in lieu of the original document, provided that such substitution is conditioned upon a reasonably prompt liquidation of the credit. In order to insure compliance with this condition it should be required, when the original document is released, either (*a*) that the proceeds of the goods will be applied within a specified time toward a liquidation of the acceptance credit or (*b*) that a new document, similar to the original one, will be resubstituted within a specified time.

Provided, that acceptances for any one customer in excess of 10 per cent of the capital and surplus of the accepting bank must remain actually secured throughout the life of the acceptance, and in the case of the acceptances of member banks this security must consist of shipping documents, warehouse receipts or other such documents, or some other actual security growing out of the same transactions as the acceptance, such as documentary drafts, trade acceptances, terminal receipts, or trust receipts which have been issued under such circumstances, and which cover goods of such a character, as to insure at all times a continuance of an effective and lawful lien in favor of the accepting bank, other trust receipts not being considered such actual security if they permit the customer to have access to or control over the goods.

A Federal reserve bank may also discount any bill drawn by a bank or banker in a foreign country or dependency or insular possession of the United States for the purpose of furnishing dollar exchange as provided in Regulation C, provided that it has a maturity at the time of discount of not more than three months, exclusive of days of grace.

SECTION XI. MATURITIES

(*a*) **Legal Requirements.**—No such acceptance is eligible for discount which has a maturity at the time of discount in excess of 90 days' sight, exclusive of days of grace, except that acceptances drawn for agricultural purposes and secured at the time of acceptance by warehouse receipts or other such documents conveying or securing title covering readily marketable staples may be discounted with maturities at the time of discount of not more than six months' sight, exclusive of days of grace.

(*b*) **General Conditions as to Maturity of Domestic Acceptances.**—Although a Federal reserve bank may legally discount an acceptance having

[1] A readily marketable staple within the meaning of these regulations may be defined as an article of commerce, agriculture, or industry of such uses as to make it the subject of constant dealings in ready markets with such frequent quotations of price as to make (*a*) the price easily and definitely ascertainable and (*b*) the staple itself easy to realize upon by sale at any time.

a maturity at the time of discount not greater than that prescribed under (*a*), it may decline to discount any acceptance the maturity of which is in excess of the usual or customary period of credit required to finance the underlying transaction or which is in excess of that period reasonably necessary to finance such transaction. Since the purpose of permitting the acceptance of drafts secured by warehouse receipts or other such documents is to permit of the temporary holding of readily marketable staples in storage pending a reasonably prompt sale, shipment, or distribution, no such acceptance should have a maturity in excess of the time ordinarily necessary to effect a reasonably prompt sale, shipment, or distribution into the process of manufacture or consumption.

SECTION XII. EVIDENCE OF ELIGIBILITY

A Federal reserve bank must be satisfied, either by reference to the acceptance itself or otherwise, that the acceptance is eligible for discount under the terms of the law and the provisions of this regulation. The bill itself should be drawn so as to evidence the character of the underlying transaction, but if it is not so drawn evidence of eligibility may consist of a stamp or certificate affixed by the acceptor in form satisfactory to the Federal reserve bank.

REGULATION B, SERIES OF 1924

(Superseding Regulation B of 1923)

OPEN MARKET PURCHASES OF BILLS OF EXCHANGE, TRADE ACCEPTANCES, AND BANKERS' ACCEPTANCES UNDER SECTION 14

SECTION I. GENERAL STATUTORY PROVISIONS

Section 14 of the Federal reserve act provides that, under rules and regulations to be prescribed by the Federal Reserve Board, Federal reserve banks may purchase and sell in the open market, at home or abroad, from or to domestic or foreign banks, firms, corporations, or individuals, bills of exchange of the kinds and maturities made eligible by the act for discount and bankers' acceptances, with or without the indorsement of a member bank.

SECTION II. GENERAL CHARACTER OF BILLS AND ACCEPTANCES ELIGIBLE

The Federal Reserve Board, exercising its statutory right to regulate the purchase of bills of exchange and acceptances, prescribes that—

(*a*) Any banker's acceptance or bill of exchange which is eligible for discount under the terms of Regulation A is eligible for purchase by Federal reserve banks in the open market, with or without the indorsement of a member bank, if—

(1) It has been accepted by the drawee prior to purchase; or

(2) It is accompanied or secured by shipping documents or by warehouse, terminal, or other similar receipts conveying security title; or

(3) It bears a satisfactory bank indorsement;

(*b*) A banker's acceptance growing out of a transaction involving the importation or exportation of goods may be purchased if it has a maturity not in excess of six months, exclusive of days of grace, provided that it conforms in other respects to the applicable requirements of Regulation A; and

(*c*) A banker's acceptance growing out of a transaction involving the storage within the United States of goods actually under contract for sale and not yet delivered or paid for may be purchased, provided that the acceptor is secured by the pledge of such goods, and provided further, that the acceptance conforms in other respects to the applicable requirements of Regulation A.

SECTION III. STATEMENTS

A bill of exchange, unless indorsed by a member bank, is not eligible for purchase until a satisfactory statement has been furnished of the financial condition of one or more of the parties thereto.

A banker's acceptance, unless accepted or indorsed by a member bank, is not eligible for purchase until the acceptor has furnished a satisfactory statement of its financial condition in form to be approved by the Federal reserve bank and has agreed in writing with a Federal reserve bank to inform it upon request concerning the transaction underlying the acceptance.

REGULATION C, SERIES OF 1924

(Superseding Regulation C of 1923)

ACCEPTANCE BY MEMBER BANKS OF DRAFTS AND BILLS OF EXCHANGE[1]

Article A

Acceptance of Drafts or Bills of Exchange Drawn against Domestic or Foreign Shipments of Goods or Secured by Warehouse Receipts Covering Readily Marketable Staples

SECTION I. STATUTORY PROVISIONS

Under the provisions of the sixth paragraph of section 13 of the Federal reserve act, as amended, any member bank may accept drafts or bills of exchange drawn upon it, having not more than six months' sight to run, exclusive of days of grace, which grow out of transactions involving the

[1] For regulations governing the rediscount of bankers' acceptances by Federal reserve banks, see Regulation A, page 200.

importation or exportation of goods; or which grow out of transactions involving the domestic shipment of goods, provided shipping documents conveying or securing title are attached at the time of acceptance; or which are secured at the time of acceptance by a warehouse receipt or other such document conveying or securing title covering readily marketable staples.[1] This paragraph limits the amount which any bank shall accept for any one person, company, firm, or corporation, whether in a foreign or domestic transaction, to an amount not exceeding at any time, in the aggregate, more than 10 per cent of its paid-up and unimpaired capital stock and surplus. This limit, however, does not apply in any case where the accepting bank remains secured either by attached documents or by some other actual security growing out of the same transaction as the acceptance. A trust receipt which permits the customer to have access to or control over the goods will not be considered by Federal reserve banks to be "actual security" within the meaning of section 13. A bill of lading draft, however, is "actual security" even after the documents have been released, provided that the draft is accepted by the drawee upon or before the surrender of the documents. The law also provides that any bank may accept such bills up to an amount not exceeding at any time, in the aggregate, more than one-half of its paid-up and unimpaired capital stock and surplus; or, with the approval of the Federal Reserve Board, up to an amount not exceeding at any time, in the aggregate, more than 100 per cent of its paid-up and unimpaired capital stock and surplus. In no event, however, shall the aggregate amount of acceptances growing out of domestic transactions exceed 50 per cent of such capital stock and surplus.

SECTION II. REGULATIONS

(1) Under the provisions of the law referred to above the Federal Reserve Board has determined that any member bank, having an unimpaired surplus equal to at least 20 per cent of its paid-up capital, which desires to accept drafts or bills of exchange drawn for the purposes described above, up to an amount not exceeding at any time, in the aggregate, 100 per cent of its paid-up and unimpaired capital stock and surplus, may file an application for that purpose with the Federal Reserve Board. Such application must be forwarded through the Federal reserve bank of the district in which the applying bank is located.

(2) The Federal reserve bank shall report to the Federal Reserve Board upon the standing of the applying bank, stating whether the business and banking conditions prevailing in its district warrant the granting of such application.

(3) The approval of any such application may be rescinded upon 90 days' notice to the bank affected.

[1]A readily marketable staple within the meaning of these regulations may be defined as an article of commerce, agriculture, or industry of such uses as to make it the subject of constant dealings in ready markets with such frequent quotations of price as to make (*a*) the price easily and definitely ascertainable, and (*b*) the staple itself easy to realize upon by sale at any time.

Article B

Acceptance of Drafts or Bills of Exchange Drawn for the Purpose of Creating Dollar Exchange

SECTION III. STATUTORY PROVISIONS

Section 13 of the Federal reserve act also provides that any member bank may accept drafts or bills of exchange drawn upon it having not more than three months' sight to run, exclusive of days of grace, drawn, under regulations to be prescribed by the Federal Reserve Board, by banks or bankers in foreign countries or dependencies or insular possessions of the United States for the purpose of furnishing dollar exchange as required by the usages of trade in the respective countries, dependencies, or insular possessions.

No member bank shall accept such drafts or bills of exchange for any one bank to an amount exceeding in the aggregate 10 per cent of the paid-up and unimpaired capital and surplus of the accepting bank unless the draft or bill of exchange is accompanied by documents conveying or securing title or by some other adequate security. No member bank shall accept such drafts or bills in an amount exceeding at any time in the aggregate one-half of its paid-up and unimpaired capital and surplus. This 50 per cent limit is separate and distinct from and not included in the limits placed upon the acceptance of drafts and bills of exchange as described under Article A of this regulation.

SECTION IV. REGULATIONS

Any member bank desiring to accept drafts drawn by banks or bankers in foreign countries or dependencies or insular possessions of the United States for the purpose of furnishing dollar exchange shall first make an application to the Federal Reserve Board setting forth the usages of trade in the respective countries, dependencies, or insular possessions in which such banks or bankers are located.

If the Federal Reserve Board should determine that the usages of trade in such countries, dependencies, or possessions require the granting of the acceptance facilities applied for, it will notify the applying bank of its approval and will also publish in the Federal Reserve Bulletin the name or names of those countries, dependencies, or possessions in which banks or bankers are authorized to draw on member banks whose applications have been approved for the purpose of furnishing dollar exchange.

The Federal Reserve Board reserves the right to modify or on 90 days' notice to revoke its approval either as to any particular member bank or as to any foreign country or dependency or insular possession of the United States in which it has authorized banks or bankers to draw on member banks for the purpose of furnishing dollar exchange.

REGULATION D, SERIES OF 1924

(Superseding Regulation D of 1923)

RESERVES OF MEMBER BANKS

SECTION I. STATUTORY PROVISIONS

Section 19 of the Federal reserve act provides, in part, as follows:

BANK RESERVES

SEC. 19. Demand deposits within the meaning of this act shall comprise all deposits payable within thirty days, and time deposits shall comprise all deposits payable after thirty days, all savings accounts and certificates of deposit which are subject to not less than thirty days' notice before payment, and all postal savings deposits.

Every bank, banking association, or trust company which is or which becomes a member of any Federal reserve bank shall establish and maintain reserve balances with its Federal reserve bank as follows:

(*a*) If not in a reserve or central reserve city, as now or hereafter defined, it shall hold and maintain with the Federal reserve bank of its district an actual net balance equal to not less than seven per centum of the aggregate amount of its demand deposits and three per centum of its time deposits.

(*b*) If in a reserve city, as now or hereafter defined, it shall hold and maintain with the Federal reserve bank of its district an actual net balance equal to not less than ten per centum of the aggregate amount of its demand deposits and three per centum of its time deposits: *Provided, however,* That if located in the outlying districts of a reserve city or in territory added to such a city by the extension of its corporate charter, it may, upon the affirmative vote of five members of the Federal Reserve Board, hold and maintain the reserve balances specified in paragraph (*a*) hereof.

(*c*) If in a central reserve city, as now or hereafter defined, it shall hold and maintain with the Federal reserve bank of its district an actual net balance equal to not less than thirteen per centum of the aggregate amount of its demand deposits and three per centum of its time deposits: *Provided, however,* That if located in the outlying districts of a central reserve city or in territory added to such city by the extension of its corporate charter, it may, upon the affirmative vote of five members of the Federal Reserve Board, hold and maintain the reserve balances specified in paragraphs (*a*) or (*b*) thereof.

* * * * * * *

The required balance carried by a member bank with a Federal reserve bank may, under the regulations and subject to such penalties as may be prescribed by the Federal Reserve Board, be checked against and withdrawn by such member bank for the purpose of meeting existing liabilities: *Provided,* *however*, That no bank shall at any time make new loans or shall pay any dividends unless and until the total balance required by law is fully restored.

In estimating the balances required by this act, the net difference of amounts due to and from other banks shall be taken as the basis for ascertaining the deposits against which required balances with Federal reserve banks shall be determined.

The various Liberty bond acts (act of April 24, 1917, sec. 7; act of September 24, 1917, sec. 8; act of April 4, 1918, sec. 8) provide, in part, as follows:

That the provisions . . . with reference to the reserves required to be kept by national banking associations and other member banks of the Federal Reserve System, shall not apply to deposits of public moneys by the United States in designated depositaries.

SECTION II. DEFINITIONS

(*a*) **Demand Deposits.**—The term "demand deposits" shall include all deposits which are payable within 30 days except "savings accounts," "time certificates of deposit," and "postal savings deposits," as defined below.

(*b*) **Time Deposits.**—The term "time deposits" shall include all "time deposits, open accounts," all "savings accounts," all "time certificates of deposit," and all "postal savings deposits," as defined below.

(*c*) **Time Deposits, Open Accounts.**—The term "time deposits, open accounts" shall mean deposits not evidenced by certificates of deposit or savings pass books, in respect to which a written contract is entered into with the depositor at the time the deposit is made that neither the whole nor any part of such deposit may be withdrawn, by check or otherwise, except on a given date, not less than 30 days after the date of the deposit, or on written notice which must be given by the depositor a certain specified number of days in advance, in no case less than 30 days.

(*d*) **Savings Accounts.**—The term "saving accounts" shall mean those deposits in respect to which—

(1) The pass book, certificate, or other similar form of receipt must be presented to the bank whenever a withdrawal is made,

(2) The depositor may at any time be required by the bank to give notice of an intended withdrawal not less than 30 days before a withdrawal is made, and

(3) The bank's printed regulations, accepted by the depositor at the time the account is opened, include the above requirements.

(*e*) **Time Certificates of Deposit.**—A "time certificate of deposit" is defined as an instrument evidencing the deposit with a bank, either with or without interest, of a certain sum specified on the face of the certificate payable in whole or in part to the depositor or on his order—

(1) On a certain date, specified on the certificate, not less than 30 days after the date of the deposit, or

(2) After the lapse of a certain specified time subsequent to the date of the certificate, in no case less than 30 days, or

(3) Upon written notice, which the bank may at its option require to be given a certain specified number of days, not less than 30 days, before the date of repayment, and

(4) In all cases only upon presentation of the certificate at each withdrawal for proper indorsement or surrender.

(*f*) **Postal Savings Deposits.**—The term "postal savings deposits" shall mean deposits of postal savings funds in banks under the terms of the postal savings act, approved June 25, 1910, as amended.

(*g*) **Government Deposits.**—The term "Government deposits" shall mean deposits of public moneys by the United States in designated depositaries.[1]

SECTION III. COMPUTATION OF RESERVES

(*a*) **Amounts of Reserves to Be Maintained.**—Every member bank of the Federal reserve system is required by law to maintain on deposit with the Federal reserve bank of its district an actual net balance equal to 3 per cent of its time deposits plus—

Seven per cent of its demand deposits if not in a reserve or central reserve city.

Ten per cent of its demand deposits if in a reserve city, except that if located in an outlying district of a reserve city or in territory added to such city by the extension of the city's corporate limits such bank may, upon the affirmative vote of five members of the Federal Reserve Board, be permitted to maintain 7 per cent reserves against its demand deposits.

Thirteen per cent of its demand deposits if located in a central reserve city, except that if located in an outlying district of a central reserve city or in territory added to such city by the extension of the city's corporate limits, such bank may, upon the affirmative vote of five members of the Federal Reserve Board, be permitted to maintain 7 per cent or 10 per cent reserves against its demand deposits.

No reserves are required to be maintained against Government deposits as defined above.

(*b*) **Deductions Allowed in Computing Reserves.**—Member banks in determining the amount against which reserves must be carried may deduct:

(1) From gross demand deposits, all Government deposits as defined above.

[1] Deposits made by United States postmasters of Government funds, other than postal savings deposits, received by them in their official capacity, constitute "Government deposits" within the meaning of this regulation and, when made in designated depositaries, are exempt from the reserve requirements of section 19. The following classes of deposits, however, are not "Government deposits" within such meaning and are not exempt from reserve requirements:

(1) Deposits of Philippine funds made by the Philippine Government and carried under the title, "Treasurer of the Philippine Islands currency reserve fund account."

(2) Deposits of Porto Rican funds made by the Porto Rican Government.

(3) Deposits of Indian funds under the control of the Department of the Interior.

(4) Deposits of States, counties, or municipalities.

(5) Deposits of the United States Shipping Board and the Emergency Fleet Corporation.

(2) From the amount of balances *due to* other banks, the amount of balances *due from* other banks (except Federal reserve banks and foreign banks), including in the amount due from banks, out of town items placed in the mail and charged to the account of correspondent banks, items with a Federal reserve bank in process of collection, checks drawn on banks located in the same city, and exchanges for clearing houses.

(*c*) **Availability of Checks as Reserve.**—Checks forwarded to a Federal reserve bank for collection or credit can not be counted as part of the minimum reserve balance to be carried by a member bank with its Federal reserve bank until such time as may be specified in the appropriate time schedule referred to in Section IV of Regulation J. If a member bank draw against checks before such time, the draft will be charged against its reserve balance if such balance be sufficient in amount to pay it; but any resulting impairment of reserve balances will be subject to all the penalties provided by the act.

SECTION IV. PENALITIES FOR DEFICIENCIES IN RESERVES

(*a*) **Basic Penalty.**—Inasmuch as it is essential that the law in respect to the maintenance by member banks of the required minimum reserve balance shall be strictly complied with, the Federal Reserve Board, under authority vested in it by section 19 of the Federal reserve act, hereby prescribes a basic penalty for deficiencies in reserves according to the following rules:

(1) Deficiencies in reserve balances of member banks in central reserve and reserve cities will be computed on the basis of average daily net deposit balances covering a weekly period of seven days. Deficiencies in reserve balances of other member banks will be computed on the basis of average daily net deposit balances covering a semimonthly period.

(2) Penalties for deficiencies in reserves will be assessed monthly on the basis of average daily deficiencies during each of the reserve computation periods ending in the preceding month.

(3) A basic rate of 2 per cent per annum above the Federal reserve bank discount rate on 90-day commercial paper will be assessed as a penalty on deficiencies in reserves of member banks.

(*b*) **Progressive Penalty.**—The Federal Reserve Board will also prescribe for any Federal reserve district, upon the application of the Federal reserve bank of that district, an additional progressive penalty for continued deficiencies in reserves, in accordance with the following rules:

(1) When a member bank in a central reserve or reserve city has had an average deficiency in reserves for six consecutive weekly periods, a progressive penalty, increasing at the rate of one-fourth of 1 per cent for each week thereafter during which the average reserve balance is deficient, will be assessed on weekly deficiencies until the required reserve has been restored and maintained for four consecutive weekly periods, provided that the maximum penalty charged will not exceed 10 per cent.

(2) When a member bank outside of a central reserve or reserve city has had an average deficiency in reserves for three consecutive semimonthly periods, a progressive penalty, increasing at the rate of one-half of 1 per

cent for each half month thereafter during which the average reserve balance is deficient, will be assessed on semimonthly deficiencies until the required reserve has been restored and maintained for two consecutive semimonthly periods, provided that the maximum penalty charged will not exceed 10 per cent.

SECTION V. LOANS AND DIVIDENDS WHILE RESERVES ARE DEFICIENT

It is unlawful for any member bank the reserves of which are at any time deficient to make any new loans or pay any dividends unless and until the total reserves required by law are fully restored, and the payment of penalties for deficiencies in reserves does not exempt member banks from this prohibition of law. As provided above, penalties for deficiencies in reserves are computed on the basis of the average reserve balances for weekly or semimonthly periods; but this prohibition of law applies whenever the reserves are deficient for one day or more, regardless of whether or not the average reserve balances for the weekly or semimonthly period are deficient.

REGULATION E, SERIES OF 1924

(Superseding Regulation E of 1923)

PURCHASE OF WARRANTS

SECTION I. STATUTORY REQUIREMENTS

Section 14 of the Federal reserve act reads in part as follows:

Every Federal reserve bank shall have power—

(*b*) To buy and sell, at home or abroad, bonds and notes of the United States, and bills, notes, revenue bonds, and warrants with a maturity from date of purchase of not exceeding six months, issued in anticipation of the collection of taxes or in anticipation of the receipt of assured revenues by any State, county, district, political subdivision, or municipality in the continental United States, including irrigation, drainage and reclamation districts, such purchases to be made in accordance with rules and regulations prescribed by the Federal Reserve Board.

SECTION II. DEFINITIONS

Within the meaning of this regulation—

The term "warrant" shall be construed to mean "bills, notes, revenue bonds, and warrants with a maturity from date of purchase of not exceeding six months."

The term "municipality" shall be construed to mean "State, county, district, political subdivision, or municipality in the continental United States, including irrigation, drainage, and reclamation districts."

The term "net funded indebtedness" shall be construed to mean the legal gross indebtedness of the municipality (including the amount of any school district or other bonds which depend for their redemption upon taxes levied upon property within the municipality) less the aggregate of the following items:

(1) The amount of outstanding bonds or other debt obligations made payable from current revenues;

(2) The amount of outstanding bonds issued for the purpose of providing the inhabitants of a municipality with public utilities, such as waterworks, docks, electric plants, transportation facilities, etc.: *Provided*, That evidence is submitted showing that the income from such utilities is sufficient for maintenance, for payment of interest on such bonds, and for the accumulation of a sinking fund sufficient for their redemption at maturity;

(3) The amount of outstanding improvement bonds, issued under laws which provide for the levying of special assessments against abutting property in amounts sufficient to insure the payment of interest on the bonds and the redemption thereof at maturity: *Provided*, That such bonds are direct obligations of the municipality and included in the gross indebtedness of the municipality; and

(4) The total of all sinking funds accumulated for the redemption of the gross indebtedness of the municipality, except sinking funds applicable to bonds described in (1), (2), and (3) above.

SECTION III. CLASS OF WARRANTS ELIGIBLE FOR PURCHASE

Any Federal reserve bank may purchase warrants issued by a municipality in anticipation of the collection of taxes or in anticipation of the receipt of assured revenues, provided—

(*a*) They are the general obligations of the entire municipality; it being intended to exclude as ineligible for purchase all such obligations as are payable from "local benefit" and "special assessment" taxes when the municipality at large is not directly or ultimately liable;

(*b*) They are issued in anticipation of taxes or revenues which are due and payable on or before the date of maturity of such warrants; but the Federal Reserve Board may waive this condition in specific cases. For the purposes of this regulation, taxes shall be considered as due and payable on the last day on which they may be paid without penalty;

(*c*) They are issued by a municipality—

(1) Which has been in existence for a period of 10 years;

(2) Which for a period of 10 years previous to the purchase has not defaulted for longer than 15 days in the payment of any part of either principal or interest of any funded debt authorized to be contracted by it;

(3) Whose net funded indebtedness does not exceed 10 per centum of the valuation of its taxable property, to be ascertained by the last preceding valuation of property for the assessment of taxes.

SECTION IV. "EXISTENCE" AND "NONDEFAULT"

Warrants will be construed to comply with that part of Section III (*c*) relative to term of existence and nondefault, under the following conditions:

(1) Warrants issued by or in behalf of any municipality which was, subsequent to the issuance of such warrants, consolidated with or merged into an

existing political division which meets the requirements of these regulations, will be deemed to be the warrants of such political division: *Provided*, That such warrants were assumed by such political division under statutes and appropriate proceedings the effect of which is to make such warrants general obligations of such assuming political division and payable, either directly or ultimately, without limitation to a special fund from the proceeds of taxes levied upon all the taxable real and personal property within its territorial limits.

(2) Warrants issued by or in behalf of any municipality which was, subsequent to the issuance of such warrants, wholly succeeded by a newly organized political division whose term of existence, added to that of such original political division or of any other political division so succeeded, is equal to a period of 10 years will be deemed to be warrants of such succeeding political division: *Provided*, That during such period none of such political divisions shall have defaulted for a period exceeding 15 days in the payment of any part of either principal or interest of any funded debt authorized to be contracted by it: *And provided further*, That such warrants were assumed by such new political division under statutes and appropriate proceedings the effect of which is to make such warrants general obligations of such assuming political division and payable, either directly or ultimately, without limitation to a special fund from the proceeds of taxes levied upon all the taxable real and personal property within its territorial limits.

(3) Warrants issued by or in behalf of any municipality which, prior to such issuance, became the successor of one or more, or was formed by the consolidation or merger of two or more, preexisting political divisions, the term of existence of one or more of which, added to that of such succeeding or consolidated political division, is equal to a period of 10 years, will be deemed to be warrants of a political division which has been in existence for a period of 10 years. *Provided*, That during such period none of such original, succeeding, or consolidated political divisions shall have defaulted for a period exceeding 15 days in the payment of any part of either principal or interest of any funded debt authorized to be contracted by it.

SECTION V. LIMITATIONS

(*a*) Except with the approval of the Federal Reserve Board, no Federal reserve bank shall purchase and hold an amount in excess of 25 per cent of the total amount of warrants outstanding at any time and issued in conformity with provisions of section 14(*b*), above quoted, and actually sold by a municipality.

(*b*) Except with the approval of the Federal Reserve Board, the aggregate amount invested by any Federal reserve bank in warrants of all kinds shall not exceed at the time of purchase a sum equal to 10 per cent of the deposits kept by its member banks with such Federal reserve bank.

(*c*) Except with the approval of the Federal Reserve Board, the maximum amount which may be invested at the time of purchase by any Federal reserve bank in warrants of any single municipality shall be limited to the following percentages of the deposits kept in such Federal reserve bank by its member banks:

Five per cent of such deposits in warrants of a municipality of 50,000 population or over;

Three per cent of such deposits in warrants of a municipality of over 30,000 population, but less than 50,000;

One per cent of such deposits in warrants of a municipality of over 10,000 population, but less than 30,000.

(*d*) Any Federal reserve bank may purchase from any of its member banks warrants of any municipality, indorsed by such member bank, with waiver of demand, notice, and protest if such warrants comply with Sections III and V (*b*) of these regulations, except that where a period of 10 years is mentioned in III (*c*) hereof a period of 5 years shall be substituted for the purposes of this clause.

SECTION VI. WARRANTS OF SMALL MUNICIPALITIES

Warrants of a municipality of 10,000 population or less shall be purchased only with the special approval of the Federal Reserve Board.

The population of a municipality shall be determined by the last Federal or State census. Where it can not be exactly determined the Federal Reserve Board will make special rulings.

SECTION VII. OPINION OF COUNSEL

Opinion of recognized counsel on municipal issues or of the regularly appointed counsel of the municipality as to the legality of the issue shall be secured and approved in each case by counsel for the Federal reserve bank.

REGULATION F, SERIES OF 1924

(Superseding Regulation F of 1923)

TRUST POWERS OF NATIONAL BANKS

SECTION I. STATUTORY PROVISIONS

The Federal reserve act as amended by the act of September 26, 1918, provides in part:

SEC. 11. The Federal Reserve Board shall be authorized and empowered:

(*k*) To grant by special permit to national banks applying therefor, when not in contravention of State or local law, the right to act as trustee, executor, administrator, registrar of stocks and bonds, guardian of estates, assignee, receiver, committee of estates of lunatics, or in any other fiduciary capacity in which State banks, trust companies, or other corporations which come into competition with national banks are permitted to act under the laws of the State in which the national bank is located.

Whenever the laws of such State authorize or permit the exercise of any or all of the foregoing powers by State banks, trust companies, or other corporations which compete with national banks, the granting to and the exercise of such powers by national banks shall not be deemed to be in contravention of State or local law within the meaning of this act.

National banks exercising any or all of the powers enumerated in this subsection shall segregate all assets held in any fiduciary capacity from the general assets of the bank and shall keep a separate set of books and records showing in proper detail all transactions engaged in under authority of this subsection. Such books and records shall be open to inspection by the State authorities to the same extent as the books and records of corporations organized under State law which exercise fiduciary powers, but nothing in this act shall be construed as authorizing the State authorities to examine the books, records, and assets of the national bank which are not held in trust under authority of this subsection.

No national bank shall receive in its trust department deposits of current funds subject to check or the deposit of checks, drafts, bills of exchange, or other items for collection or exchange purposes. Funds deposited or held in trust by the bank awaiting investment shall be carried in a separate account and shall not be used by the bank in the conduct of its business unless it shall first set aside in the trust department United States bonds or other securities approved by the Federal Reserve Board.

In the event of the failure of such bank the owners of the funds held in trust for investment shall have a lien on the bonds or other securities so set apart in addition to their claim against the estate of the bank.

Whenever the laws of a State require corporations acting in a fiduciary capacity, to deposit securities with the State authorities for the protection of private or court trusts, national banks so acting shall be required to make similar deposits and securities so deposited shall be held for the protection of private or court trusts, as provided by the State law.

National banks in such cases shall not be required to execute the bond usually required of individuals if State corporations under similar circumstances are exempt from this requirement.

National banks shall have power to execute such bond when so required by the laws of the State.

In any case in which the laws of a State require that a corporation acting as trustee, executor, administrator, or in any capacity specified in this section, shall take an oath or make an affidavit, the president, vice president, cashier, or trust officer of such national bank may take the necessary oath or execute the necessary affidavit.

It shall be unlawful for any national banking association to lend any officer, director, or employee any funds held in trust under the powers conferred by this section. Any officer, director, or employee making such loan, or to whom such loan is made, may be fined not more than $5,000, or imprisoned not more than five years, or may be both fined and imprisoned, in the discretion of the court.

In passing upon applications for permission to exercise the powers enumerated in this subsection, the Federal Reserve Board may take into consideration the amount of capital and surplus of the applying bank, whether or not such capital and surplus is sufficient under the circumstances of the case, the needs of the community to be served, and any other facts and circumstances that seem to it proper, and may grant or refuse the application accordingly: *Provided,* That no permit shall be issued to any national banking association having a capital and surplus less than the capital and surplus required by State law of State banks, trust companies, and corporations exercising such powers.

SECTION II. APPLICATIONS

A national bank desiring to exercise any or all of the powers authorized by section 11 (*k*) of the Federal reserve act, as amended by the act of September 26, 1918, shall make application to the Federal Reserve Board, on a form approved by said board, for a special permit authorizing it to exercise such powers. In the case of an original application—that is, where the applying bank has never been granted the right to exercise any of the powers authorized by section 11 (*k*)—the application should be made on F. R. B. Form 61. In the case of a supplemental application—that is, where the applying bank has already been granted the right to exercise one or more of the powers authorized by section 11 (*k*)—the application should be made on F. R. B. Form 61-*b*. Both forms are made a part of this regulation and may be obtained from the Federal Reserve Board or any Federal reserve bank.

SECTION III. SEPARATE DEPARTMENTS

Every national bank permitted to act under this section shall establish a separate trust department, and shall place such department under the management of an officer or officers, whose duties shall be prescribed by the board of directors of the bank.

SECTION IV. CUSTODY OF TRUST SECURITIES AND INVESTMENTS

The securities and investments held in each trust shall be kept separate and distinct from the securities owned by the bank and separate and distinct one from another. Trust securities and investments shall be placed in the joint custody of two or more officers or other employees designated by the board of directors of the bank and all such officers and employees shall be bonded.

SECTION V. DEPOSIT OF FUNDS AWAITING INVESTMENT OR DISTRIBUTION

Funds received or held in the trust department of a national bank awaiting investment or distribution may be deposited in the commercial department of the bank to the credit of the trust department, provided that the bank first delivers to the trust department, as collateral security, United States bonds, or other readily marketable securities owned by the bank, which collateral security shall at all times be at least equal in market value to the amount of the funds so deposited.[1]

SECTION VI. INVESTMENT OF TRUST FUNDS

(*a*) **Private Trusts.**—Funds held in trust must be invested in strict accordance with the terms of the will, deed, or other instrument creating the trust. Where the instrument creating the trust contains provisions authorizing the bank, its officers, or its directors to exercise their discretion in the matter of investments, funds held in trust may be invested only in those classes of securities which are approved by the directors of the bank. Where the instrument creating the trust does not specify the character or class of investments to be made and does not expressly vest in the bank, its officers, or its directors a discretion in the matter of investments, funds held in trust shall be invested in any securities in which corporate or individual fiduciaries in the State in which the bank is located may lawfully invest.

(*b*) **Court Trusts.**—Except as hereinafter provided, a national bank acting as executor, administrator, or in any other fiduciary capacity, under appointment by a court of competent jurisdiction, shall make all investments under an order of that court, and copies of all such orders shall be filed and preserved with the records of the trust department of the bank. If the court by general order vests a discretion in the national bank to invest funds held in trust, or if under the laws of the State in which the bank is located corporate fiduciaries appointed by the court are permitted to exercise such discretion, the national bank so appointed may invest such funds in any securities in which corporate or individual fiduciaries in the State in which the bank is located may lawfully invest.

SECTION VII. BOOKS AND ACCOUNTS

All books and records of the trust department shall be kept separate and distinct from other books and records of the bank. All accounts opened shall be so kept as to enable the national bank at any time to furnish information or reports required by the Federal or State authorities, and such books and records shall be open to the inspection of such authorities.

SECTION VIII. EXAMINATIONS

Examiners appointed by the Comptroller of the Currency or designated by the Federal Reserve Board will be instructed to make thorough and complete audits of the cash, securities, accounts, and investments of the trust department of the bank at the same time that examination is made of the banking department.

[1] The act requires that the bank shall set aside in the trust department "United States bonds or other securities approved by the Federal Reserve Board." This provision of the regulations is intended as a general approval by the Federal Reserve Board of all securities which comply with the requirements thereof and specific approval by the Federal Reserve Board is unnecessary as to such securities. The Board will not approve any securities which do not comply with these requirements.

SECTION IX. CONFORMITY WITH STATE LAWS

Nothing in these regulations shall be construed to give a national bank exercising the powers permitted under the provisions of section 11 (*k*) of the Federal reserve act, as amended, any rights or privileges in contravention of the laws of the State in which the bank is located within the meaning of that act.

SECTION X. REVOCATION OF PERMITS

The Federal Reserve Board reserves the right to revoke permits granted under the provisions of section 11(*k*), as amended, in any case where in the opinion of the board a bank has willfully violated the provisions of the Federal reserve act or of these regulations or the laws of any State relating to the operations of such bank when acting in any of the capacities permitted under the provisions of section 11(*k*), as amended.

SECTION XI. CHANGES IN REGULATIONS

These regulations are subject to change by the Federal Reserve Board; provided, however, that no such change shall prejudice any obligation undertaken in good faith under regulations in effect at the time the obligation was assumed.

REGULATION G, SERIES OF 1924

(Superseding Regulation G of 1923)

LOANS ON FARM LAND AND OTHER REAL ESTATE

Section 24 of the Federal reserve act provides in part that—

Any national banking association not situated in a central reserve city may make loans secured by improved and unencumbered farm land situated within its Federal reserve district or within a radius of one hundred miles of the place in which such bank is located, irrespective of district lines, and may also make loans secured by improved and unencumbered real estate located within one hundred miles of the place in which such bank is located, irrespective of district lines; but no loan made upon the security of such farm land shall be made for a longer time than five years, and no loan made upon the security of such real estate as distinguished from farm land shall be made for a longer time than one year nor shall the amount of any such loan, whether upon such farm land or upon such real estate, exceed fifty per centum of the actual value of the property offered as security. Any such bank may make such loans, whether secured by such farm land or such real estate, in an aggregate sum equal to twenty-five per centum of its capital and surplus or to one-third of its time deposits and such banks may continue hereafter as heretofore to receive time deposits and to pay interest on the same.

National banks not located in central reserve cities may, therefore, legally make loans secured by improved and unencumbered farm land or other real estate as provided by this section.

Certain conditions and restrictions must, however, be observed—

(*a*) There must be no prior lien on the land; that is, the lending bank must hold an absolute first mortgage or deed of trust.

(*b*) The amount of the loan must not exceed 50 per cent of the actual value of the land by which it is secured.

(*c*) The maximum amount of loans which a national bank may make on real estate, whether on farm land or on other real estate as distinguished from farm land, is limited under the terms of the act to an amount not in excess of one-third of its time deposits at the time of the making of the loan, and not in excess of one-third of its average time deposits during the preceding calendar year: *Provided, however,* That if one-third of such time deposits as of the date of making the loan or one-third of the average time deposits for the preceding calendar year is less than one-fourth of the capital and surplus of the bank as of the date of making the loan, the bank in such event shall have authority to make loans upon real estate under the terms of the act to the extent of one-fourth of the bank's capital and surplus as of that date.

(*d*) Farm land to be eligible as security for a loan by a national bank must be situated within the Federal reserve district in which such bank is located or within a radius of 100 miles of such bank irrespective of district lines.

(*e*) Real estate as distinguished from farm land to be eligible as security for a loan by a national bank must be located within a radius of 100 miles of such bank irrespective of district lines.

(*f*) The right of a national bank to "make loans" under section 24 includes the right to purchase or discount loans already made as well as the right to make such loans in the first instance: *Provided, however,* That no loan secured by farm land shall have a maturity of more than five years from the date on which it was purchased or made by the national bank and that no loan secured by other real estate shall have a maturity of more than one year from such date.

(*g*) Though no national bank is authorized under the provisions of section 24 to make a loan on the security of real estate, other than farm land, for a period exceeding one year, nevertheless, at the end of the year, the maturing note may be renewed or extended for another year, and in order to obviate the necessity of making a new mortgage or deed of trust for each renewal the original mortgage or deed of trust may be so drawn in the first instance as to cover possible future renewals of the original note. Under no circumstances, however, must the bank obligate itself in advance to make such a renewal. It must in all cases preserve the right to require payment at the end of the year and to foreclose the mortgage should that action become necessary. The same principles apply to loans of longer maturities secured by farm lands.

(*h*) In order that real estate loans held by a bank may be readily classified, a statement signed by the officers making a loan and having knowledge of the facts upon which it is based must be attached to each note secured by a first mortgage on the land by which the loan is secured, certifying in detail as of the date of the loan that all of the requirements of law have been duly observed.

REGULATION H, SERIES OF 1924

(Superseding Regulation H of 1923)

MEMBERSHIP OF STATE BANKS AND TRUST COMPANIES

SECTION I. BANKS ELIGIBLE FOR MEMBERSHIP

1. **Incorporation.**—In order to be eligible for membership in a Federal reserve bank, a State bank or trust company must have been incorporated under a special or general law of the State or district in which it is located.

2. **Capital Stock.**—Under the terms of section 9 of the Federal reserve act as amended, no applying bank can be admitted to membership in a Federal reserve bank unless—

(*a*) It possesses a paid-up, unimpaired capital sufficient to entitle it to become a national banking association in the place where it is situated, under the provisions of the national bank act, or

(*b*) It possesses a paid-up, unimpaired capital of at least 60 per cent of such amount, and, under penalty of loss of membership, complies with the rules and regulations herein prescribed by the Federal Reserve Board fixing the time within which and the method by which the unimpaired capital of such bank shall be increased out of net income to equal the capital required under (*a*).

In order to become a member of the Federal reserve system, therefore, any State bank or trust company must have a minimum paid-up capital stock at the time it becomes a member, as follows:

If located in a city or town with a population of—	Minimum capital if admitted under clause (*a*)	Minimum capital if admitted under clause (*b*)
Not exceeding 3,000 inhabitants	$ 25,000	$ 15,000
Exceeding 3,000 but not exceeding 6,000 inhabitants	50,000	30,000
Exceeding 6,000 but not exceeding 50,000 inhabitants	100,000	60,000
Exceeding 50,000 inhabitants	200,000	120,000

Any bank admitted to membership under clause (*b*) must also, as a condition of membership, the violation of which will subject it to expulsion from the Federal reserve system, increase its paid-up and unimpaired capital within five years after the approval of its application by the Federal Reserve

Board to the amount required under (*a*). For the purpose of providing for such increase, every such bank shall set aside each year in a fund exclusively applicable to such capital increase not less than 50 per cent of its net earnings for the preceding year prior to the payment of dividends, and if such net earnings exceed 12 per cent of the paid-up capital of such bank, then all net earnings in excess of 6 per cent of the paid-up capital shall be carried to such fund, until such fund is large enough to provide for the necessary increase in capital. Whenever such fund shall be large enough to provide for the necessary increase in capital, or at such other time as the Federal Reserve Board may require, such fund or as much thereof as may be necessary shall be converted into capital by a stock dividend or used in any other manner permitted by State law to increase the capital of such bank to the amount required under (*a*): *Provided, however,* That such bank may be excused in whole or in part from compliance with the terms of this paragraph if it increases its capital through the sale of additional stock: *Provided, further,* That nothing herein contained shall be construed as requiring any such bank to violate any provision of State law, and in any case in which the requirements of this paragraph are inconsistent with the requirements of State law the requirements of this paragraph may be waived and the subject covered by a special condition of membership to be prescribed by the Federal Reserve Board.

SECTION II. APPLICATION FOR MEMBERSHIP

Any eligible State bank or trust company may make application on F. R. B. Form 83a, made a part of this regulation, to the Federal Reserve Board for an amount of capital stock in the Federal reserve bank of its district equal to 6 per cent of the paid-up capital stock and surplus of such State bank or trust company. This application must be forwarded direct to the Federal reserve agent of the district in which the applying bank or trust company is located and must be accompanied by Exhibits I, II, and III, referred to on page 1 of the application blank.

SECTION III. APPROVAL OF APPLICATION

In passing upon an application the Federal Reserve Boad will consider especially—

(1) The financial condition of the applying bank or trust company and the general character of its management;

(2) Whether the corporate powers exercised by the applying bank or trust company are consistent with the purposes of the Federal reserve act; and

(3) Whether the laws of the State or district in which the applying bank or trust company is located contain provisions likely to prevent proper compliance with the provisions of the Federal reserve act and the regulations of the Federal Reserve Board made in conformity therewith.

If, in the judgment of the Federal Reserve Board, an applying bank or trust company conforms to all the requirements of the Federal reserve act and these regulations, and is otherwise qualified for membership, the board will issue a certificate of approval subject to such conditions as it may deem necessary. When the conditions imposed by the board have been accepted by the applying bank or trust company the board will issue a certificate of approval, whereupon the applying bank or trust company shall make a payment to the Federal reserve bank of its district of one-half of the amount of its subscription, *i.e.*, 3 per cent of the amount of its paid-up capital and surplus, and upon receipt of this payment the appropriate certificate of stock will be issued by the Federal reserve bank. The remaining half of its subscription shall be subject to call when deemed necessary by the Federal Reserve Board.

SECTION IV. CONDITIONS OF MEMBERSHIP

Pursuant to the authority contained in the first paragraph of section 9 of the Federal reserve act, which provides that the Federal Reserve Board may permit applying banks to become members of the Federal reserve system "*subject to such conditions as it may prescribe,*" the Federal Reserve Board will prescribe the following conditions of membership for each bank or trust company hereafter applying for admission to the Federal reserve system, in addition to such other conditions as the board may consider necessary or advisable in the particular case—

(1) Except with the permission of the Federal Reserve Board, such bank or trust company shall not cause or permit any change to be made in the general character of its assets or in the scope of the functions exercised by it at the time of admission to membership, such as will tend to affect materially the standard maintained at the time of its admission to the Federal reserve system and required as a condition of membership.

(2) Such bank or trust company shall at all times conduct its business and exercise its powers with due regard to the safety of its customers.

(3) Such bank or trust company shall not reduce its capital stock except with the permission of the Federal Reserve Board.

(4) Such bank or trust company shall not, except after applying for and receiving the permission of the Federal Reserve Board, establish any branch, agency, or additional office.

(5) Such bank or trust company, except after applying for and receiving the permission of the Federal Reserve Board, shall not consolidate with or absorb or purchase the assets of any other bank or branch bank for the purpose of operating such bank or branch bank as a branch of the applying bank; nor directly or indirectly, through affiliated corporations or otherwise, acquire an interest in another bank in excess of 20 per cent of the capital stock of such other bank; nor directly or indirectly promote the establishment of any new bank for the purpose of acquiring such an interest in it; nor make any arrangement to acquire such an interest.

(6) Such bank or trust company shall reduce to, and maintain within, the limits prescribed by the laws of the State in which it is located, any loan which may be in excess of such limits.

(7) Such bank or trust company shall reduce to an amount equal to 10 per cent of its capital and surplus all balances in excess thereof, if any,

which are carried with banks or trust companies which are not members of the Federal reserve system, and shall at all times maintain such balances within such limits.

(8) Such bank or trust company may accept drafts and bills of exchange drawn upon it of any *character* permitted by the laws of the State of its incorporation; but the aggregate *amount* of all acceptances outstanding at any one time shall not exceed the limitations imposed by section 13 of the Federal reserve act, that is, the aggregate amount of acceptances outstanding at any one time which are drawn for the purpose of furnishing dollar exchange in countries specified by the Federal Reserve Board shall not exceed 50 per cent of its capital and surplus, and the aggregate amount of all other acceptances, whether domestic or foreign, outstanding at any one time shall not exceed 50 per cent of its capital and surplus, except that the Federal Reserve Board, upon the application of such bank or trust company, may increase this limit from 50 per cent to 100 per cent of its capital and surplus: *Provided, however*, That in no event shall the aggregate amount of domestic acceptances outstanding at any one time exceed 50 per cent of the capital and surplus of such bank or trust company.

(9) The board of directors of said bank or trust company shall adopt a resolution authorizing the interchange of reports and information between the Federal reserve bank of the district in which such bank or trust company is located and the banking authorities of the State in which such bank is located.

Each bank or trust company applying for membership hereafter will be required to agree to the above conditions and any other conditions which the board may prescribe, prior to the admission of such bank or trust company to the Federal reserve system.

SECTION V. PERMISSION NECESSARY PRIOR TO MAKING CHANGES IN ASSETS OR SCOPE OF FUNCTIONS

Each bank or trust company hereafter admitted to the Federal reserve system and each bank or trust company which has heretofore been admitted subject to condition No. 1 of Section IV or subject to any similar condition shall, through the Federal reserve agent, request the permission of the Federal Reserve Board prior to taking any action which may result in a change in the general character of its assets or in the scope of the functions exercised by it at the time of admission to membership, such as will tend to affect materially the standard maintained at the time of its admission to the Federal reserve system and required as a condition of membership.

The board considers that among the actions which may result in changes of the kind referred to in this section are the establishment of branches, agencies or additional offices and consolidations or mergers with, or purchases of the assets of other banks or branch banks.

SECTION VI. PRINCIPLES GOVERNING ESTABLISHMENT OF BRANCHES

In passing upon applications by State banks and trust companies for permission to establish branches, agencies or additional offices, under condition No. 4 of Section IV, or under any similar condition which may have been prescribed by the Federal Reserve Board and agreed to by any bank or trust company heretofore admitted to the Federal reserve system, the Federal Reserve Board will observe the following principles—

(1) The Federal Reserve Board will as a general principle restrict the establishment of branches, agencies or additional offices by such banks or trust companies to the city of location of the parent bank and the territorial area within the State contiguous thereto, as said territory has been defined in the board's resolution of November 7, 1923,[1] excepting in instances where the State banking authorities have certified and the board finds that public necessity and advantage render a departure from the principle necessary or desirable.

(2) The Federal Reserve Board as a general principle will not consider an application by such bank or trust company for a permit to establish a branch, agency or additional office, unless the authorities of the State in which such bank is located regularly make simultaneous examinations of the head office and all branches, agencies or additional offices of such bank, nor unless the examinations made by the State authorities are, in the judgment of the Federal Reserve Board, of such character in every respect as to furnish the Federal Reserve Board with sufficient information as to the condition of such bank and the character of its management to enable the Federal Reserve Board fully to protect the interests of the public.

(3) The Federal Reserve Board as a general principle will require each bank or trust company which establishes or maintains branches, agencies or additional offices to maintain for itself and such branches, agencies or additional offices an adequate ratio of capital to total liabilities and an adequate percentage of its total investments in the form of paper or securities eligible for discount or purchase by Federal reserve banks.

(4) The Federal Reserve Board will not consider any application to establish a branch, agency or additional office until the State banking authorities have approved the establishment of such branch, agency or additional office, and the directors or executive committee and the Federal reserve agent of the Federal reserve bank of the district in which such bank or trust company is located have made a report upon the financial condition of the applying bank or trust company, the general character of its management, what effect the establishment of such branch, agency or additional office would have upon other banks or branches in the locality in which it is to be established, and whether, in their opinion, it would be in the interest of the public in such locality, together with their recommendation as to whether or not the application should be granted.

(5) When permission is granted for the establishment of such branch agency or additional office same shall be established and opened for business within six months after such permission is granted. If such branch, agency

[1] The term "contiguous territory" is defined in the board's resolution of Nov. 7, 1923, to mean: "The territory of a city or town whose corporate limits at some point coincide with the corporate limits of the city or town in which the parent bank is located."

or additional office is not established within such time the permit shall become void, unless the time is extended by the board for good cause.

(6) The Federal Reserve Board reserves the right to cancel any permit which it may grant hereafter to establish any branch, agency or additional office whenever it shall appear, after hearing, that such branch, agency or additional office is being operated in a manner contrary to the interest of the public in the locality in which it is established.

SECTION VII. POWERS AND RESTRICTIONS

Every State bank or trust company while a member of the Federal reserve system—

(1) Shall retain its full charter and statutory rights as a State bank or trust company, subject to the provisions of the Federal reserve act, to the regulations of the Federal Reserve Board, and to the conditions prescribed by the Federal Reserve Board and agreed to by such State bank or trust company prior to its admission:

(2) Shall maintain such improvements and changes in its banking practice as may have been specifically required of it by the Federal Reserve Board as a condition of its admission and shall not lower the standard of banking then required of it;

(3) Shall enjoy all the privileges and observe all those requirements of the Federal reserve act and of the regulations of the Federal Reserve Board made in conformity therewith which are applicable to State banks and trust companies which have become member banks; and

(4) Shall comply at all times with any and all conditions of membership prescribed by the Federal Reserve Board at the time of the admission of such member bank to the Federal reserve system.

SECTION VIII. EXAMINATIONS AND REPORTS

Every State bank or trust company, while a member of the Federal reserve system, shall be subject to examinations made by direction of the Federal Reserve Board or of the Federal reserve bank by examiners selected or approved by the Federal Reserve Board.

In order to avoid duplication, examinations of State banks and trust companies made by State authorities will be accepted in lieu of examinations by examiners selected or approved by the board wherever these are satisfactory to the directors of the Federal reserve bank, and examiners from the staff of the board or of the Federal reserve banks will, whenever desirable, be designated by the board to act with the examination staff of the State in order that uniformity in the standard of examination may be assured.

Every State bank or trust company, while a member of the Federal reserve system, shall be required to make in each year not less than three reports of condition on F. R. B. Form 105. Such reports shall be made to the Federal reserve bank of its district on call of such bank, on dates to be fixed by the Federal Reserve Board. They shall also make semiannual reports of earnings and dividends on F. R. B. Form 107. As dividends may be declared from time to time, each State bank or trust company member shall also furnish to the Federal reserve bank of its district a special notification of dividend declared on F. R. B. Form 107a. R. F. B. Forms 105, 107 and 107a are made a part of this regulation.

REGULATION I, SERIES OF 1924

(Superseding Regulation I of 1923)

INCREASE OR DECREASE OF CAPITAL STOCK OF FEDERAL RESERVE BANKS AND CANCELLATION OF OLD AND ISSUE OF NEW STOCK CERTIFICATES

SECTION I. INCREASE OF CAPITAL STOCK

(*a*) **New National Banks.**—Each new national bank, while in process of organization (including each nonmember State bank converting into a national bank,[1] while in process of such conversion) shall file with the Federal reserve bank of its district on application to the Federal Reserve Board on F. R. B. Form 30 (or as to a nonmember State bank converting into a national bank, on F. R. B. Form 30a), made a part of this regulation, for an amount of capital stock of the Federal reserve bank of its district equal to 6 per cent of the paid-up capital stock and surplus of such new national bank. Such application shall be forwarded promptly to the Federal Reserve Board, and if it is found to be in proper form the Federal Reserve Board will grant its approval effective if and when the Comptroller of the Currency issues to such bank his certificate of authority to commence business. If its application is approved, the applying bank shall thereupon make a payment to the Federal reserve bank of its district of one-half of the amount of its subscription, *i.e.*, 3 per cent of the amount of its paid-up capital and surplus; and upon receipt of this payment the Federal reserve bank will issue a receipt therefor, place the amount in a suspense account, and notify the Federal Reserve Board that it has been received. When the Comptroller of the Currency issues to such applying bank his certificate of authority to commence business the Federal reserve bank shall issue a stock certificate to the applying bank, and the capital stock of the Federal reserve bank represented by such certificate shall be considered as issued as of the date upon which the Comptroller of the Currency issues his certificate

[1] Whenever any State member bank is converted into a national bank under Sec. 5154 of the Revised Statutes, as amended by Sec. 8 of the Federal reserve act, it may continue to hold as a national bank its shares of Federal reserve bank stock previously held as a State bank, and need not file any application for Federal reserve bank stock, unless the aggregate amount of its capital and surplus is increased, in which event it should file an application for additional stock, as provided in Section I (*c*). The certificate of stock issued in the old name of the member bank, however, should be surrendered and canceled, and a new certificate should be issued in lieu thereof, in the new name of the member bank, as provided in Section III.

of authority to commence business. The remaining half of the subscription of the applying bank shall be subject to call when deemed necessary by the Federal Reserve Board.

(*b*) **State Banks Becoming Members.**—Any State bank or trust company desiring to become a member of the Federal reserve system shall make application as provided in Regulation H, and when such application has been approved by the Federal Reserve Board and all requirements of Regulation H have been complied with the Federal reserve bank shall issue an appropriate certificate of stock as provided in Regulation H.

(*c*) **Increase of Capital or Surplus by Member Banks.**—Whenever any member bank shall increase the aggregate amount of its paid-up capital stock and surplus, it shall file with the Federal reserve bank of which it is a member an application on F. R. B. Form 56, made a part of this regulation, for an additional amount of the capital stock of the Federal reserve bank of its district equal to 6 per cent of such increase. After such application has been approved by the Federal reserve agent and by the Federal Reserve Board, the applying member bank shall pay to the Federal reserve bank of its district one-half of the amount of its additional subscription, and when this amount has been paid the appropriate certificate of stock shall be issued by the Federal reserve bank. The remaining half of such additional subscription shall be subject to call when deemed necessary by the Federal Reserve Board.

(*d*) **Consolidation of Member Banks.**—Whenever two or more member banks consolidate and such consolidation results in the consolidated bank acquiring by operation of law[1] the Federal reserve bank stock owned by the other consolidating bank or banks, and which also results in the consolidated bank having an aggregate capital and surplus in excess of the aggregate capital and surplus of the consolidating member banks, such consolidated bank shall file an application for additional stock, as provided in Section I (*c*).

(*e*) **Certifying Increases of Federal Reserve Bank Stock.**—Whenever the capital stock of any Federal reserve bank shall be increased the board of directors of such Federal reserve bank shall certify such increase to the Comp-

[1] Section 5 of the Federal reserve act provides that "Shares of the capital stock of Federal reserve banks owned by member banks shall not be transferred or hypothecated." This provision prevents a transfer of Federal reserve bank stock by purchase, but does not prevent a transfer by operation of law. When there is a merger of member banks involving the liquidation of one of such banks and the purchasing of the assets of the liquidating bank by the bank continuing in existence, it is necessary for the liquidating bank to surrender its Federal reserve bank stock and for the purchasing bank to apply for new stock. On the other hand, if member banks consolidate, under a statute which does not require the liquidation of any of the consolidating banks, and the assets and obligations of the consolidated banks are transferred to the consolidated bank by operation of law, the consolidated bank becomes the owner of the Federal reserve bank stock of the consolidating banks as soon as the consolidation takes effect and such stock technically need not be surrendered. The certificates of stock issued in the names of the consolidating banks, however, should be surrendered and canceled, and a new certificate should be issued in lieu thereof in the new name of the consolidated bank, as provided in Section III. A consolidation of national banks under the act of Congress entitled "An Act to provide for the consolidation of national banking associations," approved November 7, 1918, meets all of these conditions.

troller of the Currency on F. R. B. Form 58, which is made a part of this regulation. Such certifications shall be made quarterly as of the last days of December, March, June, and September of each year. A duplicate copy of each certificate shall be forwarded to the Federal Reserve Board.

SECTION II. DECREASE OF CAPITAL STOCK

(*a*) **Reduction of Capital by Member Bank.**—Whenever a member bank reduces the amount of its paid-up capital stock and, in the case of reduction of the paid-up capital of a national bank, such reduction has been approved by the Comptroller of the Currency and by the Federal Reserve Board in accordance with the provisions of section 28 of the Federal reserve act, it shall file with the Federal reserve bank of which it is a member an application for the surrender and cancellation of stock on F. R. B. Form 60, which is made a part of this regulation. When this application has been approved by the Federal reserve agent and the Federal Reserve Board, the Federal reserve bank shall accept and cancel the stock which the applying bank is entitled to surrender and shall refund to the member bank the proportionate amount due such bank on account of the stock canceled.

(*b*) **Insolvency of Member Bank.**—Whenever a member bank shall be declared insolvent and a receiver appointed by the proper authorities, such receiver shall, within six months from the date of his appointment, file with the Federal reserve bank of which the insolvent bank is a member an application on F. R. B. Form 87, which is made a part of this regulation, for the surrender and cancellation of the stock held by such insolvent member bank, and for the refund of all balances due to it. If the receiver shall fail to make such application within the time specified, the Federal reserve agent shall report the facts to the Federal Reserve Board with a recommendation as to the action to be taken, whereupon the Federal Reserve Board will either issue an order to cancel such stock or, if the circumstances warrant it, grant the receiver additional time in which to file such an application. Upon approval of such an application by the Federal reserve agent and the Federal Reserve Board, or upon the issuance of such an order by the Federal Reserve Board, the Federal reserve bank shall cancel such stock and shall adjust accounts between the member bank and the Federal reserve bank by applying to any indebtedness of the insolvent member bank to such Federal reserve bank all cash-paid subscriptions made by it on the stock canceled with one-half of 1 per cent per month from the period of last dividend, if earned, not to exceed the book value thereof, and the balance, if any, shall be paid to the duly authorized receiver of such insolvent member bank.

(*c*) **Voluntary Liquidation of Member Bank.**—Whenever a member bank goes into voluntary liquidation and a liquidating agent is appointed, such agent shall, within six months from the date of his appointment, file with the Federal reserve bank of which the liquidating bank is a member an application on F. R. B. Form 86, if a national bank, and on F. R. B. Form 143, if a State bank, which forms are made a part of this regulation, for the surrender and cancellation of the stock held by it and for the refund of all balances due to such liquidating member bank. If the liquidating agent shall fail to make such application within the time specified, the Federal reserve agent shall report the facts to the Federal Reserve Board with a recommendation as to the action to be taken, whereupon the Federal Reserve Board will either issue an order to cancel such stock, or, if the circumstances warrant it, grant the liquidating agent additional time in which to file such an application. Upon approval of such an application by the Federal reserve agent and the Federal Reserve Board, or upon the issuance of such an order by the Federal Reserve Board, the Federal reserve bank shall cancel such stock and shall adjust accounts between the liquidating member bank and the Federal reserve bank by applying to the indebtedness of the liquidating member bank to such Federal reserve bank all cash-paid subscriptions made by it on the stock canceled with one-half of 1 per cent per month from the period of last dividend, if earned, not to exceed the book value thereof, and the balance, if any, shall be paid to the duly authorized liquidating agent of such liquidating member bank.

(*d*) **Consolidation of Member Banks.**—Whenever there is a consolidation of two or more member banks which results in the consolidated bank acquiring by operation of law (see note 11 on p. 231) the Federal reserve bank stock owned by the other consolidating banks, and which also results in the consolidated bank having a paid-up capital less than the aggregate paid-up capital of the consolidating member banks, the consolidated bank shall file with the Federal reserve bank of which it is a member an application for the surrender and cancellation of stock on F. R. B. Form 60a, which is made a part of this regulation. Upon the approval of this application by the Federal reserve agent and the Federal Reserve Board, the Federal reserve bank shall accept and cancel the stock which the applying bank is entitled to surrender, and shall refund to the applying bank the proportionate amount due such bank on account of the stock canceled.

(*e*) **Certifying Reductions of Federal Reserve Bank Stock.**—All reductions of the capital stock of a Federal reserve bank shall, in accordance with the provisions of section 6 of the Federal reserve act, be certified to the Comptroller of the Currency by the board of directors of such Federal reserve bank on F. R. B. Form 59, which is made a part of this regulation. Such certifications shall be made quarterly as of the last days of December, March, June, and September of each year. A duplicate copy of each certificate shall be forwarded to the Federal Reserve Board.

SECTION III. CANCELLATION OF OLD AND ISSUE OF NEW STOCK CERTIFICATES

Whenever a member bank changes its name or, by consolidation with another member bank, acquires by operation of law (see note 11 on p. 231) the Federal reserve bank stock previously held by such other member bank, it shall surrender to the Federal reserve bank the certificate of Federal reserve bank stock which was issued to it under its old name, or which was issued to such other member bank. The certificate so surrendered shall be indorsed by the member bank surrendering it or by the member bank to which it was originally issued and shall be accompanied by proper proof of the change of name or consolidation. Upon receipt of such certificate of stock so indorsed, together with such proof, the Federal reserve bank shall cancel the certificate so surrendered and shall issue in lieu thereof to and in the name of the member bank surrendering it a new certificate for the number of shares represented by the certificate so surrendered, or if the member bank is entitled to surrender some of the stock which is represented by the surrendered certificate, and an application for the surrender and cancellation of such stock is at the same time made in accordance with this regulation, the new certificate shall be for the number of shares represented by the surrendered certificate less the number of shares canceled pursuant to such application. All cases where certificates of stock are surrendered and new certificates issued in lieu thereof and in a different name shall be reported to the Federal Reserve Board by the Federal reserve agent.

REGULATION J, SERIES OF 1924

(Superseding Regulation J of 1920)

CHECK CLEARING AND COLLECTION

SECTION I. STATUTORY PROVISIONS

Section 16 of the Federal reserve act authorizes the Federal Reserve Board to require each Federal reserve bank to exercise the function of a clearing house for its member banks, and section 13 of the Federal reserve act, as amended by the act approved June 21, 1917, authorizes each Federal reserve bank to receive from any nonmember bank or trust company, solely for the purposes of exchange or of collection, deposits of current funds in lawful money, national-bank notes, Federal reserve notes, checks and drafts payable upon presentation, or maturing notes and bills, provided such nonmember bank or trust company maintains with its Federal reserve bank a balance sufficient to offset the items in transit held for its account by the Federal reserve bank.

SECTION II. GENERAL REQUIREMENTS

In pursuance of the authority vested in it under these provisions of law, the Federal Reserve Board, desiring to afford both to the public and to the various banks of the country a direct, expeditious, and economical system of check collection and settlement of balances, has arranged to have each Federal reserve bank exercise the functions of a clearing house and collect checks for such of its member banks as desire to avail themselves of its privileges and for such nonmember State banks and trust companies as may maintain with the Federal reserve bank balances sufficient to qualify them under the provisions of section 13 to send items to Federal reserve banks for purposes of exchange or of collection. Such nonmember State banks and trust companies will hereinafter be referred to as nonmember clearing banks.

Each Federal reserve bank shall exercise the functions of a clearing house and collect checks under the general terms and conditions hereinafter set forth.

SECTION III. CHECKS RECEIVED FOR COLLECTION

(1) Each Federal reserve bank will receive at par from its member banks and from nonmember clearing banks in its district, checks[1] drawn on all member and nonmember clearing banks, and checks drawn on all other nonmember banks which are collectable at par in funds acceptable to the Federal reserve bank of the district in which such nonmember banks are located.

(2) Each Federal reserve bank will receive at par from other Federal reserve banks, and from all member and nonmember clearing banks in other Federal reserve districts which are authorized to route direct for the credit of their respective Federal reserve banks, checks drawn on all member and nonmember clearing banks of its district, and checks drawn on all other nonmember banks of its district which are collectable at par in funds acceptable to the collecting Federal reserve bank.

(3) No Federal reserve bank shall receive on deposit or for collection any check drawn on any nonmember bank which cannot be collected at par in funds acceptable to the Federal reserve bank of the district in which such nonmember bank is located.

SECTION IV. TIME SCHEDULE AND AVAILABILITY OF CREDITS

(1) Each Federal reserve bank will publish a time schedule showing the time at which any item sent to it will be counted as reserve and become available for withdrawal or other use by the sending bank. For all checks received, the sending bank will be given immediate credit, or deferred credit, in accordance with such time schedule, and as provided below.

(2) For all such checks as are received for immediate credit in accordance with such time schedule, immediate credit, subject to final payment, will be given upon the books of the Federal reserve bank at full face value in the reserve account or clearing account upon day of receipt, and the proceeds will at once be counted as reserve and become available for withdrawal or other use by the sending bank.

(3) For all such checks as are received for deferred credit in accordance with such time schedule, deferred credit, subject to final payment, will be entered upon the banks of the Federal reserve bank at full face value, but the proceeds will not be counted as reserve nor become available for withdrawal or other use by the sending bank until such time as may be specified in such time schedule,[2] at which time credit will be transferred from the

[1] A check is generally defined as a draft or order upon a bank or banking house, purporting to be drawn upon a deposit of funds, for the payment at all events of a certain sum of money to the order of a certain person therein named, or to him or his order, or to bearer, and payable on demand.

[2] For rules for computation of reserves and penalties for deficiencies in reserves, see Regulation D, Sections III and IV, pp. 213 and 214.

deferred account to the reserve account or clearing account subject to final payment and will then be counted as reserve and become available for withdrawal or other use by the sending bank.

SECTION V. TERMS OF COLLECTION

The Federal Reserve Board hereby authorizes the Federal reserve banks to handle such checks subject to the following terms and conditions; and each member and nonmember clearing bank which sends checks to any Federal reserve bank for deposit or collection shall by such action be deemed (a) to authorize the Federal reserve banks to handle such checks subject to the following terms and conditions, (b) to warrant its own authority to give the Federal reserve banks such authority, and (c) to agree to indemnify any Federal reserve bank for any loss resulting from the failure of such sending bank to have such authority.

(1) A Federal reserve bank will act only as agent of the bank from which it receives such checks and will assume no liability except for its own negligence and its guaranty of prior indorsements.

(2) A Federal reserve bank may present such checks for payment or send such checks for collection direct to the bank on which they are drawn or at which they are payable, or in its discretion may forward them to another agent with authority to present them for payment or send them for collection direct to the bank on which they are drawn or at which they are payable.

(3) A Federal reserve bank may in its discretion and at its option, either directly or through an agent, accept either cash or bank drafts in payment of or in remittance for such checks and shall not be held liable for any loss resulting from the acceptance of bank drafts in lieu of cash, nor for the failure of the drawee bank or any agent to remit for such checks, nor for the nonpayment of any bank draft accepted in payment or as a remittance from the drawee bank or any agent.

(4) Checks received by a Federal reserve bank on its member or nonmember clearing banks will ordinarily be forwarded or presented direct to such banks, and such banks will be required to remit or pay therefor at par in cash or bank draft acceptable to the collecting Federal reserve bank, or at the option of such Federal reserve bank to authorize such Federal reserve bank to charge their reserve accounts or clearing accounts; provided, however, that any Federal reserve bank may reserve the right in its check collection circular to charge such items to the reserve account or clearing account of any such bank at any time when in any particular case the Federal reserve bank deems it necessary to do so.

(5) Checks received by a Federal reserve bank payable in other districts will be forwarded for collection upon the terms and conditions herein provided to the Federal reserve bank of the district in which such checks are payable.

(6) The amount of any check for which payment in actually and finally collected funds is not received shall be charged back to the forwarding bank, regardless of whether or not the check itself can be returned.

SECTION VI. OTHER RULES AND REGULATIONS

Each Federal reserve bank shall also promulgate rules and regulations not inconsistent with the terms of the law or of this regulation, governing the details of its check clearing and collection operations. Such rules and regulations shall be set forth by the Federal reserve banks in their letters of instruction to their member and nonmember clearing banks and shall be binding upon any member or nonmember clearing bank which sends any check to such Federal reserve bank for collection or to any other Federal reserve bank for the account of such Federal reserve bank for collection.

REGULATION K, SERIES OF 1924

(Superseding Regulation K of 1923)

BANKING CORPORATIONS AUTHORIZED TO DO FOREIGN BANKING BUSINESS UNDER THE TERMS OF SECTION 25(a) OF THE FEDERAL RESERVE ACT

SECTION I. ORGANIZATION

Any number of natural persons, not less in any case than five, may form a Corporation[1] under the provisions of section 25(*a*) for the purpose of engaging in international or foreign banking or other international or foreign financial operations or in banking or other financial operations in a dependency or insular possession of the United States either directly or through the agency, ownership, or control of local institutions in foreign countries or in such dependencies or insular possessions.

SECTION II. ARTICLES OF ASSOCIATION

Any persons desiring to organize a corporation for any of the purposes defined in section 25(*a*) shall enter into articles of association (see F. R. B. Form 151 which is suggested as a satisfactory form of articles of association) which shall specify in general terms the objects for which the Corporation is formed, and may contain any other provisions not inconsistent with law which the Corporation may see fit to adopt for the regulation of its business and the conduct of its affairs. The articles of association shall be signed by each person intending to participate in the organization of the Corporation and when signed shall be forwarded to the Federal Reserve Board in whose office they shall be filed.

SECTION III. ORGANIZATION CERTIFICATE

All of the persons signing the articles of association shall under their hands make an organization certificate on F. R. B. Form 152, which is made a part of this regulation, and which shall state specifically:

[1] Whenever these regulations refer to a corporation spelled with a capital C, they relate to a corporation organized under section 25(*a*) of the Federal reserve act.

First. The name assumed by the Corporation.

Second. The place or places where its operations are to be carried on.

Third. The place in the United States where its home office is to be located.

Fourth. The amount of its capital stock and the number of shares into which it shall be divided.

Fifth. The names and places of business or residences of persons executing the organization certificate and the number of shares to which each has subscribed.

Sixth. The fact that the certificate is made to enable the persons subscribing the same and all other persons, firms, companies, and corporations who or which may thereafter subscribe to or purchase shares of the capital stock of such Corporation to avail themselves of the advantages of this section.

The persons signing the organization certificate shall acknowledge the execution thereof before a judge of some court of record or notary public who shall certify thereto under the seal of such court or notary. Thereafter the certificate shall be forwarded to the Federal Reserve Board to be filed in its office.

SECTION IV. TITLE

Inasmuch as the name of the Corporation is subject to the approval of the Federal Reserve Board, a preliminary application for that approval should be filed with the Federal Reserve Board on F. R. B. Form 150, which is made a part of this regulation. This application should state merely that the organization of a Corporation under the proposed name is contemplated and may request the approval of that name and its reservation for a period of 30 days. No corporation which issues its own bonds, debentures, or other such obligations will be permitted to have the word "bank" as a part of its title. No Corporation which has the word "Federal" in its title will be permitted also to have the word "bank" as a part of its title. So far as possible the title of the Corporation should indicate the nature or reason of the business contemplated and should in no case resemble the name of any other corporation to the extent that it might result in misleading or deceiving the public as to its identity, purpose, connections, or affiliations.

SECTION V. AUTHORITY TO COMMENCE BUSINESS

After the articles of association and organization certificate have been made and filed with the Federal Reserve Board, and after they have been approved by the Federal Reserve Board and a preliminary permit to begin business has been issued by the Federal Reserve Board, the association shall become and be a body corporate, but none of its powers except such as are incidental and preliminary to its organization shall be exercised until it has been formally authorized by the Federal Reserve Board by a final permit generally to commence business.

Before the Federal Reserve Board will issue its final permit to commence business, the president or cashier, together with at least three of the directors, must certify (*a*) that each director elected is a citizen of the United States; (*b*) that a majority of the shares of stock is owned by citizens of the United States, by corporations the controlling interest in which is owned by citizens of the United States, chartered under the laws of the United States, or by firms or companies the controlling interest in which is owned by citizens of the United States; and (*c*) that of the authorized capital stock specified in the articles of association at least 25 per cent has been paid in in cash and that each shareholder has individually paid in in cash at least 25 per cent of his stock subscription. Thereafter the cashier shall certify to the payment of the remaining installments as and when each is paid in, in accordance with law.

SECTION VI. CAPITAL STOCK

No corporation may be organized under the terms of section 25(*a*) with a capital stock of less than $2,000,000. The par value of each share of stock shall be specified in the articles of association, and no Corporation will be permitted to issue stock of no par value. If there is more than one class of stock, the name and amount of each class and the obligations, rights, and privileges attaching thereto shall be set forth fully in the articles of association. Each class of stock shall be so named as to indicate to the investor as nearly as possible what is its character and to put him on notice of any unusual attributes.

SECTION VII. TRANSFERS OF STOCK

Section 25(*a*) provides in part that—

A majority of the shares of the capital stock of any such corporation shall at all times be held and owned by the citizens of the United States, by corporations the controlling interest in which is owned by citizens of the United States, chartered under the laws of the United States or of a State of the United States, or by firms or companies the controlling interest in which is owned by citizens of the United States.

In order to insure compliance at all times with the requirements of this provision after the organization of the Corporation, shares of stock shall be issuable and transferable only on the books of the Corporation. Every application for the issue or transfer of stock shall be accompanied by an affidavit of the party to whom it is desired to issue or transfer stock, or by his or its duly authorized agent, stating—

In the Case of an Individual.—(*a*) Whether he is or is not a citizen of the United States and, if a citizen of the United States, whether he is a natural-born citizen or a citizen by naturalization, and if naturalized, whether he remains for any purpose in the allegiance of any foreign sovereign or State; (*b*) whether there is or is not any arrangement under which he is to hold the shares or any of the shares which he desires to have issued or transferred to him, in trust for or in any way under the control of any foreign State or any foreigner, foreign corporation, or any corporation under foreign control; and if so, the nature thereof.

In the Case of a Corporation.—(*a*) Whether such corporation is or is not chartered under the laws of the United States or of a State of the United

States. If it is not, no further declaration is necessary, but if it is, it must also be stated (*b*) whether the controlling interest in such corporation is or is not owned by citizens of the United States, and (*c*) whether there is or is not any arrangement under which such corporation will hold the shares or any of the shares if issued or transferred to such corporation in trust for or in any way under the control of any foreign State or any foreigner or foreign corporation or any corporation under foreign control; and if so, the nature thereof.

In the Case of a Firm or Company.—(*a*) Whether the controlling interest in such firm or company is or is not owned by citizens of the United States; and, if so, (*b*) whether there is or is not any arrangement under which such firm or company will hold the shares or any of the shares if issued or transferred to such firm or company in trust for or in any way under the control of any foreign State or any foreigner or foreign corporation or any corporation under foreign control; and if so, the nature thereof.

The Board of directors of the Corporation, whether acting directly or through an agent, may, before making any issue or transfer of stock, require such further evidence as in their discretion they may think necessary in order to determine whether or not the issue or transfer of the stock would result in a violation of the law. No issue or transfer of stock which would cause 50 per cent or more of the total amount of stock issued or outstanding to be held contrary to the provisions of the law or these regulations shall be made upon the books of the Corporation. The decision of the board of directors in each case shall be final and conclusive and not subject to any question by any person, firm, or corporation on any ground whatsoever.

If at any time by reason of the fact that the holder of any shares of the Corporation ceases to be a citizen of the United States, or, in the opinion of the board of directors, becomes subject to the control of any foreign State or foreigner or foreign corporation or corporation under foreign control, 50 per cent or more of the total amount of capital stock issued or outstanding is held contrary to the provisions of the law or these regulations, the board of directors may, when apprised of that fact, forthwith serve on the holder of the shares in question a notice in writing requiring such holder within two months to transfer such shares to a citizen of the United States, or to a firm, company, or corporation approved by the board of directors as an eligible stockholder. When such notice has been given by the board of directors the shares of stock so held shall cease to confer any vote until they have been transferred as required above and if on the expiration of two months after such notice the shares shall not have been so transferred, the shares shall be forfeited to the Corporation.

The board of directors shall prescribe in the by-laws of the Corporation appropriate regulations for the registration of the shares of stock in accordance with the terms of the law and these regulations. The by-laws must also provide that the certificates of stock issued by the Corporation shall contain provisions sufficient to put the holder on notice of the terms of the law and the regulations of the Federal Reserve Board defining the limitations upon the rights of transfer.

SECTION VIII. OPERATIONS IN THE UNITED STATES

No Corporation shall carry on any part of its business in the United States except such as shall be incidental to its international or foreign business. Agencies may be established in the United States with the approval of the Federal Reserve Board for specific purposes, but not generally to carry on the business of the Corporation.

SECTION IX. INVESTMENTS IN THE STOCK OF OTHER CORPORATIONS

It is contemplated by the law that a Corporation shall conduct its business abroad either directly or indirectly through the ownership or control of corporations, and it is accordingly provided that with the consent of the Federal Reserve Board a Corporation may invest in the stock, or other certificates of ownership, of any other corporation organized—

(*a*) Under the provisions of section 25(*a*) of the Federal reserve Act;

(*b*) Under the laws of any foreign country or a colony or dependency thereof;

(*c*) Under the laws of any State, dependency, or insular possession of the United States;

provided, first, that such other corporation is not engaged in the general business of buying or selling goods, wares, merchandise, or commodities in the United States; and second, that it is not transacting any business in the United States except such as is incidental to its international or foreign business.

Except with the approval of the Federal Reserve Board, no Corporation shall invest an amount in excess of 15 per cent of its capital and surplus in the stock of any corporation engaged in the business of banking, or an amount in excess of 10 per cent of its capital and surplus in the stock of any other kind of corporation.

No Corporation shall purchase any stock in any other corporation organized under the terms of section 25(*a*) or under the laws of any State, which is in substantial competition therewith, or which holds stock or certificates of ownership in corporations which are in substantial competition with the purchasing Corporation. This restriction, however, does not apply to corporations organized under foreign laws.

SECTION X. BRANCHES

No Corporation shall establish any branches except with the approval of the Federal Reserve Board, and in no case shall any branch be established in the United States.

SECTION XI. ISSUE OF DEBENTURES, BONDS, AND PROMISSORY NOTES

Approval of the Federal Reserve Board.—No Corporation shall make any public or private issue of its debentures, bonds, notes, or other such obligations without the approval of the Federal Reserve Board, but this restriction shall not apply to notes issued by the Corporation in borrowing from banks or bankers for temporary purposes not to exceed one year. The approval of the Federal Reserve Board will be based solely upon the right of the Corporation to make the issue under the terms of this regulation and shall not be understood in any way to imply that the Federal Reserve Board has approved or passed upon the merits of such obligations as an investment. The Federal Reserve Board will consider the general character and scope of the business of the Corporation in determining the amount of debentures, bonds, notes, or other such obligations of the Corporation which may be issued by it.

Application.—Every application for the approval of any such issue by a Corporation shall be accompanied by (1) a statement of the condition of the Corporation in such form and as of such date as the Federal Reserve Board may require; (2) a detailed list of the securities by which it is proposed to secure such issue, stating their maturities, indorsements, guaranties, or collateral, if any, and in general terms the nature of the transaction or transactions upon which they were based; and (3) such other data as the Federal Reserve Board may from time to time require.

Advertisements.—No circular letter, or other document advertising the issue of the obligations of a Corporation shall state or contain any reference to the fact that the Federal Reserve Board has granted its approval of the issue to which the advertisement relates. This requirement will be enforced strictly in order that there may be no possibility of the public's misconstruing such a reference to be an approval by the Federal Reserve Board of the merits or desirability of the obligations as an investment.

SECTION XII. SALE OF FOREIGN SECURITIES

Approval of the Federal Reserve Board.—No Corporation shall offer for sale any foreign securities with its indorsement or guaranty, except with the approval of the Federal Reserve Board, but such approval will be based solely upon the right of the Corporation to make such a sale under the terms of this regulation and shall not be understood in any way to imply that the Federal Reserve Board has approved or passed upon the merits of such securities as an investment.

Application.—Every application for the approval of such sale shall be accompanied by a statement of the character and amount of the securities proposed to be sold, their indorsements, guaranties, or collateral, if any, and such other data as the Federal Reserve Board may from time to time require.

Advertisements.—No circular, letter, or other document advertising the sale of foreign securities by a Corporation with its indorsement or guaranty shall state or contain any reference to the fact that the Federal Reserve Board has granted its approval of the sale of the securities to which the advertisement relates.

SECTION XIII. ACCEPTANCES

Kinds.—Any Corporation may accept (1) drafts and bills of exchange drawn upon it which grow out of transactions involving the importation or exportation of goods, and (2) drafts and bills of exchange which are drawn by banks or bankers located in foreign countries or dependencies or insular possessions of the United States for the purpose of furnishing dollar exchange as required by the usages of trade in such countries, dependencies, and possessions, provided, however, that, except with the approval of the Federal Reserve Board and subject to such limitations as it may prescribe, no Corporation shall exercise its power to accept drafts or bills of exchange if at the time such drafts or bills are presented for acceptance it has outstanding any debentures, bonds, notes, or other such obligations issued by it.

Maturity.—Except with the approval of the Federal Reserve Board, no Corporation shall accept any draft or bill of exchange which grows out of a transaction involving the importation or exportation of goods with a maturity in excess of six months, or shall accept any draft or bill of exchange drawn for the purpose of furnishing dollar exchange with a maturity in excess of three months.

Limitations.—(1) Individual drawers: No acceptances shall be made for the account of any one drawer in an amount aggregating at any time in excess of 10 per cent of the subscribed capital and surplus of the Corporation, unless the transaction be fully secured or represents an exportation or importation of commodities and is guaranteed by a bank or banker of undoubted solvency. (2) Aggregates: Whenever the aggregate of acceptances outstanding at any time (*a*) exceeds the amount of the subscribed capital and surplus, 50 per cent of all the acceptances in excess of the amount shall be fully secured; or (*b*) exceeds twice the amount of the subscribed capital and surplus, all the acceptances outstanding in excess of such amount shall be fully secured. (The Corporation shall elect whichever requirement (*a*) or (*b*) calls for the smaller amount of secured acceptances.) In no event shall any Corporation have outstanding at any one time acceptances drawn for the purpose of furnishing dollar exchange in an amount aggregating more than 50 per cent of its subscribed capital and surplus.

Reserves.—Against all acceptances outstanding which mature in 30 days or less a reserve of at least 15 per cent shall be maintained, and against all acceptances outstanding which mature in more than 30 days a reserve of at least 3 per cent shall be maintained. Reserves against acceptances must be in liquid assets of any or all of the following kinds: (1) Cash; (2) balances with other banks; (3) bankers' acceptances; and (4) such securities as the Federal Reserve Board may from time to time permit.

SECTION XIV. DEPOSITS

In the United States.—No Corporation shall receive in the United States any deposits except such as are incidental to or for the purpose of carrying out transactions in foreign countries or dependencies of the United States where the Corporation has established agencies, branches, correspondents, or where it operates through the ownership or control of subsidiary corporations. Deposits of this character may be made by individuals, firms, banks, or other corporations, whether foreign or domestic, and may be time deposits or on demand.

Outside the United States.—Outside the United States a Corporation may receive deposits of any kind from individuals, firms, banks, or other corporations, provided, however, that if such corporation has any of its bonds, debentures, or other such obligations outstanding it may receive abroad only such deposits as are incidental to the conduct of its exchange, discount, or loan operations.

Reserves.—Against all deposits received in the United States a reserve of not less than 13 per cent must be maintained. This reserve may consist of cash in vault, a balance with the Federal reserve bank of the district in which the head office of the Corporation is located, or a balance with any member bank. Against all deposits received abroad the Corporation shall maintain such reserves as may be required by local laws and by the dictates of sound business judgment and banking principles.

SECTION XV. GENERAL LIMITATIONS AND RESTRICTIONS

Liabilities of One Borrower.—The total liabilities to a Corporation of any person, company, firm, or corporation for money borrowed, including in the liabilities of a company or firm the liabilities of the several members thereof, shall at no time exceed 10 per cent of the amount of its subscribed capital and surplus, except with the approval of the Federal Reserve Board: *Provided, however,* That the discount of bills of exchange drawn in good faith against actually existing values and the discount of commercial or business paper actually owned by the person negotiating the same shall not be considered as money borrowed within the meaning of this paragraph. The liability of a customer on account of an acceptance made by the Corporation for his account is not a liability for money borrowed within the meaning of this paragraph unless and until he fails to place the Corporation in funds to cover the payment of the acceptance at maturity or unless the Corporation itself holds the acceptance.

Aggregate Liabilities of the Corporation.—The aggregate of the Corporation's liabilities outstanding on account of acceptances, average domestic and foreign deposits, debentures, bonds, notes, guaranties, indorsements, and other such obligations shall not exceed at any one time ten times the amount of the Corporation's subscribed capital and surplus except with the approval of the Federal Reserve Board. In determining the amount of the liabilities within the meaning of this paragraph, indorsements of bills of exchange having not more than six months to run, drawn and accepted by others than the Corporation, shall not be included.

Operations Abroad.—Except as otherwise provided in the law and these regulations, a Corporation may exercise abroad not only the powers specifically set forth in the law but also such incidental powers as may be usual in the determination of the Federal Reserve Board in connection with the transaction of the business of banking or other financial operations in the countries in which it shall transact business. In the exercise of any of these powers abroad a Corporation must be guided by the laws of the country in which it is operating and by sound business judgment and banking principles.

SECTION XVI. MANAGEMENT

The directors, officers, or employees of a Corporation shall exercise their rights and perform their duties as directors, officers, or employees, with due regard to both the letter and the spirit of the law and these regulations. For the purpose of these regulations the Corporation shall, of course, be responsible for all acts of omission or commission of any of its directors, officers, employees, or representatives in the conduct of their official duties.

The character of the management of a Corporation and its general attitude toward the purpose and spirit of the law and these regulations will be considered by the Federal Reserve Board in acting upon any application made under the terms of these regulations.

SECTION XVII. REPORTS AND EXAMINATIONS

Reports.—Each Corporation shall make at least two reports annually to the Federal Reserve Board at such times and in such form as it may require.

Examinations.—Each Corporation shall be examined at least once a year by examiners appointed by the Federal Reserve Board. The cost of examinations shall be paid by the Corporation examined.

SECTION XVIII. AMENDMENTS TO REGULATIONS

These regulations are subject to amendment by the Federal Reserve Board from time to time, provided, however, that no such amendment shall prejudice obligations undertaken in good faith under regulations in effect at the time they were assumed.

REGULATION L, SERIES OF 1924

(Superseding Regulation L of 1923)

INTERLOCKING BANK DIRECTORATES UNDER THE CLAYTON ACT

SECTION I. DEFINITIONS

Within the meaning of this regulation—

The term "member bank" shall apply to any national bank and any State bank or trust company which is a member of the Federal reserve system.

The term "national bank" shall be construed to apply not only to national banking associations but also to banks, banking associations, and trust companies organized or operating under the laws of the United States, including all banks and trust companies doing business in the District of Columbia, regardless of the sources of their charters.

The term "resources" shall be construed to mean an amount equal to the sum of the deposits, capital, surplus, and undivided profits.

The term "State bank" shall include any bank, banking association, or trust company incorporated under State law.

The term "private banker" shall apply to any unincorporated individual engaging in one or more phases of the banking business as that term is generally understood and to any member of an unincorporated firm engaging in such business.

The term "Edge Act" shall mean section 25(*a*) of the Federal reserve act, as amended December 24, 1919.

The term "Edge corporation" shall mean any corporation organized under the provisions of the Edge Act.

The term "city of over 200,000 inhabitants" includes any city, incorporated town, or village of more than 200,000 inhabitants, as shown by the last preceding decennial census of the United States. Any bank located anywhere within the corporate limits of such city is located in a city of over 200,000 inhabitants within the meaning of the Clayton Act, even though it is located in a suburb of an outlying district at some distance from the principal part of the city.

SECTION II. PROHIBITIONS OF CLAYTON ACT

Under section 8 of the Clayton Antitrust Act—

(1) No person who is a director or other officer or employee of a national bank having resources aggregating more than $5,000,000 can legally serve at the same time as director, officer, or employee of any other national bank, regardless of its location.

(2) No person who is a director in a State bank or trust company having resources aggregating more than $5,000,000 or who is a private banker having resources aggregating more than $5,000,000 can legally serve at the same time as director of any national bank, regardless of its location.

(3) No person can legally be a director, officer, or employee of a national bank located in a city of more than 200,000 inhabitants who is at the same time a private banker in the same city or a director, officer, or employee of any other bank (State or national) located in the same city, regardless of the size of such bank.

The eligibility of a director, officer, or employee under the foregoing provisions is determined by the average amount of deposits, capital, surplus, and undivided profits as shown in the official statements of such bank, banking association, or trust company filed as provided by law during the fiscal year next preceding the date set for the annual election of directors, and when a director, officer, or employee has been elected or selected in accordance with the provisions of the Clayton Act it is lawful for him to continue as such for one year thereafter under said election or employment.

When any person elected or chosen as a director, officer, or employee of any bank is eligible at the time of his election or selection to act for such bank in such capacity his eligibility to act in such capacity is not affected by reason of any change in the affairs of such bank from whatsoever cause until the expiration of one year from the date of his election or employment.

SECTION III. EXCEPTIONS

The provisions of section 8 of the Clayton Act—

(1) Do not apply to mutual savings banks not having a capital stock represented by shares.

(2) Do not prohibit a person from being at the same time a director, officer, or employee of a national bank and not more than one other national bank, State bank, or trust company, where the entire capital stock of one is owned by the stockholders of the other.

(3) Do not prohibit a person from being at the same time a class A director of a Federal reserve bank and also an officer or director, or both an officer and a director, in one member bank.

(4) Do not prohibit a person who is serving as director, officer, or employee of a national bank, even though it has resources aggregating over $5,000,000 from serving at the same time as director, officer, or employee of any number

of State banks and trust companies, provided such State institutions are not located in the same city of over 200,000 inhabitants as the national bank and do not have resources aggregating in the case of any one bank more than $5,000,000.

(5) Do not prohibit a person from serving at the same time as director, officer, or employee of any number of national banks, provided no two of them are located in the same city of over 200,000 inhabitants and no one of them has resources aggregating over $5,000,000.

(6) Do not prohibit a person who is not a director, officer, or employee of any national bank from serving at the same time as officer, director, or employee of any number of State banks or trust companies, regardless of their locations and resources.

(7) Do not prohibit a person who is an officer or employee but not a director of a State bank from serving as director, officer, or employee of a national bank, even though either or both of such banks have resources aggregating over $5,000,000, provided both banks are not located in the same city of over 200,000 inhabitants.

(8) Do not prohibit a person who is an officer or employee but not a director of a national bank from serving at the same time as director, officer, or employee of a State bank, even though either or both of such banks have resources aggregating over $5,000,000, provided both banks are not located in the same city of over 200,000 inhabitants.

(9) Do not apply to persons who have obtained the consent or approval of the Federal Reserve Board under the provisions of the Kern amendment, section 25 of the Federal reserve act, or the Edge Act, as hereinafter provided.

Exceptions Cumulative.—The above exceptions are cumulative.

SECTION IV. PERMISSION OF THE FEDERAL RESERVE BOARD UNDER KERN AMENDMENT

By the Kern amendment, approved May 15, 1916, as amended May 26, 1920, the Clayton Act was amended so as to authorize the Federal Reserve Board to permit any private banker or any officer, director, or employee of any member bank or class A director of a Federal reserve bank to serve as director, officer, or employee of not more than two other banks, banking associations, or trust companies coming within the prohibitions of the Clayton Act, provided such other banks are not in substantial competition with such private banker or member bank.

Substantial Competition.—If the institutions involved are not in substantial competition, the board is authorized, in its discretion, to grant, withhold, or revoke such consent; but if they are in substantial competition, the board has no discretion in the matter and must refuse such consent.

The board has adopted the following statement of general principles for its guidance in determining whether banks are in substantial competition within the meaning of the Kern amendment to the Clayton Act:

"In general, two banks will be deemed to be in substantial competition if they actually compete for a considerable amount of business, *i.e.*, if a considerable portion of the business of each is of the same character and in doing or seeking such business they actually compete for the same customers or prospective customers, regardless of whether or not it is probable or possible that an interlocking directorate between them would result in injury to the public by making credit less available. If the statements of two banks show that each has a considerable amount of the same class of deposits or loans and it appears from the evidence submitted that they are so located as to be in a position to serve the same customers conveniently, the board will presume, in the absence of evidence to the contrary, that they are in substantial competition. This presumption may be rebutted, however, by any evidence showing that they are not actually competing for such business, *e.g.*, that they actually serve different classes of customers, that the business in question is not actually sought by one bank but is merely incidental to its other business, or that competition has already been eliminated through common stock ownership. The existence of substantial competition, however, may be shown by evidence other than that described above."

This is not intended as a precise definition of the term "substantial competition," but merely as a broad statement of the general principles which will be observed by the Federal Reserve Board in determining whether banks are in substantial competition. Whether or not substantial competition exists in any particular case is a question of fact which must be determined in the light of all the facts and circumstances involved in such case.

Burden of Proof.—Inasmuch as the Federal Reserve Board has no power to permit a person to serve two or more banks coming within the prohibitions of the Clayton Act unless the institutions involved are not in substantial competition, the applicant for such permission has the burden of proving to the board that such institutions are not in substantial competition.

When Obtained.—Inasmuch as the Kern amendment excepts from the prohibitions of the Clayton Act only those "who shall first procure the consent of the Federal Reserve Board," it is a violation of the law to serve two or more institutions in the prohibited classes before such consent has been obtained. Such consent should be obtained, therefore, before becoming an officer, director, or employee of more than one bank in the prohibited classes. Such consent may be procured before the person applying therefor has been elected as a class A director of a Federal reserve bank or as a director of any member bank.

Applications for Permission.—A person wishing to obtain the permission of the Federal Reserve Board to serve banks coming within the prohibitions of the Clayton Act should:

(1) Make formal application on F. R. B. Form 94, or, if a private banker, F. R. B. Form 94d. Each of these forms is made a part of this regulation.

(2) Obtain from each of the banks involved a statement on F. R. B. Form 94a, which is made a part of this regulation, showing the character of its business, together with a copy of its last published statement of condition, and, if a private banker, make a statement on F. R. B. Form 94e showing the character of his or his firm's business.

(3) Forward all these papers to the Federal reserve agent of his district, who will attach his recommendation on F. R. B. Form 94b, which is made

a part of this regulation, and forward them in due course to the Federal Reserve Board.

Approval or Disapproval.—As soon as an application is acted upon by the board, the applicant will be advised of the action taken.

If the board approves the application, a formal certificate of permission to serve on the banks involved will be issued to the applicant.

Rehearing.—If the board decides that the banks are in substantial competition and that it can not approve the application, it will, upon petition of the applicant, reconsider its decision and afford him every opportunity to present any additional facts or arguments bearing on the subject.

Effect of Permits.—Permission once granted is continuing until revoked, and need not be renewed.

Revocation.—All permits, however, are subject to revocation at any time in the discretion of the Federal Reserve Board. The issuance of a permit to any person shall have the effect of revoking any or all permits which may have been issued previously to that person.

SECTION V. PERMITS UNDER SECTION 25 OF THE FEDERAL RESERVE ACT

With the approval of the Federal Reserve Board, any director, officer, or employee of a member bank which has invested in the stock of any corporation principally engaged in international or foreign banking or financial operations or banking in a dependency or insular possession of the United States, under the provisions of section 25 of the Federal reserve act, may serve as director, officer, or employee of any such foreign bank or financial corporation.

Applications for Approval.—The approval of the Federal Reserve Board for such interlocking directorates may be obtained through an informal application in the form of a letter addressed to the Federal Reserve Board either by the officer, director, or employee involved, or in his behalf by one of the banks which he is serving. Such application should be sent directly to the Federal Reserve Board.

SECTION VI. PERMITS TO SERVE EDGE CORPORATIONS

With the approval of the Federal Reserve Board—

(1) Any officer, director, or employee of any member bank may serve at the same time as director, officer, or employee of any Edge corporation in whose capital stock the member bank shall have invested.

(2) Any officer, director, or employee of any Edge corporation may serve at the same time as officer, director, or employee of any other corporation in whose capital stock such Edge corporation shall have invested under the provisions of the Edge Act.

Applications for Approval.—Such approval may be obtained through an informal application in the form of a letter addressed to the Federal Reserve Board either by the director, officer, or employee involved, or in his behalf by one of the banks or corporations involved. Such applications should be sent directly to the Federal Reserve Board.

APPENDIX C

FEDERAL RESERVE BANK DEVELOPMENTS: 1914–1924

1.—Earning Assets of Federal Reserve Banks, 1914–1924

(In thousands of dollars)

Date	Bills discounted			Bills bought in open market	Total bills on hand	United States securities	Municipal warrants[4]	Total earning assets
	Secured by U. S. government obligations[1]	Other	Total					
1914:								
Nov. 27	....	$ 7,383	$ 7,383	....	$ 7,383	....	....	$ 7,383
Dec. 31	....	9,909	9,909	....	9,909	$ 205	$ 734	10,848
1915:								
Jan. 29	....	$ 13,955	$ 13,955	....	$ 13,955	$ 13,180	....	$ 27,135
Feb. 26	....	20,469	20,469	....	20,469	17,417	....	37,886
Mar. 26	....	31,683	31,683	....	31,683	21,579	....	53,262
Apr. 30	....	36,586	36,586	....	36,586	25,469	....	62,055
May 28	....	$ 33,951	$ 33,951	$	$ 33,951	$ 6,947	$23,094	$ 63,992
June 25	....	25,996	25,996	10,379	36,375	7,601	11,509	55,485
July 30	....	29,102	29,102	11,625	40,727	7,923	16,107	64,757
Aug. 27	....	29,275	29,275	13,564	42,839	8,836	25,808	77,485

Sept. 24	....	$ 31,373	$ 31,373	$ 13,058	$ 44,431	$ 9,328	$24,945	$ 78,704
Oct. 29	....	30,448	30,448	13,619	44,067	10,505	25,014	70,586
Nov. 26	....	32,704	32,794	16,179	48,973	12,919	27,308	89,200
Dec. 30	....	32,368	32,368	23,013	55,381	15,797	12,220	83,398
1916:								
Jan. 28	....	$ 26,901	$ 26,901	$ 26,314	$ 53,215	$ 21,372	$20,602	$ 95,189
Feb. 25	....	22,827	22,827	29,054	51,881	29,632	25,403	106,916
Mar. 31	....	21,267	21,267	40,408	61,675	40,275	33,015	134,965
Apr. 28	....	21,448	21,448	47,585	69,033	49,681	36,933	155,647
May 26	....	$ 20,365	$ 20,365	$ 52,708	$ 73,073	$ 55,782	$44,946	$ 173,801
June 30	....	21,188	21,188	71,005	92,283	57,129	22,671	172,083
July 28	....	27,594	27,594	83,454	111,048	56,581	27,220	194,849
Aug. 25	....	27,032	27,032	82,146	109,178	55,001	27,803	192,042
Sept. 29	....	$ 25,953	$ 25,953	$ 80,625	$ 106,578	$ 53,471	$24,028	$ 184,077
Oct. 27	....	21,131	21,131	86,085	107,216	51,904	29,890	189,010
Nov. 24	....	20,501	20,501	102,092	122,593	50,594	22,166	195,353
Dec. 29	....	30,196	30,196	127,497	157,693	55,414	8,975	222,082
1917:								
Jan. 26	....	$ 15,711	$ 15,711	$ 97,697	$ 113,408	$ 55,769	$12,249	$ 181,426
Feb. 23	....	20,266	20,266	123,966	144,232	48,118	17,124	209,474
Mar. 30	....	20,106	20,106	84,473	104,579	47,700	15,715	167,994
Apr. 27	....	35,043	35,043	71,400	106,443	117,818	14,909	239,260
May 25	$ 1,900	$ 45,687	$ 47,587	$107,377	$ 154,964	$117,058	$14,675	$ 287,297
June 29	25,546	193,546[3]	219,092	202,270	421,362	70,728	2,446	494,536
July 27	12,670	125,789	138,459	195,097	333,556	70,953	1,409	411,978
Aug. 31	11,867	135,448	147,315	154,591	301,906	77,927	1,230	381,063

[1] Figures to Nov. 30, 1917, inclusive, represent only member banks' collateral notes secured by Government war obligations and are exclusive of customers' paper similarly secured, the amount of which, however, was small.

[2] Includes loans on gold coin and bullion—$21,850,000.

[3] Includes bill of lading drafts as follows: Jan. 25, $2,705,000; Feb. 21, $2,824,000; Mar. 29, $2,994,000; Apr. 26, $2,168,000; May 31, $235,000; June 28, $12,000; July 26, $37,000; Sept. 27, $31,000.

[4] All other earning assets beginning with Feb., 1924.

1.—Earning Assets of Federal Reserve Banks, 1914–1924—Continued.

(In thousands of dollars)

Date	Bills discounted: Secured by U. S. government obligations[1]	Bills discounted: Other	Bills discounted: Total	Bills bought in open market	Total bills on hand	United States securities	Municipal warrants[4]	Total earning assets
1917:								
Sept. 28	$ 65,923	$ 167,616	$ 233,539	$176,169	$ 409,708	$ 95,005	$ 224	$ 504,937
Oct. 26	209,230	187,864	397,094	177,590	574,684	110,042	233	684,959
Nov. 30	405,608	350,790	756,398	205,454	961,852	89,096	1,429	1,052,377
Dec. 28	283,421	397,285	680,706	275,366	956,072	107,233	1,005	1,064,310
1918:								
Jan. 25	$ 312,520	$ 315,142	$ 627,662	$273,912	$ 901,574	$123,194	$ 4,902[3]	$1,029,670
Feb. 21	263,905	245,629	509,534	296,170	805,704	222,657	3,436[3]	1,031,797
Mar. 28–29	301,451	281,777	583,228	304,065	887,293	310,769	3,523[3]	1,201,585
Apr. 26	642,429	259,314	901,743	302,844	1,204,587	78,853	2,722[3]	1,286,162
May 31	$ 562,993	$ 334,364	$ 897,357	$256,373	$1,153,730	$146,924	$ 736[3]	$1,301,390
June 28	434,509	434,666	869,175	216,848	1,086,023	259,066	23[3]	1,345,112
July 26	673,231	628,920	1,302,151	205,274	1,507,425	57,012	103[3]	1,564,540
Aug. 30	896,228	531,967	1,428,195	232,603	1,660,798	56,122	67	1,716,987
Sept. 27	$1,221,533	$ 491,897	$1,713,430	$288,391	$2,001,821	$ 78,643	$ 102[3]	$2,080,566
Oct. 25	1,092,417	453,747	1,546,164	398,623	1,944,787	350,311	24	2,295,122
Nov. 29	1,412,511	402,684	1,815,195	375,341	2,190,536	121,796	27	2,312,359
Dec. 27	1,400,371	302,567	1,702,938	303,673	2,006,611	311,546	13	2,318,170

1919:								
Jan. 31	$1,357,571	$ 243,557	$1,601,128	$281,293	$1,882,421	$294,784	$ 4	$2,177,209
Feb. 28	1,667,965	211,855	1,879,820	276,919	2,156,739	182,782	4	2,339,525
Mar. 28	1,691,010	195,230	1,886,240	248,107	2,134,347	200,935	3	2,335,285
Apr. 25	1,760,672	189,740	1,950,412	185,822	2,136,234	218,636	....	2,354,870
May 29	$1,802,893	$ 186,499	$1,989,392	$183,650	$2,173,042	$229,014	....	$2,402,056
June 27	1,573,483	244,557	1,818,040	304,558	2,122,598	231,569	....	2,354,167
July 25	1,616,210	251,392	1,867,602	375,556	2,243,158	239,400	....	2,482,558
Aug. 29	1,609,296	205,838	1,815,134	363,138	2,178,272	270,705	....	2,448,977
Sept. 26	$1,572,503	$ 309,779	$1,882,282	$342,491	$2,224,773	$278,315	....	$2,503,088
Oct. 31	1,681,082	447,465	2,128,547	394,355	2,522,902	301,254	....	2,824,156
Nov. 28	1,736,033	478,176	2,214,209	495,595	2,709,804	314,937	....	3,024,741
Dec. 26	1,510,364	684,514	2,194,878	585,212	2,780,090	300,405	....	3,080,495
1920:								
Jan. 30	$1,457,892	$ 716,465	$2,174,357	$561,313	$2,735,670	$303,521	....	$3,039,191
Feb. 27	1,572,980	880,531	2,453,511	531,367	2,984,878	294,354	....	3,279,232
Mar. 26	1,441,015	1,008,215	2,449,230	451,879	2,901,109	289,922	....	3,191,031
Apr. 30	1,465,320	1,069,751	2,535,071	407,247	2,942,318	293,514	....	3,235,832
May 28	$1,447,962	$1,071,469	$2,519,431	$418,600	$2,938,031	$306,394	....	$3,244,425
June 25	1,277,980	1,153,814	2,431,794	399,185	2,830,979	352,296	....	3,183,275
July 30	1,241,017	1,250,613	2,491,630	345,305	2,836,935	325,380	....	3,162,315
Aug. 27	1,314,830	1,352,297	2,667,127	321,965	2,989,092	300,580	....	3,289,672
Sept. 24	$1,220,423	$1,484,041	$2,704,464	$307,624	$3,012,088	$297,500	....	$3,309,588
Oct. 29	1,203,995	1,597,302	2,801,297	298,375	3,099,672	296,371	....	3,396,043
Nov. 26	1,192,425	1,542,975	2,735,400	247,703	2,983,103	320,614	....	3,303,717
Dec. 30	1,141,036	1,578,098	2,719,134	255,702	2,974,836	288,191	....	3,263,027

1.—Earning Assets of Federal Reserve Banks, 1914–1924.—Continued.

(In thousands of dollars)

Date	Bills discounted			Bills bought in open market	Total bills on hand	United States securities	Municipal warrants[4]	Total earning assets
	Secured by U. S. government obligations[1]	Other	Total					
1921:								
Jan. 31	$1,040,367	$1,416,750	$2,457,117	$163,700	$2,620,817	$287,150	....	$2,907,967
Feb. 28	997,965	1,391,545	2,389,510	169,421	2,558,931	282,807	....	2,841,738
Mar. 31	971,100	1,262,006	2,233,106	119,340	2,352,446	276,932	....	2,629,378
Apr. 30	937,652	1,138,916	2,076,568	109,763	2,186,331	267,095	....	2,453,426
May 31	$ 787,244	$1,120,669	$1,907,913	$ 75,457	$1,983,370	$266,481	....	$2,249,851
June 30	637,590	1,113,760	1,751,350	40,223	1,791,573	259,184	....	2,050,757
July 31	577,774	1,063,838	1,641,612	17,977	1,659,589	244,365	....	1,903,954
Aug. 31	545,176	946,759	1,491,935	35,320	1,527,255	230,233	....	1,757,488
Sept. 30	$ 496,844	$ 916,169	$1,413,013	$ 45,042	$1,458,055	$227,830	....	$1,685,885
Oct. 31	462,436	850,591	1,313,027	86,110	1,399,137	192,521	$ 10	1,591,668
Nov. 30	476,360	705,941	1,182,301	72,954	1,255,255	204,544	67	1,459,866
Dec. 31	485,233	659,113	1,144,346	145,263	1,289,609	233,528	379	1,523,516
1922:								
Jan. 31	$ 363,586	$ 475,299	$ 838,885	$ 74,935	$ 913,820	$293,085	$ 206	$1,207,111
Feb. 28	284,614	427,963	712,577	93,458	806,035	407,889	242	1,214,166
Mar. 31	260,781	419,686	680,467	105,270	785,737	455,506	102	1,241,345
Apr. 29	185,743	324,361	510,104	90,677	600,781	587,080	....	1,187,861
May 31	$ 171,106	$ 300,384	$ 471,490	$118,182	$ 589,672	$603,419	....	$1,193,091
June 30	167,241	294,177	461,418	161,112	622,530	555,465	....	1,177,995
July 31	132,390	273,788	406,178	140,111	546,289	536,669	3	1,082,961
Aug. 31	126,113	271,335	397,448	180,176	577,624	507,131	21	1,084,776

1922:								
Sept. 30	$ 162,780	$ 300,916	$ 463,696	$244,375	$ 708,071	$482,676	$ 15	$1,190,762
Oct. 31	269,042	307,393	576,435	258,165	834,600	362,639	24	1,197,263
Nov. 29	315,280	334,816	650,096	259,226	909,322	304,461	24	1,213,807
Dec. 30	331,790	285,990	617,780	272,122	889,902	436,155	39	1,326,096
1923:								
Jan. 31	$ 377,482	$ 219,769	$ 597,251	$188,566	$ 785,817	$353,735	....	$1,139,552
Feb. 28	356,039	239,721	595,760	207,678	803,438	363,074	....	1,166,512
Mar. 31	372,768	326,146	698,914	263,358	962,272	250,360	41	1,212,673
Apr. 30	386,079	338,914	724,993	271,573	996,566	185,305	....	1,181,871
May 31	$ 406,824	$ 363,910	$ 770,734	$258,680	$1,029,414	$191,964	$ 55	$1,221,433
June 30	407,356	429,593	836,949	205,600	1,042,549	101,503	65	1,144,117
July 31	391,937	433,999	825,936	183,096	1,009,032	98,083	10	1,107,125
Aug. 31	412,318	452,244	864,562	171,607	1,036,169	101,995	20	1,138,184
Sept. 30	$ 401,186	$ 482,367	$ 883,553	$173,258	$1,056,811	$ 96,285	$ 317	$1,153,413
Oct. 31	425,650	458,150	883,800	204,698	1,088,498	91,837	317	1,180,652
Nov. 30	406,533	396,821	803,354	300,207	1,103,561	104,169	154	1,207,884
Dec. 31	353,685	369,383	723,068	354,637	1,077,705	133,566	51	1,211,322
1924:								
Jan. 31	$ 267,978	$ 264,282	$ 532,260	$286,041	$ 818,301	$126,371	$ 10	$ 944,682
Feb. 29	257,215	271,748	528,963	267,880	796,843	165,463	100	962,406
Mar. 31	228,949	288,936	517,885	228,247	746,132	262,867	51	1,009,050
Apr. 30	161,164	286,021	447,185	124,485	571,670	301,660	51	873,381
May 31	$ 164,149	$ 277,217	$ 441,366	$ 79,549	$ 520,915	$352,857	$ 551	$ 874,323
June 30	115,580	218,374	333,954	36,524	370,478	431,085	1,301	802,864
July 31	89,424	203,623	293,047	23,469	316,516	522,897	1,250	840,663
Aug. 30	83,480	191,188	274,668	58,103	332,771	542,211	1,750	876,732
Sept. 30	$ 111,591	$ 164,608	$ 276,199	$131,576	$ 407,775	$576,108	$ 1,095	$ 985,878
Oct. 31	118,592	145,549	264,141	200,114	464,255	584,205	3,557	1,052,017
Nov. 29	112,694	129,330	242,024	313,572	555,596	583,738	2,550	1,141,884
Dec. 31	186,840	127,288	314,128	387,100	701,288	540,160	8,050	1,249,438

2.—Reserves, Deposits, and Note Circulation of Federal Reserve Banks, 1914–1924

(Amounts in thousands of dollars)

Date	Reserves		Deposits			F. R. notes in circulation	Total deposit and F. R. note liability	Required reserve	Excess reserve	Reserve percentage	F. R. bank note circulation—net liability
	Gold	Total	Government	Members' reserve[1]	Net[2]						
1914:											
Nov. 27	$ 227,840	$ 262,470	....	....	$ 249,268	$ 2,700	$ 251,968	$ 88,324	$ 174,146	104.2	
Dec. 31	241,321	267,899	....	....	256,018	10,608	266,626	93,850	174,049	100.5	
1915:											
Jan. 29	$ 251,306	$ 272,188	....	....	$ 272,095	$ 14,500	$ 286,595	$ 101,033	$ 171,155	95.0	
Feb. 26	269,753	298,838	....	....	282,248	22,957	305,205	107,970	190,868	97.9	
Mar. 26	273,137	296,235	....	....	282,644	33,767	316,411	112,433	183,802	93.6	
Apr. 30	280,543	307,061	....	....	285,364	46,444	331,808	118,455	188,606	92.5	
May 28	$ 298,331	$ 330,320	....	....	$ 284,615	$ 57,847	$ 342,462	$ 122,754	$ 207,566	96.5	
June 25	324,183	372,031	....	....	303,038	72,489	375,527	135,059	236,972	99.1	
July 30	347,383	369,475	....	....	299,105	85,127	384,232	138,738	230,737	96.2	
Aug. 27	359,165	379,043	....	....	309,999	95,233	405,232	146,593	232,450	93.5	
Sept. 24	$ 405,404	$ 428,324	$ 15,000	....	$ 337,532	$ 115,662	$ 453,194	$ 164,401	$ 263,923	94.5	
Oct. 29	433,236	470,294	15,000	....	350,021	146,025	496,046	180,917	289,377	94.8	
Nov. 26	492,163	529,375	15,000	....	398,899	165,304	564,203	205,736	323,639	93.8	
Dec. 30	542,413	555,938	15,000	....	394,245	189,026	583,271	213,596	342,342	95.3	
1916:											
Jan. 28	$ 555,241	$ 570,737	$ 27,760	....	$ 441,663	$ 179,224	$ 620,887	$ 226,272	$ 344,465	91.9	
Feb. 25	526,213	543,891	32,501	....	435,793	171,368	607,161	221,075	322,816	89.6	
Mar. 31	514,521	524,459	38,469	....	445,328	163,066	608,394	221,091	303,368	86.2	$ 964
Apr. 28	487,029	499,040	40,660	....	439,013	163,094	602,107	218,892	280,148	82.9	1,669

May 26......	$ 515,255	$ 537,227	$ 44,131	....	$ 504,299	$ 159,389	$ 663,688	$ 240,260	$ 296,967	80.9	$ 1,732
June 30......	542,744	570,192	101,152	....	538,241	152,244	690,485	249,282	320,910	82.6	1,721
July 28......	527,530	544,125	56,542	....	535,548	152,590	688,138	248,478	295,647	79.1	1,692
Aug. 25......	536,221	548,486	50,099	....	530,866	156,345	687,211	248,341	300,145	79.8	1,690
Sept. 29......	$ 584,767	$ 592,578	$ 38,085	....	$ 529,360	$ 196,538	$ 725,898	$ 263,891	$ 328,687	81.6	$ 3,033
Oct. 27......	617,481	627,457	20,082	....	548,703	214,622	763,325	277,894	349,563	82.2	1,031
Nov. 24......	701,501	719,475	26,319	....	620,128	240,448	860,576	313,224	406,251	83.6	1,028
Dec. 29......	736,236	753,774	28,837	....	650,665	275,353	926,018	337,874	415,900	81.4	
1917:											
Jan. 26......	$ 791,245	$ 808,824	$ 25,007	$ 687,841	$ 688,508	$ 259,768	$ 948,276	$ 344,885	$ 463,939	85.3	$
Feb. 23......	803,324	818,573	13,407	629,475	677,036	303,171	980,207	358,231	460,342	83.5	
Mar. 30......	938,046	947,328	20,567	711,117	706,905	357,610	1,064,515	390,461	556,867	89.0	
Apr. 27......	945,141	975,481	99,689	719,785	743,532	420,509	1,164,041	428,441	547,040	83.8	
May 25......	$ 977,371	$1,014,263	$ 76,114	$ 813,326	$ 721,171	$ 454,402	$1,175,573	$ 434,170	$ 580,093	86.3	
June 29......	1,294,512	1,334,352	300,966	1,033,460	1,261,800	508,753	1,770,553	645,131	689,221	75.4	$ 934
July 27......	1,362,263	1,414,052	143,032	1,135,456	1,232,200	534,015	1,766,215	644,876	769,176	80.1	2,459
Aug. 31......	1,353,498	1,406,108	154,358	1,069,804	1,133,926	587,915	1,721,841	632,040	774,068	81.7	6,023
Sept. 28......	$1,408,470	$1,457,559	$ 71,289	$1,136,930	$1,193,886	$ 700,212	$1,804,098	$ 697,945	$ 759,614	77.0	$ 8,000
Oct. 26......	1,503,436	1,552,942	132,221	1,264,323	1,318,798	847,506	2,166,304	800,581	752,361	71.7	8,000
Nov. 30......	1,621,725	1,676,211	220,962	1,489,370	1,595,512	1,056,983	2,652,495	981,222	694,989	63.2	8,000
Dec. 28......	1,671,133	1,720,768	108,213	1,453,160	1,457,994	1,246,488	2,704,482	1,008,893	711,875	63.6	8,000
1918:											
Jan. 25......	$1,726,507	$1,782,759	$135,691	$1,480,743	$1,492,878	$1,234,934	$2,727,812	$1,016,481	$ 766,278	65.4	$ 8,000
Feb. 21......	1,772,395	1,832,524	56,165	1,459,720	1,462,627	1,314,581	2,777,208	1,037,751	794,773	66.0	7,999
Mar. 28–29..	1,815,704	1,874,063	104,086	1,499,400	1,535,367	1,452,838	2,988,205	1,118,513	755,550	62.7	7,978
Apr. 26......	1,827,000	1,890,945	130,668	1,497,416	1,556,303	1,526,232	3,082,535	1,155,199	735,746	61.3	7,895

[1] Figures not reported separately until Jan., 1917.

[2] Figures shown in this column represent net deposits up to and including Feb. 28, 1921, and total deposits thereafter.

NOTE.—Figures of cash reserves, Federal reserve note circulation, excess reserves, and reserve percentages for dates prior to June, 1917, have been calculated on a basis comparable with figures published subsequent to the passage of the June 21, 1917, amendment to the Federal reserve act, which provides that gold with Federal reserve agents may be counted as part of the bank's required reserves.

2.—Reserves, Deposits, and Note Circulations of Federal Reserve Banks, 1914–1924—Continued.

(Amounts in thousands of dollars)

Date	Reserves		Deposits			F. R. notes in circulation	Total deposit and F. R. note liability	Required reserve	Excess reserve	Reserve percentage	F. R. bank note circulation—net liability
	Gold	Total	Government	Members' reserve[1]	Net[2]						
May 31......	$1,917,826	$1,975,709	$166,191	$1,440,413	$1,586,608	$1,600,968	$3,187,576	$1,195,700	$ 780,009	62.0	$ 8,324
June 28......	1,940,021	2,006,199	84,535	1,557,587	1,529,819	1,722,216	3,252,035	1,224,323	781,876	61.7	10,390
July 26......	1,974,200	2,029,329	233,040	1,435,196	1,622,870	1,870,835	3,493,705	1,316,339	712,990	58.1	11,084
Aug. 30......	2,013,704	2,066,902	104,729	1,478,639	1,572,898	2,092,708	3,665,606	1,387,597	679,305	56.4	20,687
Sept. 27.....	$2,020,813	$2,072,176	$191,623	$1,535,490	$1,667,109	$2,349,326	$4,016,435	$1,523,218	$ 548,958	51.6	$ 35,819
Oct. 25......	2,045,132	2,098,169	278,218	1,683,499	1,723,902	2,507,912	4,231,814	1,606,531	491,638	49.6	58,859
Nov. 29.....	2,065,213	2,120,371	207,157	1,488,893	1,668,283	2,568,676	4,236,959	1,611,369	509,002	50.0	86,003
Dec. 27......	2,090,274	2,146,219	63,367	1,587,318	1,552,892	2,685,244	4,238,136	1,617,610	528,609	50.6	117,122
1919:											
Jan. 31......	$2,112,106	$2,179,646	$ 64,928	$1,693,132	$1,659,457	$2,450,729	$4,110,186	$1,561,102	$ 618,544	53.0	$129,445
Feb. 28......	2,122,998	2,188,723	210,547	1,620,972	1,796,739	2,472,307	4,269,046	1,617,781	570,942	51.3	134,042
Mar. 28.....	2,142,305	2,210,524	168,147	1,631,167	1,741,425	2,521,776	4,263,201	1,618,209	592,315	51.9	145,540
Apr. 25......	2,169,216	2,240,152	91,726	1,664,320	1,752,094	2,549,552	4,301,646	1,633,054	607,098	52.1	158,848
May 29......	$2,187,743	$2,255,106	$141,479	$1,656,118	$1,830,920	$2,519,292	$4,350,212	$1,648,539	$ 606,567	51.8	$168,427
June 27......	2,147,784	2,216,256	73,614	1,713,030	1,750,694	2,499,180	4,249,874	1,612,415	603,841	52.1	177,185
July 25......	2,095,151	2,161,023	116,038	1,718,396	1,796,561	2,504,497	4,301,058	1,630,595	530,428	50.2	193,649
Aug. 29......	2,066,788	2,135,976	54,494	1,729,950	1,629,797	2,580,629	4,210,426	1,602,681	533,295	50.7	219,815
Sept. 26.....	$2,177,854	$2,187,505	$ 61,276	$1,731,413	$1,634,074	$2,655,354	$4,289,428	$1,634,068	$ 553,437	51.0	$239,451
Oct. 31......	2,138,000	2,205,592	100,465	1,833,481	1,850,518	2,752,876	4,603,394	1,748,831	456,761	47.9	254,933
Nov. 28.....	2,093,641	2,159,666	98,157	1,844,434	1,889,399	2,852,277	4,741,676	1,802,200	357,466	45.5	256,793
Dec. 26......	2,078,432	2,135,536	72,357	1,780,874	1,704,470	3,057,646	4,762,116	1,819,623	315,913	44.8	261,039

1920:											
Jan. 30......	$2,012,656	$2,073,933	$ 72,074	$1,850,712	$1,806,496	$2,850,944	$4,657,440	$1,772,650	$ 301,283	44.5	$250,530
Feb. 27......	1,966,836	2,083,215	133,013	1,871,961	1,884,576	3,019,984	4,904,560	1,867,594	215,621	42.5	237,131
Mar. 26.....	1,934,755	2,057,155	27,711	1,867,125	1,772,904	3,048,039	4,820,943	1,839,731	217,424	42.7	201,392
Apr. 30......	1,936,720	2,070,765	37,592	1,859,844	1,812,732	3,074,555	4,887,287	1,864,278	206,487	42.4	177,881
May 28......	$1,953,103	$2,092,496	$ 36,433	$1,852,916	$1,794,440	$3,107,021	$4,901,461	$1,870,862	$ 221,634	42.7	$179,185
June 25.....	1,969,375	2,108,605	14,189	1,831,916	1,722,223	3,116,718	4,838,041	1,849,465	259,140	43.6	185,604
July 30......	1,977,704	2,128,640	12,167	1,808,156	1,697,245	3,120,138	4,817,383	1,842,091	286,540	44.2	192,168
Aug. 27......	1,971,825	2,127,827	43,510	1,818,502	1,717,867	3,203,637	4,921,504	1,882,708	245,119	43.2	200,793
Sept. 24.....	$1,989,835	$2,151,594	$ 46,493	$1,800,677	$1,658,464	$3,279,996	$4,938,460	$1,892,460	$ 259,134	43.6	$214,180
Oct. 29......	2,003,320	2,168,038	18,754	1,805,661	1,674,553	3,351,303	5,025,856	1,926,615	241,423	43.1	214,961
Nov. 26.....	2,023,946	2,195,310	15,909	1,711,774	1,623,641	3,325,538	4,949,179	1,898,489	296,821	44.4	214,610
Dec. 30......	2,059,333	2,249,163	27,639	1,748,979	1,604,100	3,344,686	4,948,876	1,899,341	349,822	45.4	216,960
1921:											
Jan. 31......	$2,103,660	$2,319,755	$ 28,627	$1,721,895	$1,650,663	$3,083,155	$4,733,818	$1,810,994	$ 508,761	49.0	$200,159
Feb. 28......	2,148,085	2,363,475	50,828	1,705,253	1,670,010	3,048,554	4,718,564	1,803,925	559,550	50.1	187,633
Mar. 31.....	2,221,569	2,436,741	91,617	1,658,625	1,784,394	2,904,948	4,689,342	1,786,517	650,224	52.0	169,885
Apr. 30......	2,322,683	2,505,612	31,664	1,666,509	1,732,214	2,844,011	4,576,225	1,743,879	761,733	54.8	154,944
May 31......	$2,408,058	$2,571,579	$ 39,080	$1,601,634	$1,670,624	$2,751,869	$4,422,493	$1,685,466	$ 886,113	58.1	$ 143,706
June 30......	2,467,659	2,627,494	43,446	1,603,845	1,675,217	2,648,086	4,323,303	1,645,560	981,934	60.8	132,568
July 31......	2,543,039	2,697,032	32,680	1,625,123	1,683,048	2,549,626	4,232,674	1,608,917	1,088,115	63.7	125,046
Aug. 31......	2,641,061	2,787,920	46,809	1,618,901	1,690,754	2,481,460	4,172,220	1,584,348	1,203,572	66.8	109,864
Sept. 30.....	$2,728,372	$2,879,331	$ 98,540	$1,581,032	$1,704,807	$2,482,427	$4,187,234	$1,589,653	$1,289,678	68.8	$100,378
Oct. 31......	2,791,272	2,934,960	43,086	1,658,627	1,732,898	2,421,426	4,154,324	1,575,085	1,359,875	70.6	85,515
Nov. 30.....	2,840,447	2,989,142	45,913	1,670,362	1,742,830	2,366,006	4,108,836	1,550,392	1,432,750	72.7	75,862
Dec. 31......	2,874,995	3,010,252	95,051	1,753,217	1,876,082	2,409,392	4,285,474	1,620,385	1,389,867	70.2	83,690
1922:											
Jan. 31......	$2,908,958	$3,062,705	$ 82,810	$1,677,837	$1,790,685	$2,179,052	$3,969,737	$1,498,361	$1,564,344	77.2	$ 82,811
Feb. 28......	2,946,739	3,079,784	53,759	1,710,249	1,799,401	2,196,058	3,995,459	1,508,214	1,571,570	77.1	80,717
Mar. 31.....	2,974,784	3,105,039	87,588	1,708,761	1,834,811	2,194,743	4,029,554	1,520,081	1,584,958	77.1	80,575
Apr. 29......	2,996,425	3,128,306	51,981	1,754,844	1,849,442	2,169,420	4,018,862	1,515,073	1,613,233	77.8	77,135

2.—RESERVES, DEPOSITS, AND NOTE CIRCULATION OF FEDERAL RESERVE BANKS, 1914–1924—Continued.

(Amounts in thousands of dollars)

Date	Reserves		Deposits			F. R. notes in circulation	Total deposit and F. R. note liability	Required reserve	Excess reserve	Reserve percentage	F. R. bank note circulation—net liability
	Gold	Total	Government	Members' reserve[1]	Net[2]						
May 31......	$3,007,621	$3,130,497	$ 54,295	$1,782,004	$1,870,153	$2,141,184	$4,011,337	$1,511,027	$1,619,470	78.0	$ 70,553
June 30......	3,021,767	3,144,542	33,093	1,820,377	1,883,329	2,152,962	4,036,291	1,520,350	1,624,192	77.9	67,351
July 31......	3,047,949	3,178,652	58,583	1,760,824	1,846,582	2,132,145	3,978,727	1,499,162	1,679,490	79.9	61,052
Aug. 31......	3,061,049	3,195,558	48,446	1,803,622	1,874,688	2,155,515	4,030,203	1,518,347	1,677,211	79.3	53,636
Sept. 30.....	$3,077,210	$3,207,494	$ 14,511	$1,857,260	$1,897,182	$2,268,652	$4,165,834	$1,571,475	$1,636,019	77.0	$ 44,005
Oct. 31......	3,079,966	3,217,882	34,355	1,812,570	1,875,436	2,301,777	4,177,213	1,577,113	1,640,769	77.0	34,961
Nov. 29.....	3,072,858	3,202,810	33,440	1,807,631	1,860,223	2,329,814	4,190,037	1,583,004	1,619,806	76.4	2 ,868
Dec. 30......	3,047,393	3,176,872	10,756	1,933,888	1,973,532	2,395,789	4,369,321	1,649,052	1,527,820	72.7	2,770
1923:											
Jan. 31	$3,075,810	$3,227,132	$ 46,014	$1,913,465	$1,991,062	$2,203,701	$4,194,763	$1,578,354	$1,648,778	76.9	$ 3,105
Feb. 28......	3,072,813	3,201,600	43,401	1,887,552	1,952,317	2,246,943	4,199,260	1,582,086	1,619,514	76.2	2,645
Mar. 31.....	3,059,592	3,167,446	79,354	1,862,676	1,961,651	2,247,257	4,208,908	1,585,480	1,581,966	75.3	2,431
Apr. 30......	3,082,282	3,179,666	40,290	1,864,756	1,926,109	2,235,435	4,161,544	1,568,311	1,611,355	76.4	2,286
May 31......	$3,112,106	$3,201,333	$ 28,130	$1,899,810	$1,964,128	$2,245,829	$4,209,957	$1,585,775	$1,615,558	76.0	$ 1,724
June 30......	3,095,217	3,194,665	33,544	1,851,938	1,914,043	2,253,033	4,167,076	1,571,128	1,623,537	76.7	1,425
July 31......	3,100,814	3,190,932	35,811	1,878,367	1,936,938	2,177,743	4,114,681	1,549,026	1,641,906	77.6	1,570
Aug. 31......	3,105,903	3,188,541	46,551	1,844,718	1,911,730	2,226,998	4,138,728	1,559,905	1,628,636	77.0	520
Sept. 30.....	$3,112,717	$3,189,598	$ 50,304	$1,839,142	$1,912,460	$2,267,620	$4,180,080	$1,576,409	$1,613,189	76.3	$ 485
Oct. 31......	3,111,078	3,191,145	40,334	1,895,265	1,958,660	2,224,865	4,183,525	1,575,475	1,615,670	76.3	523
Nov. 30.....	3,101,158	3,185,277	32,501	1,864,794	1,919,214	2,252,492	4,171,706	1,572,722	1,612,555	76.4	498
Dec. 31......	3,080,032	3,168,934	38,074	1,898,315	1,959,579	2,246,673	4,206,252	1,584,522	1,584,412	75.3	471

1924:											
Jan. 31......	$3,142,575	$3,261,161	$ 37,582	$1,950,702	$2,010,322	$2,026,469	$4,036,791	$1,514,201	$1,746,960	80.8	$ 435
Feb. 29......	3,119,652	3,220,804	43,095	1,900,149	1,964,451	2,042,665	4,007,116	1,504,624	1,716,180	80.4	402
Mar. 31......	3,094,088	3,103,887	99,581	1,885,237	2,006,372	2,002,785	4,009,157	1,503,344	1,690,543	79.7	383
Apr. 30......	3,120,389	3,222,609	32,503	1,944,952	2,005,381	1,926,013	3,931,394	1,472,289	1,750,320	82.0	343
May 31......	$3,112,629	$3,205,513	$ 47,477	$1,906,093	$1,974,807	$1,911,440	$3,886,247	$1,455,759	$1,749,754	82.5	$ 319
June 30......	3,128,176	3,238,803	43,251	1,944,095	2,010,317	1,860,923	3,871,240	1,447,980	1,790,823	83.7	
July 31......	3,143,065	3,247,113	45,464	2,090,821	2,168,124	1,763,947	3,932,071	1,464,420	1,782,693	82.6	
Aug. 30......	3,089,127	3,168,536	36,135	2,059,517	2,128,220	1,763,659	3,891,879	1,450,341	1,718,195	81.4	
Sept 30......	$3,046,723	$3,133,210	$ 56,254	$2,110,949	$2,197,101	$1,745,395	$3,942,496	$1,467,142	$1,666,068	79.5	
Oct. 31......	3,036,705	3,117,825	26,976	2,138,452	2,194,827	1,799,104	3,993,931	1,487,833	1,629,992	78.1	
Nov. 29......	3,025,316	3,110,009	36,693	2,142,820	2,208,728	1,874,833	4,083,561	1,522,988	1,587,021	76.2	
Dec. 31......	2,936,533	3,047,054	51,197	2,220,436	2,310,668	1,862,062	4,172,730	1,553,557	1,493,497	73.0	

APPENDIX D

WEEKLY CONDITION STATEMENT OF FEDERAL RESERVE BANKS

Resources and Liabilities of the Twelve Federal Reserve Banks Combined

(In thousands of dollars)

	Sept. 24, 1924	Sept. 17, 1924	Sept. 26, 1923
Resources			
Gold with Federal reserve agents	$2,031,406	$2,038,632	$2,061,965
Gold redemption fund with U. S. Treasury	34,686	36,638	53,328
Gold held exclusively against Federal reserve notes	$2,066,092	$2,075,270	$2,115,293
Gold settlement fund with Federal Reserve Board	$ 603,448	$ 611,304	$ 641,647
Gold and gold certificates held by banks	399,623	394,919	359,664
Total gold reserves	$3,069,163	$3,081,493	$3,116,604
Reserves other than gold	$ 86,852	$ 83,919	$ 76,094
Total reserves	$3,156,015	$3,165,412	$3,192,698
Non-reserve cash	$ 43,191	$ 44,543	$ 74,248
Bills discounted:			
Sec. by U. S. government obligations	89,515	83,601	402,141
Other bills discounted	170,348	174,366	459,867
Total bills discounted	$ 259,863	$ 257,967	$ 862,008
Bills bought in open market	$ 91,901	$ 99,212	$ 172,124
U. S. government securities:			
Bonds	37,061	35,951	21,462
Treasury notes	397,753	397,863	66,275
Certificates of indebtedness	139,782	184,915	4,148
Total U. S. government securities	$ 574,596	$ 618,729	$ 91,885
All other earning assets	$ 1,995	$ 6,950	$ 317
Total earning assets	$ 928,355	$ 982,858	$1,126,334
5 per cent Redemption fund—Federal reserve bank notes	....	....	$ 28
Uncollected items	598,345	$ 775,917	616,211
Bank premises	60,026	59,672	55,023
All other resources	26,211	26,464	13,717
Total resources	$4,812,143	$5,054,866	$5,078,259
Liabilities			
Federal reserve notes in actual circulation	$1,729,859	$1,734,666	$2,247,830
Federal Reserve bank notes in circulation—net	....	....	492
Deposits:			
Member bank—Reserve account	2,120,331	2,261,255	1,851,790
Government	46,926	6,339	56,279
Other deposits	28,625	29,583	22,004
Total deposits	$2,195,882	$2,297,177	$1,930,073
Deferred availability items	$ 540,929	$ 678,050	$ 550,527
Capital paid in	111,976	112,032	109,657
Surplus	220,915	220,915	218,369
All other liabilities	12,582	12,026	21,311
Total liabilities	$4,812,143	$5,054,866	$5,078,259
Ratio of total reserves to deposit and Federal reserve note liabilities combined, per cent	80.4	78.5	76.4
Contingent liability on bills purchased for foreign correspondents	$ 19,692	$ 20,950	$ 33,794

Resources and Liabilities of the Federal Reserve Banks at Close of Business, September 24, 1924

(In thousands of dollars)

	Federal Reserve Bank of												
	Boston	New York	Philadelphia	Cleveland	Richmond	Atlanta	Chicago	St. Louis	Minneapolis	Kansas City	Dallas	San Francisco	Total
Resources													
Gold with Federal reserve agents	$211,431	569,854	$183,267	$216,939	$ 51,473	$128,861	$226,345	$ 54,308	$ 56,098	$ 61,595	$ 43,303	$227,932	$2,031,406
Gold redemption fund with U. S. Treas.	2,234	$ 6,054	5,994	1,967	1,810	2,793	3,647	3,769	781	2,704	1,624	1,309	34,686
Gold held exclusively against Federal reserve notes	$213,665	$ 575,908	$189,261	$218,906	$ 53,283	$131,654	$229,992	$ 58,077	$ 56,879	$ 64,299	$ 44,927	$229,241	$2,066,092
Gold settlement fund with Federal Reserve Board	$ 52,104	$ 156,782	$ 31,220	$ 72,862	$ 33,603	$ 18,065	$129,386	$ 16,617	$ 13,532	$ 32,711	$ 10,392	$ 36,174	$ 603,448
Gold and gold certificates held by banks	21,665	177,740	27,126	17,930	13,348	7,563	72,125	9,780	8,124	3,613	6,952	33,657	399,623
Total gold reserves	$287,434	$ 910,430	$247,607	$309,698	$100,234	$157,282	$431,503	$ 84,474	$ 78,535	$100,623	$ 62,271	$299,072	$3,069,163
Reserves other than gold	$ 8,129	$ 17,518	$ 2,724	$ 4,785	$ 4,274	$ 8,885	$ 10,120	$ 14,939	$ 1,261	$ 2,470	$ 8,480	$ 3,267	$ 86,852
Total reserves	$295,563	$ 927,948	$250,331	$314,483	$104,508	$166,167	$441,623	$ 99,413	$ 79,796	$103,093	$ 70,751	$302,339	$3,156,015
Non-reserve cash	$ 3,999	$ 13,799	$ 1,246	$ 2,595	$ 2,261	$ 3,550	$ 5,111	$ 2,774	$ 605	$ 2,543	$ 1,670	$ 3,029	$ 43,191
Bills discounted:													
Sec. by U. S. government obligations	5,778	17,821	11,227	21,995	9,475	2,602	8,657	4,311	303	625	1,336	5,385	89,515
Other bills discounted	4,751	17,401	6,297	6,688	28,939	22,994	20,240	18,932	10,851	8,990	11,451	12,814	170,348
Total bills discounted	$ 10,529	$ 35,222	$ 17,524	$ 28,683	$ 38,414	$ 25,596	$ 28,897	$ 23,243	$ 11,154	$ 9,615	$ 12,787	$ 18,199	$ 259,863
Bills bought in open market	$ 8,376	$ 40,084	$ 1,801	$ 8,301	....	$ 2,304	$ 8,889	$ 3,693	$ 1,674	$ 3,626	$ 3,862	$ 9,291	$ 91,901
U. S. Government securities:													
Bonds	1,039	4,902	749	5,115	1,191	996	9,645	600	8,246	1,625	1,834	1,119	37,061
Treasury notes	26,796	136,394	25,426	38,229	2,812	1,375	53,143	12,715	15,033	24,305	19,469	42,056	397,753
Certificates of indebtedness	11,029	46,020	5,277	17,398	990	515	17,769	3,454	5,268	8,407	6,492	17,163	139,782
Total U. S. government securities	$ 38,864	$ 187,316	$ 31,452	$ 60,742	$ 4,993	$ 2,886	$ 80,557	$ 16,769	$ 28,547	$ 34,337	$ 27,795	$ 60,338	$ 574,596
All other earning assets	....	$ 245	$ 1,750	....	....	....	....	....	....	....	....	....	$ 1,995
Total earning assets	$ 57,769	$ 262,867	$ 52,527	$ 97,726	$ 43,407	$ 30,786	$118,343	$ 43,705	$ 41,375	$ 47,578	$ 44,444	$ 87,828	$ 928,355
Uncollected items	$ 50,676	$ 133,330	$ 55,259	$ 54,865	$ 54,965	$ 26,787	$ 75,129	$ 30,122	$ 14,781	$ 36,922	$ 27,420	$ 38,089	$ 598,345
Bank premises	4,312	16,714	1,112	9,130	2,528	2,875	8,264	2,524	2,093	4,595	1,912	3,067	60,026
All other resources	146	8,325	246	219	188	1,878	698	156	5,129	1,050	3,511	4,665	26,211
Total Resources	$412,465	$1,362,983	$360,721	$479,018	$207,857	$232,043	$649,168	$178,694	$144,679	$195,781	$149,717	$439,017	$4,812,143

RESOURCES AND LIABILITIES OF THE FEDERAL RESERVE BANKS AT CLOSE OF BUSINESS, SEPTEMBER 24, 1924—Continued.

(In thousands of dollars)

	Federal Reserve Bank of												
	Boston	New York	Philadelphia	Cleveland	Richmond	Atlanta	Chicago	St. Louis	Minneapolis	Kansas City	Dallas	San Francisco	Total
Liabilities													
Federal reserve notes in actual circulation	$198,035	$ 302,733	$150,984	$210,792	$ 71,434	$133,955	$216,692	$ 55,960	$ 65,097	$ 64,782	$ 51,199	$208,196	$1,729,859
Deposits:													
Member bank—Reserve account	$138,458	$ 827,463	$125,818	$176,819	$ 63,077	$ 59,496	$313,005	$ 72,728	$ 50,130	$ 80,923	$ 51,973	$160,441	$2,120,331
Government	2,172	10,816	3,045	3,106	3,397	5,118	3,826	2,950	2,256	2,243	3,673	4,324	46,926
Other deposits	249	18,132	374	1,365	186	100	1,538	818	327	778	284	4,474	28,625
Total deposits	$140,879	$ 856,411	$129,237	$181,290	$ 66,660	$ 64,714	$318,369	$ 76,496	$ 52,713	$ 83,944	$ 55,930	$169,239	$2,195,882
Deferred availability items	$ 48,898	$ 111,992	$ 49,795	$ 49,578	$ 51,261	$ 18,457	$ 67,072	$ 30,517	$ 14,674	$ 32,575	$ 29,053	$ 37,057	$ 540,929
Capital paid in	8,005	30,201	10,392	12,705	5,883	4,579	15,197	5,118	3,324	4,361	4,147	8,064	111,976
Surplus	16,390	59,929	19,927	23,691	11,672	8,950	30,426	10,072	7,484	9,496	7,577	15,301	220,915
All other liabilities	258	1,717	386	962	947	1,388	1,412	531	1,387	623	1,811	1,160	12,582
Total Liabilities	$412,465	$1,362,983	$360,721	$479,018	$207,857	$232,043	$649,168	$178,694	$144,679	$195,781	$149,717	$439,017	$4,812,143
Ratio of total reserves to deposit and Federal reserve note liabilities combined, per cent	87.2	80.1	80.3	80.2	75.7	83.6	82.5	75.1	67.7	69.3	66.0	80.1	80.4
Contingent liability on bills purchased for foreign correspondents	....	$ 5,181	$ 1,985	$ 2,394	$ 1,167	$ 901	$ 3,050	$ 1,003	$ 737	$ 941	$ 778	$ 1,555	$ 19,692

Federal reserve notes outstanding and in actual circulation

	Boston	New York	Philadelphia	Cleveland	Richmond	Atlanta	Chicago	St. Louis	Minneapolis	Kansas City	Dallas	San Francisco	Total
Federal reserve notes outstanding	$220,068	$ 616,358	$198,714	$231,232	$ 78,711	$150,820	$231,278	$ 63,968	$ 68,022	$ 72,118	$ 57,734	$247,396	$2,236,419
Federal reserve notes held by banks	22,033	313,625	47,730	20,440	7,277	16,865	14,586	8,008	2,925	7,336	6,535	39,200	506,560
Federal reserve notes in actual circulation	$198,035	$ 302,733	$150,984	$210,792	$ 71,434	$133,955	$216,692	$ 55,960	$ 65,097	$ 64,782	$ 51,199	$208,196	$1,729,859

Distribution of bills and U. S. certificates of indebtedness by maturities

	Within 15 days	16 to 30 days	31 to 60 days	61 to 90 days	From 91 days to 6 months	Over 6 months	Total
Bills discounted	$143,331	$30,569	$48,859	$28,417	$ 8,266	$ 421	$ 259,863
Bills bought in open market	20,064	13,593	24,270	27,910	6,064	......	91,901
Certificates of indebtedness	....	......	3	76,282	19,980	43,517	139,782

APPENDIX E

AGRICULTURAL CREDIT FACILITIES UNDER THE FEDERAL RESERVE ACT

(Statement Issued by the Federal Reserve Board in August, 1923)

In view of the interest attaching to the added facilities for extending credit to farmers, established by the agricultural credits act of 1923 with the amendments to the Federal reserve act which it contained, there has been prepared the following summary in nontechnical language of the ways in which credit may be extended for agricultural purposes under the provisions of the amended Federal reserve act and the regulations issued by the Federal Reserve Board.

How Credits Are Extended.—The operations of Federal reserve banks in extending credit to agricultural interests are regulated by the Federal reserve act with its various amendments. Neither farmers nor other individuals can obtain credit directly from the Federal reserve banks, but must apply for loans to their own local banks, which, if they are members of the Federal reserve system, may in turn rediscount with the Federal reserve bank the notes, drafts, or bills of exchange required from customers. The Federal reserve act places certain limitations on the character of paper that the reserve banks may discount and places upon the Federal Reserve Board the duty of issuing regulations putting into effect the provisions of the law. Following is a brief summary of the provisions of the act and of the board's regulations with special reference to the credit facilities offered to agricultural interests.

General Character of Eligible Paper.—The character of the paper which Federal reserve banks may discount is generally defined in section 13 of the Federal reserve act. This provision of law authorizes Federal reserve banks to discount notes, drafts, and bills of exchange issued or drawn for agricultural, industrial, or commercial purposes, or the proceeds of which have been used or are to be used for such purposes. The law does not permit the reserve banks to discount paper the proceeds of which are (1) to be loaned to some other borrower, or (2) to be used for permanent investment, or (3) for speculation. Exceptions to (1) in favor of certain kinds of agricultural loans are discussed later.

Agricultural Paper in General.—Agricultural paper is given by the act an important advantage over commercial paper, since the latter can be discounted only for a period not exceeding 90 days, while paper which is issued or drawn for an agricultural purpose, or is based on live stock, may now be discounted by Federal reserve banks even though it has nine months to run from the date of discount. The Federal Reserve Board has made appropriate provision for this in its new regulations in which the definition of agricultural paper has been clarified and broadened so as to incorporate the latest and most liberal principles adopted by the board in determining what constitutes agricultural paper. Nine months' paper will thus be eligible for discount if the proceeds have been or are to be used by a farmer in any one or more of the steps of planting, cultivating, harvesting, or marketing a crop, or of breeding, fattening, or marketing live stock, and the Federal Reserve Board has held that the marketing of crops or live stock includes carrying them for a reasonable time in order to market them in an orderly manner, instead of dumping large quantities on the market at one time in order to get money with which to meet current expenses. Under this provision of the law, member banks which have loaned money for nine months to wheat growers and other farmers for the purpose of raising, carrying, and marketing their crops, will be able to rediscount the farmers' notes with the Federal reserve banks.

Paper of Cooperative Marketing Associations.—In recent years cooperative marketing associations have been coming more and more into prominence as agencies that enable the farmer to market his crops to better advantage. The service which such associations can render to agriculture is clearly recognized and the Federal reserve act makes special provisions for the extension of credit to such associations. Under the act, as amended by the agricultural credits act of March 4, 1923, cooperative marketing associations can issue paper which is eligible for discount with maturities up to 9 months, if the proceeds of the paper are advanced to members of the association for an agricultural purpose, or are used to pay members for agricultural products delivered to the association, or finance the association in packing, preparing for market, or marketing products grown by its members. Paper of cooperative marketing associations by which money is borrowed to be in turn loaned to individual members of the association would ordinarily be ineligible for discount, but it was felt that the ability to issue such paper and have it available for discount would be of such assistance in the cooperative marketing movement that a special exception to the general rule is made in the law. The law also specifically defines as agricultural certain classes of paper of cooperative marketing associations which otherwise would be construed as commercial paper. This provision makes the paper in question eligible for discount with Federal reserve banks for a maximum period of 9 months, instead of 90 days.

Sight and Demand Drafts.—Another feature of the law which should prove of great assistance to the agricultural interests is the new provision making sight and demand drafts eligible for discount under certain circumstances. Under the original act such paper would be ineligible for discount because it has no definite maturity. It appears, however, that it is the custom of many member banks during crop-moving periods to discount large volumes of sight drafts secured by bills of lading covering the shipment of wheat, cotton, or other agricultural products. These drafts, although having no definite maturity, are usually paid with great promptness, and actually constitute a liquid and desirable form of paper. At the suggestion of the Federal Reserve Board an amendment was made to the Federal reserve act by the agricultural credits act of March 4, 1923, permitting Federal reserve banks to discount sight or demand drafts drawn to finance the domestic shipment of nonperishable, readily marketable staples and secured by bills of lading or similar shipping documents conveying or securing title to such staples. In order to assure the liquidity of the Federal reserve banks' assets it is provided that such paper must be presented for payment with reasonable promptness and in no event may a Federal reserve bank hold such paper longer than 90 days.

Factors' Paper.—The law as recently amended also provides that notes, drafts, and bills of exchange of factors for the purpose of making advances to producers of staple agricultural products in their raw state shall be eligible for discount. Under normal circumstances, paper the proceeds of which are loaned to some other borrower would be ineligible for discount, but this kind of factors' paper may now be discounted with maturities up to 90 days. This facility should prove of much assistance in financing agricultural production, because in addition to borrowing from their banks, farmers can also borrow from their factors who will be the more ready to lend on account of the privilege given them of making notes and drafts which may be discounted by Federal reserve banks.

Bankers' Acceptances.—In addition to the ordinary classes of credit instruments—that is, notes, drafts, and bills of exchange—a type of paper known as bankers' acceptances has recently been coming into more common use as a means of financing agricultural operations, both by individual farmers and more particularly by cooperative marketing associations. Bankers' acceptances are drafts or bills of exchange drawn on and accepted by a bank or trust company or other banking institution, and the law authorizes Federal reserve banks to discount bankers' acceptances under certain conditions. For this purpose such acceptances must be indorsed by a member bank and must be drawn to finance the importation or exportation of goods, or the storage of readily marketable staples. Acceptances which are drawn to finance the domestic shipment of goods or the storage of readily marketable staples must also be secured by shipping documents or warehouse receipts conveying or securing title to the goods or staples in question. With regard to bankers' acceptances, the law also discriminates in favor of those drawn to finance agricultural operations by making them eligible for discount with maturities up to six months, provided they are secured by warehouse receipts conveying title to readily marketable staples, while bankers' acceptances drawn for other purposes may be discounted by Federal reserve banks with maturities up to 90 days only. Thus individual farmers and cooperative marketing associations can obtain funds to finance their operations by drawing on their banks and discounting the accepted drafts with other banks. This additional means of getting credit is a very valuable one, because bankers' acceptances are normally the best type of credit instrument and carry the lowest rate of interest.

Admission of Small Banks to Membership.—With a view to increasing the availability of credit through the Federal reserve banks, the agricultural credits act of March 4, 1923, contained a provision designed to enable many smaller banks, which formerly had insufficient capital to become member banks, to join the Federal reserve system. Under this provision banks having 60 per cent of the capital normally required as a qualification for membership may join the system under certain conditions relating to the increase of their capital within a reasonable time, and it is hoped that many of the small country banks will take advantage of this provision and thereby put themselves in a position to offer their customers the benefits of membership and the increased credit facilities afforded by the rediscount privilege.

Open Market Purchases of Paper.—In addition to the discount of agricultural paper for member banks, Federal reserve banks are also enabled to extend credit facilities to the agricultural interests by means of purchasing such paper in the open market. Under section 14 of the Federal reserve act the power is given to Federal reserve banks to purchase in the open market bankers' acceptances and bills of exchange of the kinds and maturities made eligible for discount. By virtue of this provision Federal reserve banks may purchase, as well as discount, bills of exchange drawn for agricultural purposes and having maturities up to nine months, and secured bankers' acceptances drawn to finance agricultural operations with maturities up to six months.

Five-year Loans on Farm Land.—The Federal reserve act also makes provision for long-time borrowing on real-estate security. Section 24 of the act authorizes national banks to make loans for periods up to five years when secured by improved and unencumbered farm land, and for periods up to one year when secured by improved and unencumbered real estate. Naturally, land thus used as security for loans must be located within reasonable proximity to the lending bank—the exact limits are prescribed in the law—and it is further provided, as a matter of sound banking, that these loans may not exceed 50 per cent of the actual value of the property offered as security. The law also places a reasonable limitation on the aggregate amount of farm land and real estate loans which national banks may have outstanding, for otherwise they might tie up too much of their funds in long-time nonliquid loans and not be able to meet the current requirements of their other borrowers. Thus, farmers who need long-time loans can borrow for five years from national banks in their locality on the security of their farm lands, and the Federal Reserve Board has provided in its regulations that at maturity such loans may be renewed for other five-year periods, although a national bank must not obligate itself in advance to make a renewal.

Other Credit Facilities.—The above gives a brief description of the more important provisions of the Federal reserve act which provide for the extension of credit facilities to the agricultural interests. There are also certain other provisions dealing with the relations between the Federal reserve banks and the new intermediate credit institutions which were set up by the agricultural credits act of 1923, and by virtue of which Federal reserve banks, through discounting and open-market purchases, are enabled to extend certain additional credits to agriculture.

Agricultural Loans by National Banks.—Attention should also be called to the provisions of section 5200 of the Revised Statutes. This is not part of the Federal reserve act and applies only to national banks, but it has an important bearing on the amount of credit which farmers and cooperative marketing associations may obtain from national banks. Section 5200 of the Revised Statutes contains the limitation on the amount of money which a national bank may lend to any one person. This is, in general, 10 per cent of the lending bank's capital and surplus, with certain classes of paper excluded as not being considered loans of money. An exception is made, however, with respect to loans on readily marketable nonperishable staples, including live stock. Such loans may be made to any one person up to 25 per cent of the lending banks' capital and surplus, provided the loans over and above 10 per cent are represented by notes, secured by shipping documents or warehouse receipts covering staples or live stock. National banks may also discount in unlimited amounts certain kinds of paper classified broadly as "bills of exchange drawn in good faith against actually existing values." Section 5200 of the Revised Statutes includes in this broad classification drafts secured by shipping documents conveying or securing title to goods shipped, demand obligations when secured by documents covering commodities in process of shipment, and bankers' acceptances of the kinds described in section 13 of the Federal reserve act, so that national banks may extend credit on these classes of paper without limitation. These provisions, which were inserted on the recommendation of the Federal Reserve Board, give broad powers to national banks to extend accommodation on the security of farm products and live stock and have proven of great value to farmers and cattlemen in their financing problems.

The Federal Reserve Board's Part.—A discussion of the provisions of the law in this connection would not be complete without reference to the functions of the Federal Reserve Board, in construing and administering the law. There is not space here for a critical study of the board's rulings and regulations with respect to agricultural credits, but it can be stated with emphasis that the board has so construed and administered the law as to improve in the highest possible degree the credit standing and economic position of the agricultural interests, placing at their disposal, through its discounts for member banks and its open-market operations, the vast resources of the Federal reserve system to the fullest extent permitted by the law and by the principles of sound banking.

APPENDIX F

RICHMOND CASE

DECISION OF SUPREME COURT OF THE UNITED STATES, JUNE 11, 1923

FARMERS AND MERCHANTS BANK OF MONROE, N. C., ET AL., PETITIONERS, v. FEDERAL RESERVE BANK OF RICHMOND, VA.

[On writ of certiorari to the Supreme Court of the State of North Carolinal

Mr. Justice BRANDEIS delivered the opinion of the court.

The Legislature of North Carolina provided by section 2 of chapter 20, Public Laws of 1921, entitled "An act to promote the solvency of State banks:"

"That in order to prevent accumulation of unnecessary amounts of currency in the vaults of the banks and trust companies chartered by this State, all checks drawn on said banks and trust companies shall, unless specified on the face thereof to the contrary by the maker or makers thereof, be payable at the option of the drawee bank, in exchange drawn on the reserve deposits of said drawee bank when any such check is presented by or through any Federal reserve bank, postoffice, or express company, or any respective agents thereof."

Section 1 authorizes banking institutions chartered by the State to charge a fee not in excess of one-eighth of one per cent on remittances covering checks, the minimum fee on any remittance therefor to be ten cents. Section 4 exempts from the operation of Sections 1 and 2 all checks drawn in payment of obligations to the Federal or the State government. Whether this statute conflicts with section 13 of the Federal reserve act (December 23, 1913, c. 6, 38 Stat. 251) 263; as amended September 7, 1916, c. 461, 39 Stat.752; June 21, 1917, c. 32, section 4, 40 Stat. 232, 234) or otherwise with the Federal Constitution is the question for decision.

The legislation arose out of the effort of the Federal Reserve Board to introduce in the United States universal par clearance and collection of checks through Federal reserve banks. See American Bank & Trust Co. v. Federal Reserve Bank of Atlanta, 256 U. S. 350. The Federal Reserve Bank of Richmond serves the fifth Federal Reserve District which includes North Carolina. Upon the enactment of this statute the bank gave notice that it considered the legislation void under the Federal Constitution; that, when presenting checks to North Carolina State banks for payment over the counter, it would refuse to accept exchange drafts on reserve deposits as required by section 2; and that it would return as dishonored checks for which only exchange drafts had been tendered in payment. Some checks were returned thus dishonored; and to enjoin such action, this suit was brought in a court of the State by the Farmers and Merchants Bank of Monroe and eleven other State banks. Two hundred and seventy-one more joined later as plaintiffs. So far as appears, none of them was a member of the Federal reserve system or was affiliated with it. The trial court granted a perpetual injunction. The Supreme Court of the State reversed the decree, 183 N. C. 546; and the case is here on writ of certiorari, 261 U. S.—. Defendant admits that, if the North Carolina statute is constitutional, plaintiffs are entitled to an injunction.

To understand the occasion for the statute, its operation and its effect, the applicable banking practice must be considered.[1] Par clearance does not mean that the payee of a check who deposits it with his bank for collection will be credited in his account with the face of the check if it is collected. His bank may, despite par clearance, make a charge to him for its service in collecting the check from the drawee bank. It may make such a charge although both it and the drawee bank are members of the Federal reserve system; and some third bank which aids in the process of collection may likewise make a charge for the service it renders. Such a collection charge may be made not only to member banks by member banks, National or State, but it may be made to member banks also by the Federal reserve banks for the services which the latter render. The collection charge is expressly provided for in section 16 of the Federal reserve act (38 Stat. 268) which declared that:

"The Federal Reserve Board shall, by rule, fix the charges to be collected by the member banks from its patrons whose checks are cleared through the Federal reserve bank and the charge which may be imposed for the service of clearing or collection rendered by the Federal reserve bank."

Par clearance refers to a wholly different matter. It deals not with charges for collection, but with charges incident to paying. It deals with exchange. Formerly, checks, except where paid at the banking house over the counter, were customarily paid either through a clearing house or by remitting, to the bank in which they had been deposited for collection, a draft on the drawee's deposit in some reserve city. For the service rendered by the drawee bank in so remitting funds available for use at the place of the deposit of the check, it was formerly a common practice to make a small charge, called exchange, and to deduct the amount from the remittance.

[1] See Annual Reports of the Federal Reserve Board, 1914, pp. 19, 20, 174; 1915, pp. 14–17; 1916, pp. 9–12; Regulation I, Series of 1916, p. 169; 1917, pp. 23, 24; Regulation J, Series of 1917, 181–183; 1918, pp. 74–77; 204–206; 810, 811, 817, 821; 1919, pp. 40–44; 222–228; 1920, pp. 63–69; 1921, 68–73; 228–230; Letter from the Governor of the Federal Reserve Board of January 26, 1920, Senate Document No. 184, 66th Congress, 2d session; also "Par Clearance of Checks," by C. T. Murchison, 1 No. Car. Law Review 133.

This charge of the drawee bank the Federal Reserve Board planned to eliminate and, in so doing, to concentrate in the twelve Federal reserve banks the clearance of checks and the accumulation of the reserve balances used for that purpose. The board began by efforts to induce the banks to adopt par clearance voluntarily.[1] The attempt was not successful. The board then concluded to apply compulsion. Every national bank is necessarily a member of the Federal reserve system; and every State bank with the requisite qualifications may become such. Over members the board has large powers, as well as influence. The first step in the campaign of compulsion was taken in the summer of 1916, when the board issued a regulation requiring every drawee bank, which is a member of the Federal reserve system to pay without deduction, all checks upon it presented through the mail by the Federal reserve bank of the district. The operation of this requirement was at first limited in scope by the fact that the original act (section 13) authorized the reserve banks to collect only those checks which were drawn on member banks and which were deposited by a member bank or another reserve bank or the United States. Few of the many State banks had then elected to become members. In September, 1916, section 13 was amended so as to authorize a reserve bank to receive for collection from any member (including other reserve banks) also checks drawn upon nonmember banks within its district. Thereby, the Federal Reserve Board was enabled to extend par clearance to a large proportion of all checks issued in the United States. But the regulation (J) then issued expressly provided that the Federal reserve banks would receive from member banks, at par, only checks on those of the nonmember banks whose checks could be collected by the Federal reserve bank at par. It was recognized that nonmembers were left free to refuse assent to par clearance. By December 15, 1916, only 37 of the State banks within the United States, numbering about 20,000, had become members of the system; and only 8,065 of the State banks had assented to par clearance.

Reserve banks could not, under the then law, make collections for nonmembers. It was believed that if Congress would grant Federal reserve banks permission to make collection also for nonmembers, the board could offer to all banks inducements adequate to secure their consent to par clearance. A further amendment to section 13 was thereupon secured by act of June 21, 1917, c. 32, section 4, which provided, among other things, that Federal reserve banks:

"Solely for the purposes of exchange of or collection, may receive from any nonmember bank . . . deposits of checks . . . payable upon presentation: *Provided*, Such nonmember bank . . . maintains with the Federal reserve bank of its district a balance sufficient to offset the items in transit held for its account by the Federal reserve bank."

To this provision, which embodied the legislation proposed by the Federal Reserve Board, there was added, while in the Senate, another proviso, relating to the exchange charge, now known in a modified form as the Hardwick amendment, which declares:

[1] See Report, Federal Reserve Board, 1915, pp. 14–17; *ibid*, 1916, pp. 9–11.

"That nothing in this or any other section of this act shall be construed as prohibiting a member or nonmember bank from making reasonable charges, to be determined and regulated by the Federal Reserve Board, but in no case to exceed 10 cents per $100 or fraction thereof, based on the total of checks and drafts presented at any one time, for collection or payment of checks and drafts and remission therefor by exchange or otherwise; but no such charges shall be made against the Federal reserve banks."

Thus a Federal reserve bank was authorized to receive for collection checks from nonmembers who maintained with it the prescribed balance; and strenuous efforts were then made to induce all State banks to so arrange. But the law did not compel State banks to do this. Many refused; and they continued to insist on making exchange charges. On March 21, 1918, the Attorney General, 31 Ops. Atty. Gen. 245, 251, advised the President:

"The Federal reserve act, however, does not command or compel these State banks to forego any right they may have under the State laws to make charges in connection with the payment of checks drawn upon them. The act merely offers the clearing and collection facilities of the Federal reserve banks upon specified conditions. If the State banks refuse to comply with the conditions by insisting upon making charges against the Federal reserve banks, the result will simply be, so far as the Federal reserve act is concerned, that since the Federal reserve banks cannot pay these charges they cannot clear or collect checks on banks demanding such payment from them."

The Federal Reserve Board and the Federal reserve banks were thus advised that they were prohibited from paying an exchange charge to any bank. But they believed that it was their duty to accept for collection any check on any bank; and that Congress had imposed upon them the duty of making par clearance and collection of checks universal in the United States. So they undertook to bring about acquiescence of the remaining State banks to the system of par clearance.[1] Some of the nonassenting State banks made stubborn resistance.[2] To overcome it the reserve banks held themselves out as prepared to collect at par also checks on the State banks which did not assent to par clearance. This they did by publishing a list of all banks from whom they undertook to collect at par, regardless of whether such banks had agreed to remit at par or not. This resulted in drawing to the Federal reserve banks for collection the large volume of checks which theretofore had come to the drawee bank by mail from many sources and which had been paid by remittances drawn on the bank's balance in some reserve city. If a State bank persisted in refusal to remit at par, the reserve banks caused these checks to be presented, at the drawee bank,

[1] North Carolina was placed on the par list on November 15, 1920. There were on January 1, 1921, in the United States, 30,523 banks, State and national. Of these, 1,755 State banks had refused to enter the par list. About 250 of the banks so refusing were in North Carolina. During the year 1921 the number which refused to consent to par clearance increased to 2,353. Annual Report of Federal Reserve Board, 1921, p. 71.

[2] See American Bank & Trust Co. v. Federal Reserve Bank of Atlanta, supra; Brookings State Bank v. Federal Reserve Bank of San Francisco, 277 Fed. 430; 281 Fed. 222; Farmers & Merchants Bank of Catlettsburg, Ky., v. Federal Reserve Bank of Cleveland, 286 Fed. 610.

for payment in cash over the counter. The practice adopted by the reserve banks would, if pursued, necessarily subject country banks to serious loss of income. It would deprive them of their income from exchange charges; and it would reduce their income-producing assets by compelling them to keep in their vaults in cash a much larger part of their resources than theretofore. That such loss must result was admitted. That it might render the banks insolvent was clear. But the Federal reserve banks insisted that no alternative was left open to them, since they had to collect the checks and were forbidden to pay exchange charges. The State banks denied that the Federal reserve banks were obliged to accept these checks for collection; and insisted that Federal reserve banks should refrain from accepting for collection checks on banks which did not assent to par clearance.

It was to protect its State banks from this threatened loss, which might disable them, that the legislature of North Carolina enacted the statute here in question.[1] It made no attempt to compel the Federal reserve bank to pay an exchange charge. It made no attempt to compel a depositor to accept something other than cash in payment of a check drawn by him. It merely provided that, unless the drawer indicated by a notation on the face of the check that he required payment in cash, the drawee bank was at liberty to pay the check by exchange drawn on its reserve deposits. Thus the statute merely sought to remove (when the drawer acquiesced) the absolute requirement of the common law that a check presented at the bank's counter must be paid in cash. It gave the drawee bank the option to pay by exchange only in certain cases; namely, when the check was "presented by or through any Federal reserve bank, post office or express company, or any respective agents thereof." The option was so limited, because the only purpose of the statute was to relieve State banks from the pressure which, by reason of the common-law requirement, Federal reserve banks were in a position to exert and thus compel submission to par clearance. It was expected that depositors would cooperate with their banks and refrain from making the prescribed notation; and that when the reserve banks were no longer in a position to exert pressure by demanding payment in cash, they would cease to solicit, or to receive, for collection checks on nonassenting State banks. Thus, these would be enabled to earn exchange charges as theretofore. Such was the occasion for the statute and its purpose. Whether this legislative modification of the common-law rule which requires payment in cash violates the Federal Constitution is the question for decision. That it does is asserted on five grounds.

First.—It is contended that in authorizing payment of checks by draft on reserve deposits section 2 violates the provision of Article I, section 10, clause 1 of the Federal Constitution, which prohibits a State from making anything except gold and silver coin a tender in payment of debts. This claim is

[1] Statutes similar in purpose were enacted in Alabama, Florida, Georgia, Louisiana, Mississippi, South Dakota, and Tennessee. See Annual Report of Federal Reserve Board, 1921, p. 70; Alabama, Gen. & Loc. Acts, 1920, No. 35; Florida, Laws, 1921, c. 8532; Georgia, Laws, 1920, p. 107; Louisiana, Acts, 1920, No. 23; Mississippi, Laws, 1920, c. 183; South Dakota, Laws, 1921, c. 31; Tennessee, Pub. Acts, 1921, c. 37.

clearly unfounded. The debt of the bank is solely to the depositor. The statute does not authorize the bank to discharge its obligation to its depositor by an exchange draft. It merely provides that, unless the depositor in drawing the check specifies on its face to the contrary, he shall be deemed to have assented to payment by such a draft. There is nothing in the Federal Constitution which prohibits a depositor from consenting, when he draws a check, that payment may be made by a draft. And, as the statute is prospective in its operation, Denny *v.* Bennett, 128 U. S. 489; Abilene National Bank *v.* Dolley, 228 U. S. 1, 5, there is no constitutional obstacle to a State's providing that, in the absence of dissent, consent shall be presumed. Laws which subsist at the time and place of the making of a contract, and where it is to be performed, enter into and form a part of it, as fully as if they had been expressly referred to or incorporated in its terms. This principle embraces alike those laws which affect its construction and those which affect its enforcement or discharge. See Odgen *v.* Saunders, 12 Wheat. 213, 231; Von Hoffman *v.* Quincy, 4 Wall. 535, 550. If, therefore, the provision of section 2 authorizing payment by exchange draft is otherwise valid, it is binding upon the drawer of the check. Since it binds the drawer, it binds the payee and every subsequent holder, whether he be a citizen of North Carolina or of some other State, and wherever the transfer of the check was made. Brabston *v.* Gibson, 9 How. 263. For the holder of a check has, in the absence of acceptance by the drawee bank, no independent right to require payment under the general law. Bank of the Republic *v.* Millard, 10 Wall. 152. He takes it subject to the construction and with rights conferred by the laws of North Carolina, the place of the bank's contract and of performance. Pierce *v.* Indseth, 106 U. S. 546. Compare Rouquette *v.* Overmann, L. R. 10 Q. B. 525.

Second.—It is contended that section 2 violates the due process clause. The argument is that defendant is a Federal corporation authorized to engage in the business of collecting checks payable upon presentation within the district, a business common to all banking institutions; that the right to engage in this branch of the business is a valuable property right; that while defendant has, in the past, not made any charge for such collections, it has the right to do so, and could make this branch of its business an important source of revenue; that to compel defendant to accept in payment of checks exchange drafts on reserve deposits, whether good or bad, deprives it of liberty of contract, and in effect of an important branch of its business, since that of collecting checks can not be conducted under such limitations. To this argument the answer is clear. The purpose of the statute, as its title declares, was to promote the solvency of State banks. We should, in the absence of controlling decision of the highest court of the State to the contrary, construe the statute not as authorizing payment in a "bad" draft, but as authorizing payment in such exchange drafts only as had customarily been used in remitting for checks. So construed the statute is merely an exercise of the police power, by which the banking business is regulated for the purpose of protecting the public and promoting the general welfare. Noble State Bank *v.* Haskell, 219 U. S. 104, 575. The regulation here attempted is not so extreme as inherently to deny rights protected by the due process clause. Compare Chicago, Burlington & Quincy R. R. Co. *v.* McGuire, 219 U. S. 549, 567, 568; Central Lumber Co. *v.* South Dakota 226 U. S. 157, 162. If the regulation exceeds the State's power to protect the public, it must be because some other provision of the Federal Constitution is violated by the means adopted or by the manner in which they are applied.

Third.—It is contended that the statute is obnoxious to the equal protection clause. The argument is that the Federal Reserve Bank of Richmond is obliged to accept payment in exchange drafts, whereas other banks with whom it might conceivably compete may demand cash, except in those cases where they present the check through an express company or the post office. It is well settled that the legislature of a State may (in the absence of other controlling provisions) direct its police regulations against what it deemed an existing evil, without covering the whole field of possible abuses. Lindsley *v.* National Carbonic Gas Co., 220 U. S. 61, 81; Missouri Pacific Ry. Co. *v.* Mackey, 127 U. S. 205. If the legislature finds that a particular instrument of trade war is being used against a policy which it deems wise to adopt, it may direct its legislation specifically and solely against that instrument. Central Lumber Co. *v.* South Dakota, supra, p. 160. If it finds that the instrument is used only under certain conditions, or by a particular class of concerns, it may limit its prohibition to the conditions and the concerns which it concludes alone menace what it deems the public welfare. The facts recited above disclose ample ground for the classification made by the legislature. Hence, there was no denial of equal protection of the law. There remains to consider whether section 2 exceeds the State's power, because Congress has imposed specifically upon Federal reserve banks duties, the performance of which section 2 obstructs; and that in this way it conflicts with the Federal reserve act. This is the ground on which the invalidity of the North Carolina act has been most strongly assailed.

Fourth.—One contention is that section 2 conflicts with the Federal reserve act because it prevents the Federal reserve banks from collecting checks of such State banks as do not acquiesce in the plan for par clearance. The argument rests on the assumption that the Federal Reserve Bank of Richmond is obliged to receive for collection any check upon any North Carolina State bank, if such check is payable upon presentation; and is obliged to collect the same at par without allowing deductions for exchange or other charge. But neither section 13, nor any other provision of the Federal reserve act, imposes upon reserve banks any obligation to receive checks for collection. The act merely confers authority to do so. The class of cases to which such authority applies was enlarged from time to time by Congress. But in each amendment, as in section 13, the words used were "may receive"—words of authorization merely. It is true that in statutes the word "may" is sometimes construed as "shall." But that is where the context, or the subject matter, compels such construction. Supervisors *v.* United States, 4 Wall. 435. Here it does not. This statute appears to have been drawn with great care. Throughout the act the distinction is clearly made between what the board and the reserve banks "shall" do and what they "may" do.[1]

Moreover, even if it could be held that the reserve banks are ordinarily obliged to collect checks for authorized depositors, it is clear that they are not required to do so where the drawee has refused to remit except upon allowance of exchange charges which reserve banks are not permitted to pay. There is surely nothing in the act to indicate that reserve banks must undertake the collection of checks in cases where it is impossible to obtain payment except by incurring serious expense; as, in presenting checks by special messenger at a distant point. Furthermore, the checks which the act declares reserve banks may receive for collection are limited to those "payable on presentation." The expression would seem to imply that the checks must be payable either in cash or in such funds as are deemed by the reserve bank to be an equivalent. A check payable at the option of the drawee by a draft on distant reserves would seem not to be within the limited class of checks referred to in the act. The argument of the Federal reserve bank is not helped by reference to the incidental power conferred by section 4. It is only "such incidental powers as shall be necessary to carry on the business of banking within the limitations prescribed by this [the Federal reserve] act" which are granted. No duty or right of the Federal reserve bank to collect checks is obstructed by the North Carolina statute which merely gives to the drawee bank the right to pay in the customary exchange draft, where this depositor has, by the form used in drawing the check, consented that this be done.

Fifth.—The further contention is made that section 2 conflicts with the Federal reserve act because it interferes with the duty of the Federal Reserve Board to establish in the United States a universal system of par clearance and collection of checks. Congress did not in terms confer upon the Federal Reserve Board or the Federal reserve banks a duty to establish universal par clearance and collection of checks; and there is nothing in the original act or in any amendment from which such duty to compel its adoption may be inferred. The only sections which in any way deal either with clearance or collection are 13 and 16. In neither section is there any suggestion that the Reserve Board and the reserve banks shall become an agency for universal clearance. On the contrary section 16 strictly limits the scope of their clearance functions. It provides that the Federal Reserve Board:

[1] In the original Federal reserve act (38 Stat. 251) "may" is used in sections 2, 3, 4, 5, 8, 9, 10, 11, 12, 13, 14, 15, 16, 18, 19, 21, 22, 24, 25, 26, 28. "Shall" is used in those sections and also in sections 1, 6, 7, 20, 23, 27, 29. Thus: Sec. 2: "The Secretary . . . shall designate . . . cities to be known as Federal reserve cities, and shall divide the Continental United States into districts. . . . The districts . . . may be readjusted. . . . Such districts shall be known as Federal reserve districts and may be designated by number"; Sec. 3: "Each Federal Reserve bank shall establish branch banks within the Federal reserve district in which it is located and may do so in the district of any Federal reserve bank which may have been suspended"; Sec. 5: "outstanding capital stock shall be increased . . . as member banks increase their capital stock . . . and may be decreased as member banks reduce their capital stock . . . "; Sec. 13: " . . . may receive . . . deposits . . . may discount . . . shall at no time exceed"; Sec. 16: "Every Federal reserve bank shall maintain reserves . . . "; "Every Federal reserve bank shall receive on deposit."

"may at its discretion exercise the functions of a clearing house for such Federal reserve banks . . . and may also require each such bank to exercise the functions of a clearing house for its member banks."

There is no reference whatever to "par" in section 13, either as originally enacted or as amended from time to time. There is a reference to "par" in section 16; and it is so clear and explicit as to preclude a contention that it has any application to nonmember banks; or to the ordinary process of check collection here involved. Section 16 (38 Stat. p. 268) declares:

"Every Federal reserve bank shall receive on deposit at par from member banks or from Federal reserve banks checks and drafts drawn upon any of its depositors, and when remitted by a Federal reserve bank, checks and drafts drawn by any depositor in any other Federal reserve bank or member bank upon funds to the credit of said depositor in said reserve bank or member bank. Nothing herein contained shall be construed as prohibiting a member bank from charging its actual expense incurred in collecting or remitting funds, or for exchange sold to its patrons."

The depositors in a Federal reserve bank are the United States, other Federal reserve banks, and member banks. It is checks on these depositors which are to be received by the Federal reserve banks. These checks from these depositors the Federal reerve banks must receive. And when received they must be taken at par. There is no mention of nonmember banks in this section. When, in 1916, section 13 was amended to permit Federal reserve banks to receive from member banks solely for collection other checks payable upon presentation within the district—and when, in 1917, section 13 was again amended to permit such receipt solely for collection also from certain nonmember banks—section 16 was left in this respect unchanged. In other respects section 16 was amended both by the act of 1916 and by the act of 1917. The natural explanation of the omission to amend the provision in section 16 concerning clearance is that the section has no application to nonmember banks—even if affiliated.

Moreover, the contention that Congress has imposed upon the board the duty of establishing universal par clearance and collection of checks through the Federal reserve banks is irreconcilable with the specific provision of the Hardwick amendment which declares that even a member or an affiliated nonmember may make a limited charge (except to Federal reserve banks) for "payment of checks and . . . remission therefor by exchange or otherwise." The right to make a charge for payment of checks, thus regained by member and preserved to affiliated nonmember banks, shows that it was not intended, or expected, that the Federal reserve banks would become the universal agency for clearance of checks. For, since against these the final clause prohibited the making of any charge, then if the reserve banks were to become the universal agency for clearance, there would be no opportunity for any bank to make as against any bank a charge for the "payment of checks." The purpose of Congress in amending section 13 by the act of 1917 was to enable the board to offer to nonmember banks the use of its facilities, which it was hoped would prove a sufficient inducement to them to forego exchange charges; but to preserve in nonmember banks the right to reject such offer, and to protect the interests of member and affiliated nonmember banks (in competition with the nonaffiliated State banks) by allowing also those connected with the Federal system to make a reasonable exchange charge to others than the reserve banks. The power of the Federal Reserve Board to establish par clearance was, thus, limited by the unrestricted right of unaffiliated nonmember banks to make a charge for exchange and the restricted right of members and affiliate nonmembers to make the charge therefor fixed as reasonable by the Federal Reserve Board. No bank could make such a charge against the Federal reserve banks, because these are prohibited from paying any such charge. Member and nonmember affiliated banks, because they were such, performed the service for the Federal reserve banks without charge. Unaffiliated nonmember banks were under no obligation to do so. Thus construed, full effect may be given to all clauses in the Hardwick amendment as enacted. It in no way interferes with the right of a depositor in a nonaffiliated State bank to agree with his bank that the checks which he might draw should (unless otherwise indicated on their face) be payable, at the option of the drawee, in exchange in certain cases.

The North Carolina statute here in question does not obstruct the performance of any duty imposed upon the Federal Reserve Board and the Federal reserve banks. Nor does it interfere with the exercise of any power conferred upon either. It is therefore consistent with the Federal reserve act and with the Federal Constitution.

Reversed.

Mr. Justice VAN DEVANTER and Mr. Justice SUTHERLAND dissent.

APPENDIX G

CLASSIFICATION OF EXPENSES OF OPERATION OF FEDERAL RESERVE BANK OF NEW YORK: 1923

The expenses of carrying on the work of the bank, divided as nearly as possible according to functions, with the miscellaneous items of overhead similarly apportioned among the various functions, were as follows:

1. Maintaining the accounts of the bank.		
This work included making about 9,026,000 entries a year in the accounts maintained with member and other banks, and the current determination of reserve balances, which are required by law.....		$ 211,363
2. Supplying currency and coin.		
Paying out, receiving, and redeeming currency, involving the count of about 775,000,000 individual notes during the year.	$ 896,934	
Paying out and receiving coin. This service was formerly performed largely by the Subtreasury, and is now entirely in the hands of the Federal Reserve Bank. Receipts and issues amounted to $228,798,000 for the year..................	172,025	
Currency and coin shipments to and from out-of-town banks. There were 234,621 such shipments in and out during the year..............................	429,038	
Cost of printing new Federal reserve currency to replace worn notes in circulation and to maintain supplies unissued and on hand, including cost of transportation....	421,229	
Supplying currency and coin..........		$1,919,226
3. Making loans.		
Making discounts and advances to member banks. The number of items handled during the year was 72,177, aggregating $17,952,000,000......................	$ 275,110	

Purchasing acceptances and government obligations for the account of this bank and other Federal reserve banks. The items purchased during the year aggregated $3,528,000,000	142,907	
Making loans		$ 418,017
4. Collecting checks, drafts, notes, and coupons.		
Collection of cash items, mostly checks. The average number collected was 425,151 a day, or 128,400,000 for the year, aggregating $65,518,000,000	$1,705,245	
Collection of non-cash items, including drafts, notes, and coupons. The number of items handled during the year was about 2,177,000, aggregating $1,921,000,000	501,816	
Collecting checks, etc		$2,207,061
5. Supplementary services.		
Custody of securities. This service involved holding in safekeeping on the average about $700,000,000 of securities for the United States government, $50,000,000 for the War Finance Corporation and $260,000,000 from other sources	$ 186,129	
Purchase and sale of bankers acceptances and other securities for member banks and foreign banks amounting for the year to $237,712,000, and receiving and delivering securities for the account of member banks, amounting for the year to about $500,000,000. In addition the bank has acted for the Treasury Department in the purchase and sale of government securities	145,638	
Telegraphic transfer of funds. This service is performed over the telegraph wires of the Federal Reserve System, and is used by the Treasury Department and member banks. It involves making an average of 939 transfers of funds to all parts of the country each day, amounting to about $92,820,000 and aggregating for the year $28,031,500,000	115,400	
Supplementary services		$ 447,207
6. Services in connection with government loans. This work included during 1923 the receipt or delivery of 1,345,000 individual govern-		

ment bonds, notes, and certificates, amounting to $2,622,000,000, which were exchanged or converted or handled in connection with registration; and the payment of 17,683,617 individual coupons on government bonds, notes, and certificates. It also involved the sale and issue of 124,846 pieces amounting to $851,583,000, and the redemption of 788,758 pieces amounting to $807,929,000 of government bonds, notes, and certificates. Aside from amounts received from the Treasury in partial reimbursement, the cost of such operations to the bank was.............		$ 648,310
(In addition to these operations for the Treasury, the bank performed other work for the government connected with the currency, the collection of checks, the custody, purchase, and sale of securities, the transfer of funds, etc., which have been referred to under their respective headings.)		
7. General or Supervisory expenses, not apportioned among the functions specified above.		
Executive salaries (Chairman, governor, four deputy governors, and secretary of the bank, and manager and cashier of the Buffalo branch)........................	$ 203,640	
Work of the Federal reserve agent, including note issues, examination of member banks, visits to member banks, statistical and information services, such as the preparation of weekly bank statements and the publication of the monthly review.	352,575	
Maintaining the General Audit............	260,226	
Directors' Fees and Traveling Expenses....	21,664	
This bank's share of the expenses of the Federal Reserve Board...................	190,847	
General or supervisory expenses.........		$1,028,952
Total.............................		$6,880,136

APPENDIX H

MEMBERSHIP OF THE FEDERAL RESERVE BOARD: 1914–1924

Chairman (ex-officio)

William G. McAdoo: (New York)	Aug. 10, 1914—resigned Dec. 15, 1918
Carter Glass: (Virginia)	Dec. 16, 1918—resigned Feb. 1, 1920
David F. Houston: (Missouri)	Feb. 2, 1920–Mar. 3, 1921
Andrew W. Mellon: (Pennsylvania)	Mar. 4, 1920–

Comptroller of the Currency

John Skelton Williams: (Virginia)	Aug. 10, 1914–Mar. 3, 1921
Daniel R. Crissinger: (Ohio)	Mar. 17, 1921—resigned April 30, 1923
Henry M. Dawes: (Illinois)	May 1, 1923—resigned Dec. 15, 1924
J. W. McIntosh: (Illinois)	Dec. 15, 1924–

Governor

Charles S. Hamlin: (Massachusetts)	Aug. 10, 1914–Aug. 9, 1916
W. P. G. Harding: (Alabama)	Aug. 10, 1916–Aug. 9, 1922
Edmund Platt (acting): (New York)	Aug. 10, 1922–April 30, 1923
Daniel R. Crissinger: (Ohio)	May 1, 1923–

Vice-governor

Frederick A. Delano: (Illinois)	Aug. 10, 1914–Aug. 9, 1916
Paul M. Warburg: (New York)	Aug. 10, 1916–Aug. 9, 1918
Albert Strauss: (New York)	Aug. 10, 1918–Mar. 15, 1920
Edmund Platt: (New York)	June 16, 1920–

MEMBERS OF THE BOARD

Charles S. Hamlin: (Massachusetts)	Appointed Aug. 10, 1914 for 2 years. Reappointed Aug. 10, 1916. Term expires August 9, 1926.
Paul M. Warburg: (New York)	Appointed Aug. 10, 1914 for 4 years. Term expired Aug. 9, 1918.
Frederic A. Delano: (Illinois)	Appointed Aug. 10, 1914 for 6 years. Resigned July 21, 1918
W. P. G. Harding: (Alabama)	Appointed Aug. 10, 1914 for 8 years. Term expired Aug. 9, 1922
Adolph C. Miller: (California)	Appointed Aug. 10, 1914 for 10 years. Reappointed Aug. 10, 1924. Term expires Aug. 9, 1934
Albert Strauss: (New York)	Appointed Nov. 26, 1918. Resigned Mar. 15, 1920
H. A. Moehlenpah: (Wisconsin)	Appointed Nov. 10, 1919 to complete unexpired term of Mr. Delano. Term expired Aug. 9, 1920
Edmund Platt: (New York)	Appointed June 8, 1920 to complete the unexpired term of Mr. Strauss. Term expires Oct. 26, 1928
D. C. Wills: (Ohio)	Appointed *ad interim* Sept. 29, 1920—resigned Mar. 3, 1921
Daniel R. Crissinger: (Ohio)	Appointed May 1, 1923—term expires Aug. 9, 1932
John R. Mitchell: (Minnesota)	Appointed May 12, 1921—resigned May 12, 1923
Milo D. Campbell: (Michigan)	Appointed Mar. 14, 1923. Died Mar. 22, 1923
E. H. Cunningham: (Iowa)	Appointed May 14, 1923 to complete the unexpired term of Mr. Campbell. Term expires Mar. 2, 1933
George R. James: (Tennessee)	Appointed May 14, 1923 to complete the unexpired term of Mr. Mitchell. Term expires May 11, 1931.

MEMBERSHIP IN Dec., 1924

Andrew W. Mellon, Secretary of the Treasury, ex-officio
J. W. McIntosh, Comptroller of the Currency, ex-officio
Daniel R. Crissinger, Governor
Edmund Platt, Vice-governor
Adolph C. Miller
Charles S. Hamlin
George R. James
E. H. Cunningham

APPENDIX I

EXTRACTS FROM ARTICLE ON DISCOUNT POLICY OF FEDERAL RESERVE BANKS

By O. M. W. Sprague of Harvard University[1]

At the outset, it is necessary to reach some conclusion as to the responsibility that rests upon the Reserve Board and the management of the reserve banks for the credit expansion of the last five years. For by far the greater part of that expansion responsibility clearly rests elsewhere. The volume of credit has been subject to conditions and influenced by policies which the management of the reserve system could not control. This is obviously the case as regards the large additional supply of credit which became available as a result of the gold imported before we entered the war. Up to that time, the loans of the reserve banks were of quite insignificant proportions.

After we entered the war, the loans of the reserve banks increased by leaps and bounds; but for the policy of war finance which occasioned these loans and the manifold greater loans of the commercial banks, the Reserve Board was not responsible. That it is possible to finance without inflation expenditures as great even as those incurred by the United States government during the recent war, I am firmly convinced. That we could not finance that war without credit inflation, I am equally certain. The primrose path of inflation had the backing of public opinion; the administrative machinery and perhaps the constitutional power for adequate taxation were lacking. A little less waste in expenditure, slightly heavier taxation and slightly higher interest rates on government bonds might have characterize our war finance program,with the desirable result that there would have been somewhat less of credit inflation. But I must not allow myself to digress further on this tempting subject. The important point in the present connection is that whatever the financial policy adopted by a government in time of war may be, it is the imperative duty of the management of a central bank to coöperate loyally in executing that policy. The Reserve Board and the officials of the reserve banks could offer advice and criticism; they could not decline to do their part in executing the policy of the Treasury.

Presumably there would have been no less use of credit in financing the war if the reserve system had not been established. In that event, the government would doubtless have met requirements for additional money for use outside the banks by issues of paper money which would surely

[1] Reprinted from the American Economic Review, Vol. XI, No. 2, March, 1921.

have become inconvertible. The economy of gold under the reserve system permitted credit expansion on an unexampled scale without suspension of specie payments. It was none the less inflation.

One of the results of the extensive use of credit in financing the war was to place the banks of the country in a position of extreme dependence on the reserve banks. At the time of the armistice the reserve banks were lending member banks nearly $1,800,000,000 and in addition held nearly $400,000,000 of bills bought in the open market. As general liquidation of loans at the reserve banks, unless due to the receipt of new gold, involves much greater contraction of loans by member banks, it is probable that they must continue to rediscount heavily there for many years to come if not indefinitely. No progress whatever in reducing these obligations has been made during the two years since the armistice. On the contrary, borrowing at the reserve banks has increased by nearly 50 per cent, loans standing at $3,126,000,000 on November 5,1920.

It is only for this after-the-war increase in the loans of the reserve banks and the more considerable increase in the loans of the other banks thus made possible that the management of the reserve banks can be held to be in some measure, but by no means primarily, responsible. Government financial policies were the controlling factor in the situation for at least a year after the armistice. The policy of borrowing at abnormally low rates was insistently maintained by the Treasury. It does not fall within the scope of this paper to discuss in detail the wisdom of this policy. Much can be said on both sides of the question. I content myself with observing that it was my opinion at the time, and the subsequent course of events has not altered the conclusion, that a distinctly higher range of rates on government certificates in the summer and autumn of 1919 would have been a wiser policy. But even if the Federal Reserve Board had been convinced that the after-the-war financial policy of the Treasury was unwise, as to which there is no evidence one way or the other, I do not think the board could have refused to coöperate in executing that policy, taking an independent course and making a sharp advance in discount rates. It is, however, reasonable to surmise that the policy of the Treasury after the armistice would have been subjected to more searching scrutiny if the Reserve Board were less heavily weighted with Treasury officials. When account is taken of the future frequent borrowing requirement of the government, the retention of two Treasury officials as ex-officio members of the Reserve Board seems most inexpedient. Borrowers on a large scale are not the most desirable of persons to be selected as directors of any bank. The Treasury as a borrower in times of peace should not be in position to exert a considerable, much less a controlling, direct influence on the discount policy of the reserve banks. Merely as a matter of simplification of administrative machinery, also, the functions of the Comptroller of the Currency should be transferred to the Reserve Board and the reserve banks. So much of diminution of direct Treasury influence as is involved in this proposal seems certainly desirable. Whether the Secretary of the Treasury should cease to be a member of the board is a question as to which a definite answer is less easily given. Upon the whole, I am inclined to think that the presence of the Secretary is desirable. The intimate understanding of the financial situation that a Secretary may gain as a member of the Reserve Board can hardly fail to be of advantage to him in the conduct of his office. The Secretary of the Treasury, as a member of the Board can also do much to defend the reserve system from unreasonable demands on the part of the public and above all from political onslaughts.

Returning once more to the course of credit under the reserve system, there remains for consideration the experience of the last twelve months, during which the reserve banks have been in position to exert complete control over the supply of credit and have also been able to take independent action. At the end of August, 1919, the gross debt of the government reached its maximum and though the Treasury continued to enter the market as a chronic borrower, its strongest ground for insisting upon the policy of liberal loans at low rates could be urged no longer. With evident reluctance Treasury control of the discount policy of the reserve banks was relaxed and seems to have been entirely relinquished with the last issue of 4¾ per cent certificates in January, 1920.

Full responsibility for the credit situation was regained in circumstances which imposed a severe test upon the reserve system and upon its management. After nearly five years of unexampled business activity, accompanied by unprecedented credit expansion and advances in prices, the activity of trade was unabated, the demand for credit was if anything more intense and prices were still moving rapidly upward. Beneath the surface, there were indications that even though large supplies of additional credit were still to be had, a period of readjustment could not be long postponed. Liberal credit was no longer, as at the beginning of a period of activity, serving to stimulate production and direct industry into promising channels. It was rather tending to disorganize industry, subjecting it to an increasing extent to speculative influences, to wage disputes and numberless other strains. The average quality of the loans of the banks was becoming less satisfactory because of these conditions in industry as well as on account of extensive sales of goods in foreign markets on long credit terms. In short the situation at the end of 1919 was one which by no possibility could be corrected by the application of additional supplies of credit. A check on further credit expansion followed by some contraction was the one sure remedy and that remedy would have been quite as much needed even though an abundant supply of additional credit had been still available. It is, however, by no means certain that the Reserve Board would have taken measures to restrain credit during the course of the winter and spring of this year if the power of the reserve banks to extend credit within the limits of legal reserve requirements had not been nearly exhausted. The successive advances in discount rates made during the first half of the year were not then entirely the expression of a voluntary policy. It was a policy which in large measure was enforced by the reserve position of the banks. It was necessary to check further credit expansion. Otherwise, the reserve banks in the course of a few months would have held no reserve above legal requirements as a basis for credit to be used in meeting an emergency. To go on expanding credit until the last available dollar was employed was indeed our former practice, and the initial stages of the transition to a period of readjustment were always marked by crisis and panic. It is one of the inestimable advantages of the reserve system that the brakes were applied before the supply of credit was entirely exhausted and before trade activity had culminated in a crisis. We are still in the midst of a period of necessary readjustment and liquidation, but the immense superiority of the reserve system as compared with our former means of meeting similar situations is already conspicuously evident.

Although the process of readjustment is not completed, experience alreadc furnishes a basis for fairly definite conclusions regarding some important aspects of the policy of the reserve banks in handling the situation. The discount rate of the reserve banks is clearly an effective means of checking credit expansion, but it is also evident that advancing rates influence the situation rather slowly. Credit continued to expand for some months after rates were finally advanced in May to the present high level. When credit is expanding rapidly, there is at any moment a considerable supply of unused credit scattered among the thousands of banks of the country the use of which is not subject to control by the reserve banks. The continued increase in the amount of federal reserve notes for some months after credit expansion was checked is in accord with what was to have been anticipated. Increased requirements for currency accompany, but with some lag, the increase in credit in the form of deposits subject to check.

These conditions and tendencies prompt the suggestion that when rates are advanced in order to check credit expansion the practice of the Bank of England of advancing rates by increments of one per cent should be adopted. In making for the first time a test of the effects of advancing discount rates, it was perhaps natural and proper to move slowly. Experience during the last year indicates that advances of fractions of per cent are ineffective. It may be added that in this particular instance, it would have been of much advantage if somewhat greater progress in the process of readjustment had been made before the beginning of the crop moving season, a result which would have followed a less hesitant discount policy.

The process of gradual contraction and orderly industrial readjustment seems at first sight in every respect superior to the short and severe crisis and panic followed by depression with which we have had frequent experience in the past. I do not doubt that the balance of advantage is heavily in favor of the slower process. At the same time it should be recognized that the slower process is attended by its own peculiar difficulties. While the aggregate loss is doubtless reduced, the burden of loss is apparently distributed in a somewhat different but by no means certainly in a more equitable fashion among the various groups of producers. The slow process of liquidation does not succeed in bringing about a slow and uniform general decline in prices. In fact, price changes seem to be more irregular, or at least the irregularities are more prolonged than when periods of trade activity culminated in catastrophic disturbances. In this connection the query suggests itself whether farmers might not have incurred less loss if there had been a crisis in the early autumn that might have forced a more immediate reduction in prices of the goods they must buy.

The irregular distribution of the burdens of liquidation in some measure explains even though it does not give sufficient ground for complying with the widespread demands for assistance now being made by various classes of producers. Much of the occasion for special consideration will disappear when in the near future, as now seems probable, the decline in prices has completed the circle.

There is grave danger that the quack remedy of inflation through enforced accommodation from the reserve banks may be attempted. Such a remedy would be similar in all essentials to the grant of aid by the issue of paper money by the government, a form of assistance that was urged but successfully resisted after the Civil War. It is not too much to say that it is now to be determined whether the people of the United States possess sufficient intelligence and endurance to permit the successful operation of anything better than a straight-jacket credit system. We have established a system which is designed to prevent collapse and complete disorganization. This presupposes that reserve banks will regularly hold in reserve large potential credit power. If we insist upon using such power as a means of temporary relief and stimulation, ultimate disaster is the certain consequence. Past experience shows that it is dangerous for governments to issue paper money. There is a constant temptation to overissue when confronted by real or imaginary emergencies. The same danger arises in the case of the reserve system—that public opinion and perhaps legislative action will compel the employment of its resources in a vain endeavor to cure evils which are mainly due to credit already granted in excess.

The process of industrial readjustment at best is painful and its burdens are most unevenly distributed. It seems pertinent therefore to inquire whether something more cannot be accomplished through the reserve system than the mere modification and amelioration of conditions at the culmination of periods of business activity. Would it be possible so to operate the reserve system that conditions which compel widespread liquidation would not be developed, or at least would not be developed to so serious degree as in the past. This inquiry is rendered more significant by the serious danger that conditions which render subsequent liquidation unavoidable will develop more luxuriantly under the reserve system than was possible under the national banking system. Let us examine this point.

The liquidation now under way will doubtless lead to a considerable reduction in the loans of the banks to the public and in rediscounts at the reserve banks. It is not unlikely that a reserve ratio as high as 70 per cent will be seen before the beginning of the next period of active business and intense demand for credit. Moderate if not low discount rates will doubtless prevail at the beginning of the period. A large supply of credit will be available; much more, as we have seen, than could be furnished if the reserve banks like the Bank of England could not issue credit notes. I mention this familiar fact once more because the pre-war discount policy of the Bank of England, with its changes in rates as the reserve increased or decreased, seems to give the sanction of successful experience to a policy for central banks that would allow credit to be extended freely at low rates whenever reserves are ample. Bank of England practice, however, loses significance and is positively misleading when it is applied to a banking system which loses no gold for purposes of domestic circulation as deposit credit expands. Again in pre-war times, comparatively slight influences, whether at home or abroad, were sufficient to subject the reserve of the Bank of England to depletion from gold exports. For these two reasons credit expansion in England could seldom be carried far without bringing the reserve of the bank down to a point at which an advance in the discount rate would become necessary. In this country, whatever may be the situation in the distant future, gold exports for many years to come are not likely to be the almost automatic consequence of moderate credit expansion. This restraint on excessive credit expansion in any single country was effective when all important commercial countries were on the gold standard. It is not now effective because most of the world is on an inconvertible basis. Consequently the volume of credit which may be created in the United States will be determined for many years to come almost wholly by domestic influences. In these circumstances, while the reserve system may be expected to prevent the outbreak of panic, its expansive power is so great that with the reserve ratio the determinant of discount policy it can be confidently predicted that far wider price fluctuations will mark the successive stages of the business cycle than were experienced under the national banking system.

It should also be noted that the discount rate of the reserve banks is a somewhat less immediately effective instrument of credit control than that of the Bank of England in pre-war days. A considerable portion of the loans of the British banks were of an international character which could readily be shifted to the money markets of other countries when London rates became relatively high. Owing to the present disordered financial situation of most countries, loans arising out of foreign trade and other international transactions no longer possess this quality so valuable from a banking standpoint. International loans have become no more transferable than domestic loans and, it may be added, with respect to payment at maturity without delay or renewals have become decidedly inferior to domestic loans.

The absence of branch banking in the United States also weakens the validity of comparisons between the discount rate of the Bank of England and those of the reserve banks. Credit is less fluid under our system of some thirty thousand banks. There are much wider variations in the lending rates of the various commercial banks; there is no such general market rate of discount as in England. Consequently, the Bank of England practice of a discount rate slightly above the market rate cannot have so pervasive an influence. Moreover, until the banks cease to be constant heavy borrowers at the reserve banks, a condition largely due as we have seen to the war, it will not be feasible as a regular policy to establish discount rates above the lending rates of member banks even of those in the large cities. When, however, it is the definite purpose of the management of the reserve banks to check credit expansion, it will probably be found necessary to establish discount rates which are considerably above the minimum rates at which some member banks are making some of their loans.

As a guide to discount policy, it must be admitted the reserve ratio has certain conspicuous advantages. It is definite and obvious. Public opinion may be expected to support the always unwelcome policy of credit restraint when that policy is enforced by a depleted reserve. It is unhappily very doubtful whether the public would have been reconciled to the advance in rates made last spring if the reserve banks had had, let us say, a reserve ratio of 55 per cent, and yet, all other things being the same, an advance in rates would have been no less desirable.

By parity of reasoning, it follows that reductions in discount rates need not wait upon the acquisition of a high reserve ratio. The present situation furnishes a convenient illustration. Credit expansion has already been definitely checked; there is no present danger that lower discount rates would stimulate a widespread demand for credit that would permit prices to move rapidly upward once more. The demand for credit is now largely for the purpose of holding goods for which purchasers cannot be found. It is no longer a sellers' market. In these circumstances, it is at least possible that a slight reduction in discount rates, by encouraging many to resume normal business dealings, might facilitate the process of liquidation, and so make possible a more speedy reduction in the total volume of loans than will be secured through the maintenance of the present schedule of rates.

There is no substitute for the reserve ratio which possesses its peculiar virtues of simplicity and definiteness. To an enlightened business public, however, it should be evident that so delicate and at the same time potent an instrument as credit cannot be wisely administered in a mechanical fashion in accord with simple definite rules.

Whether at any time it is desirable to impose restraint upon credit depends upon the uses to which credits are being put and upon the effects of these uses. The most definite indication that we possess of excessive credit is found in the decided upward movements of prices extending over a number of years. There is practically universal agreement that prices cannot be held at an absolutely fixed level. Most would agree that advancing prices at the beginning of a period of activity stimulate production in some measure. Few, however, would question that at some stage in every period of business activity rising prices facilitate ill-judged undertakings and fail to increase industrial output. No doubt there would be wide differences of opinion as to just when this stage is reached in any particular business cycle. Even so, it is submitted that the expert judgment of a responsible body like the Federal Reserve Board, enjoying the benefit of general public criticism, provides a far more satisfactory basis for a discount policy than the variations of a reserve ratio.

The proposal to base the discount rate largely on the observed effects of credit expansion is not designed to secure the stabilization of prices. Such a policy would not be concerned with permanent changes in prices associated with variations in the world's supply of gold. It would aim merely at lessening price fluctuations within particular business cycles, checking somewhat the upward movement, and thereby lessening the subsequent decline.

Nearly every economic and social question is complicated, and many are rendered insoluble by the alternations between activity and depression of the business cycle. To mention but a single instance, consider the extent to which efforts to enlist an interest in efficient production on the part of wage earners have been frustrated for many years to come by the present widespread unemployment, an inevitable sequel of the orgy or inflation of the last five years.

This proposal to administer the reserve system in such a way as to moderate the fluctuations of the business cycle, will of course be met with the objection that it is politically hazardous. It will be urged that any attempt to influence prices will be resented by large and influential classes who would believe, whether rightly or wrongly, that they were being subjected to needless loss or deprived of well earned gains. This difficulty, while unquestionably very serious, is less than would appear at first sight. We should not gauge the antagonism to restraint on credit exercised at an early stage in a period of expansion by the outcry which is heard when enforced contraction occurs after years of excessive credit, rising prices, and feverish trade activity. Restraint in the use of credit if imposed at an earlier stage in the cycle will not be accompanied by widespread liquidation, followed by years of depression. Here as elsewhere it is the wiser course to endeavor to remove causes, working with the confident expectation that that discount policy for the reserve banks which will yield the greatest permanent advantage will finally secure general public approval.

In the event that no control of credit based on the observed effects of credit expansion at different stages in the business cycle is attempted by the Federal Reserve Board, or, if attempted, is given up because of lack of public support, another, but in my judgment less satisfactory, method of lessening the danger of excessive credit should be adopted. At some favorable moment, when the public is in a conservative mood, the legal reserve requirements against federal reserve notes, or against both notes and deposits should be raised. A reserve ratio of 50 per cent or even 60 per cent would permit much more additional credit expansion than was possible under the national banking system, and quite as much as could be advantageously employed. The economic development of the country might have been somewhat more rapid at times in the past had more capital been available, but credit is not capital; it is simply an agency for transferring capital. I venture to assert that at no time in the past has the economic development of the country been retarded because of an insufficient supply of credit, while very frequently development has been retarded as a consequence of credit furnished in excess.

The experience of six years has disclosed no serious defects in the structure or management of the federal reserve system, while the expansive credit power of the system, enormously greater than that under the national banking system, presents no serious danger for the future if suitable policies are adopted. Much more is clearly necessary than the adjustment of discount rates to variations in the reserve position of the reserve banks. A discount policy should be adopted which is designed to check the rapid expansion of credit in periods of trade activity. Such a policy is entirely practicable but it cannot be adopted in the absence of general confidence in the wisdom of the policies of the management of the reserve banks, and it requires readiness on the part of the public to support these policies even when the immediate consequences are painful. Satisfactory results from the working of the reserve system seem assured if the management is given the support of an intelligent public opinion.

APPENDIX J

EXTRACTS FROM ARTICLE ON FEDERAL RESERVE POLICY[1]

By A. C. Miller

Member of Federal Reserve Board

The acute distress and the economic hardship resulting from the business and price recession movements of the past eight months, which have been experienced in all sections of the country, have drawn attention to the federal reserve system to a degree not hitherto experienced and have made the operations and methods of the federal reserve banks a matter of wide-spread public interest. The growing appreciation of the fact in the past few months, even in sections of the country where a strong disposition was manifested last autumn to charge the federal reserve system with responsibility for the collapse of prices, that the recent liquidation movement has, in the main, proceeded from world-wide economic causes and is incident to the general economic readjustment made necessary by the profound economic disturbances worked by the war, has done much to clarify the atmosphere and to make the moment favorable for a review and discussion of federal reserve policy and practice. While there is every reason to believe that the first and worst stage of the post-war economic readjustment is near its close, there is enough likelihood of further periods of economic difficulty and strain in the process of completing the general readjustment to make it a matter of great public concern to consider how the federal reserve system may best function in assisting the industry, trade, and business of the country through such further periods of uncertainty and pressure as may occur.

It is but little more than six years since the federal reserve system was organized and began operations on a modest scale. In that brief period of time it has had to meet a greater variety of conditions and problems than have ever confronted any system of reserve banking. Since the armistice it has had to cope with economic and financial problems of unprecedented magnitude and great complexity. It has rendered continuously the greatest assistance to the Treasury in making short-term borrowings. It has provided the credit basis for financing our enormous exports on credit to Europe. It is primarily to its steadying and moderating influence that the drop in prices during the past eight months did not eventuate in a complete and disastrous collapse. All of these things have been accomplished without ever for a moment putting the maintenance of the gold standard, or the solidity and integrity of our credit system, in jeopardy. These things augur well for the future of reserve banking in the United States. The federal

[1] Reprinted from the American Economic Review, Vol. XI, No. 2, June, 1921.

reserve system has met its first searching tests on the whole with remarkable success. The fact, moreover, that in the heat of a presidential campaign, in which the attitude and methods of the federal reserve system were frequently the subject of bitter attack in sections of the country which felt in a peculiarly high degree the impact of the price recession movement, it did not yield to sectional or political pressure of any character, has done much to set at rest the doubt, often expressed at the inception of the system, as to whether any system of reserve banking under governmental supervision could be fully successful in the United States because of "politics."

A great banking system is not, however, to be regarded as a ready-made contrivance. The legislator can frequently foresee much, and the law can do much, to make provision for future contingencies and establish safeguards against future temptations, but when all is done that can wisely be done by legislative prescription and legislative safeguards, it still remains true that a great banking system must be largely the result of growth and development in the course of shaping its policies, devising methods, promoting practices, and adapting its operations to the exigencies of differing situations as they arise. Such is peculiarly the case at the present time. The federal reserve system must learn its ways and get its gait in a world more profoundly disturbed financially, economically, socially, and politically than ever before. Severe, therefore, as are the tests which the system has already had to meet, the developmental stage may not yet be said to be over. Traditional methods of reserve banking, developed in the experience of Europe, cannot be mechanically adopted in the administration of the federal reserve system. Much pioneer work in blazing new paths must therefore needs be done by those who are guiding its development, and they will need all the help they can get from enlightened discussion and large-minded consideration of their problems. Recalling Bagehot's penetrating observation that "the abstract thinking of the world is never to be expected from persons in high places,"[1] and recalling also how much the development of the English banking system in the nineteenth century owed to scientific economic discussion, it is much to be desired that American economists who are interested in problems of credit and banking, or in the bearing of credit administration upon economic conditions, should give close thought to Federal reserve problems. It is for this reason that Dr. O. M. W. Sprague's notable examination of the discount policy of the Federal reserve banks[2] is particularly welcome. His paper serves well as a point of departure for (1)

[1] Reference: *Lombard Street*, by Walter Bagehot, p. 179. The whole passage with reference to the early management of the reserve of the Bank of England is worth quoting: ". . . the directors of the Bank of England were neither acquainted with right principles, nor were they protected by a judicious routine. They could not be expected themselves to discover such principles. The abstract thinking of the world is never to be expected from persons in high places; the administration of first-rate current transactions is a most engrossing business, and those charged with them are usually but little inclined to think on points of theory, even when such thinking most nearly concerns those transactions. No doubt when men's own fortunes are at stake, the instinct of the trader does somehow anticipate the conclusions of the closet. But a board has no instincts when it is not getting an income for its members, and when it is only discharging a duty of office."

[2] In the American Economic Review for March, 1921, p. 16.

a review of federal reserve policy in the past and (2) a consideration of factors and difficulties that will have to be reckoned with in adjusting the methods and operations of the Federal reserve banks in the future to new conditions and altered circumstances.

3. *Credit Policy.*—Credit policy was only of theoretical moment in the first years of the federal reserve system. Easy credit conditions in the United States, because of the reduction of member bank reserve requirements and the great influx of gold, made reserve bank credit policy and discount rates of little actual consequence until the late autumn of 1916. Then, for the first time, did a credit situation develop which gave to the rates of some of the federal reserve banks a degree of effectiveness. The increasing pressure for credit funds, which would have developed in the year 1917 even if the United States had not entered the war, would undoubtedly have led to the development of an effective discount policy by the federal reserve system—a policy in which main reliance would have been put upon rates, and under which reserve bank rates would have been adjusted to market conditions so as to keep them, in the larger financial centers at least, at or above the ordinary commercial rate; all of this in accordance with well recognized principles of reserve bank practice. With the entry of the United States into the war the outlook was changed, and the federal reserve system was confronted with large and difficult problems of credit growing out of the loan policy and loan operations of the Treasury. From that time forth to the beginning of the year 1920, the discount policy of the federal reserve system was shaped not in accordance with money market conditions —not with the idea of using reserve bank rates as an instrument of effective control of the money market—but with the primary purpose of assisting the Treasury in the flotation of its great bond issues and its short-term certificate issues. In brief, the discount policy of the federal reserve system was treated as an element of the Treasury's loan policy, the federal reserve system virtually ceasing to exercise, for the time being, its normal function of regulating credit. The position of the Federal Reserve Board with respect to the bearing of Treasury policy upon the federal reserve system has been explained in its several annual reports,[1] and recently was succinctly stated by the governor of the Federal Reserve Board at the joint hearings held before the Senate and House committees on agriculture on December 3, 1920:[2]

"The Federal Reserve Board adopted a policy in order to assist in the war financing which was economically unsound. I say this frankly. Congress authorized certain loans. It authorized the Secretary of the Treasury to determine the rates at which the loans should be issued. The Secretary of the Treasury asked the advice of experts and then fixed the rates of interest to be borne by the several issues of bonds, notes, and certificates. During the time we were actually at war, something like $18,000,000,000 of bonds were sold to the people, an amount certainly in excess of the normal invest-

[1] See Report for 1920, pp. 11–15; for 1919, pp. 67–73; and for 1918, pp. 1–5 and 85–87.

[2] Pages 62 and 63 of the hearings entitled "Reviving the Activities of the War Finance Corporation."

ment power of the American people in such a short time, and the only way in which those loans could be financed was through the instrumentality of the banks. The only way the banks could undertake to do it was to get some assistance from the Federal Reserve Banks and at a low rate. The low rate of interest borne by these bonds was fixed with a view of holding down the expenses of the Government as far as possible. Anyway, that is something the Federal Reserve Board has no responsibility for. In order to make possible the floating of these bonds we fixed a rate less than their coupon rate. Some member banks announced that for a period of six months there would be a rate of 4¼ per cent on notes secured by Government obligations. The result was there was no loss to subscribing banks pending the distribution of the bonds to the public. There were successive bond issues. The principal reason why discount rates were not increased earlier than they were in 1919 was on account of Treasury financing."

This may be taken as the official statement of the Federal Reserve Board with respect to the discount policy followed by the federal reserve banks to the end of the year 1919.

It is clear that the point at which the loan policy of the Treasury affected the federal reserve banks was the money rate. Discount rates were maintained at artificially low levels from shortly after the beginning of the war in 1917 until the end of the year 1919. The particular device which was employed in aid of the Treasury's loan policy, as is well known, was the establishment and maintenance of (1) preferential rates on bond and certificate secured paper, as compared with commercial paper, and (2) a differential in favor of the rate on such bond and certificate secured paper as compared with the interest rate borne by the bonds and certificates. The immense credit resources of the federal reserve system were thus availed of by the Treasury during this period to make and maintain an artificial money market. In effect, the power of the Federal Reserve Board as the ultimate regulator of the discount policy of the federal reserve banks was put in commission, and rates were fixed, not "with a view of accommodating commerce and business,"[1] in accordance with normal principles, but with a view to accommodating the financial program of the Treasury in accordance with emergency principles.

Whether the Treasury's loan policy and methods of short-term borrowing were well conceived is not here in question. Indeed, the time has not yet come for passing judgment upon the policies of the Treasury in connection with the financial conduct of the war. It is, however, possible to speak of that feature of Treasury policy which most vitally affected the federal reserve banks. The wisdom and the necessity of the device of an artificial money rate, carried to the point that it was by the maintenance of a differential rate upon so-called war loan paper, may be questioned. In the light of subsequent developments, it may be questioned whether it was not a costly device to the country. While the bad economic consequences of artificially low discount rates were minimized during the war by the many various controls over the economic activities of the people that were then

[1] The language of the Federal Reserve act, section 14, paragraph D.

set up, a precedent was established which it was found difficult to set aside after the war.

The controls which were set up during the war on production, trade, and consumption—such as the War Industries Board, War Trade Board, Food Administration, Fuel Administration, Railway Administration, Shipping Board, Capital Issues Committee, New York Money Committee, had very important financial consequences. Their bearing upon the credit situation and upon the credit problem of the federal reserve banks was especially important. They acted in effect, though that was not their intended purpose, as a control of credit expansion at the source by limiting the occasion for the use of credit and by confining its use to such purposes as were deemed essential to the prosecution of the war.[1]

But with the close of the war—that is, with the cessation of hostilities following the armistice—these various controls were soon lifted: "The moment we knew the armistice to have been signed we took the harness off."[2] It was very generally expected that business and industry, if freed from restraint, would soon effect their return to a normal condition. Early in the year 1919, however, industrial stagnation and unemployment were in evidence, and a fresh survey and diagnosis of the economic situation was made by the Industrial Board[3] set up under the auspices of the Department of Commerce for assisting the readjustment of industry and trade to a more stable basis. Its main effort was directed to bring about revision of prices and stabilization of the expected fall of prices. Events soon showed that the policy of "price stabilization" was based on a faulty economic diagnosis. It was not many months after the close of the war that prices began to rise. The main impulse came from the release of buying power which had been in restraint during the war. A seller's market began to develop in the spring of 1919. The consumer demanded goods; price was a secondary consideration. Dealers, both wholesale and retail, were bidding against one another for such supplies as there were, and manufacturers were bidding against one another for raw materials and labor. The rapid rise of prices induced buying for speculation, and speculation in its turn accelerated the rise of prices. Inflation was becoming cumulative and systemic in its effects, and pervading the whole body economic. This is the explanation of a phenomenon which has puzzled so many people. During the war, expansion of credit was restrained from working its full economic effects in the form of price inflation and speculation. After the war it was let loose when the various controls above enumerated were lifted and the huge volume of credit created during the war was permitted to diffuse itself.

The credit and business situation which developed in the United States in 1919 was one that needed restraint. A seller's market usually needs

[1] *Federal Reserve Bulletin*, October, 1918, pp. 922–924. If these various controls which were in effective operation in the last months of the war had been made equally effective early in the war, it is probable that a better financial and credit situation would have been maintained throughout the war; in brief, that there would have been less inflation of credit and prices than in fact developed.

[2] From President Wilson's address to Congress, delivered December 2, 1918.

[3] *Federal Reserve Bulletin*, Mar., 1919, p. 246.

credit restraint before it passes the limit of safety, just as a buyer's market usually needs the help of credit support. It would have been of the greatest advantage to the country if such restraint[1] had been exercised by the federal reserve system in the year 1919, and the development of the runaway and speculative markets, which developed in the second half of the year, been measurably prevented. The federal reserve system was the one important agency of control left to the country after the various war controls had disappeared. All the more important was it, therefore, that it should be in a position to function as effectively as possible. Its burden and responsibility, even under the most favorable view of the situation, were undeniably large, and would have imposed a severe test upon the system. In the light of what transpired in the year 1920, as is now a matter of universal knowledge, there is every reason to believe that if the federal reserve system had functioned as effectively in 1919 in regulating credit as it did in 1920 in retarding and eventually arresting expansion, it would have rendered an inestimable service to the country and would have prevented many of the unhealthful developments in business and credit from gaining the headway which made action of so drastic a character as that which was taken in 1920 necessary. How much of the business distress and economic hardship experienced by the country during the past year would have been avoided, had the federal reserve system been in a position to pursue a discount policy in the second half of the year 1919 such as the trend of developments clearly indicated to be necessary, cannot of course be determined. Much of the hardship suffered by the country in 1920 might, however, have been avoided by the adoption in 1919 of an effective precautionary policy of credit control. That such a precautionary discount policy would have been adopted by the federal reserve system, had it felt free to act, will not be doubted by any one acquainted with the attitude of the Federal Reserve Board and the federal reserve banks at this time. As early as June, 1919, after the close of the Victory Liberty Loan campaign, which, it will be remembered, was announced to be the last of the war loans, the Federal Reserve Board expressed its concern over the unhealthful tendencies which were in process. Counsel

[1] The month of September was the time to have gotten control. The public debt reached its maximum at the end of August, and a great reduction of the floating debt occurred in September. Total war loan paper for the twelve federal reserve banks dropped from $1,635,233,000 on September 5, 1919, to $1,383,896,000 on September 19, following the redemption of certificates on September 15 of $431,910,000. The rise was then rapid, reaching $1,771,028,000 on November 7. The movement of total bills discounted paralleled the variations in war loan paper closely. On September 5, total bills discounted for member banks were $1,847,418,000. They fell to $1,645,881,000 on September 19, and rose to $2,180,480,000 on November 7. The expansion of the loan account of the federal reserve banks during the seven weeks from September 19 to November 7 amounted to over $500,000,000.

For the Federal Reserve Bank of New York, total war loan paper dropped from $672,070,000 on September 5, 1919, to $483,053,000 on September 19. It then rose to $795,212,000 on November 7. On September 5, total bills discounted amounted to $724,861,000, falling to $528,592,000 on September 19, and rising to $904,351,000 on November 7. The expansion in total bills discounted in the seven weeks from September 19 to November 7 amounted to approximately $375,000,000.

and warnings of similar purport were subsequently repeated. The necessity of restraint upon the borrowings of member banks for speculative purposes by other means than advances in discount rates[1] was pointed out, and such restraint was urged. Here and there, for a while, there were some slight evidences that the situation was being controlled, but no large results were achieved, and speculative tendencies of a dangerous character and large dimensions, involving speculation in land and commodities as well as in securities, gained increasing momentum through the autumn of 1919. "Direct action," so-called, as a method of credit control was not succeeding.[2] The expansion of credit and the rise of prices went on apace. Speculation flourished. It could no longer be doubted that the federal reserve system must undertake the regulation of credit by means of discount rates. A beginning was made by the slight advance in discount rates on war loan paper on December 11, 1919, with every expectation and intention on the part of the federal reserve system of assuming full control of its discount policy with the advent of the year 1920.

All this is said dispassionately and objectively, by way of explanation of a critical period in the history of federal reserve policy. The Treasury, as well as the federal reserve system, had its difficulties. While the war, in a fighting sense, was over with the advent of the year 1919, it was not over in a financial sense. The Treasury was still confronted with vast financial obligations. The financial precedent established during the war carried over into the year 1919. Reserve bank policy continued to be subordinated to Treasury policy, and discount rates throughout the year 1919 were maintained at artificially low levels. The device of an artificial discount rate provided too comfortable an expedient alike to the Treasury and to the banks of the country, which were still burdened with commitments made under the "borrow and buy" Liberty Loan slogan, to be easily relinquished. Thus was the federal reserve system controlled in the matter of its discount policy at the very time when the interest of the country at large required that it should be free of control in order that it itself might control.

With the year 1920[3] the federal reserve banks entered upon the exercise of their function of regulating credit in accordance with business and economic indications, and, under circumstances of extraordinary difficulty and for the first time since the outbreak of the war, undertook to develop a policy of credit control by means of discount rates. About the same time the Treasury adopted the policy of adjusting the interest rate on its short-

[1] "The Federal Reserve Board is concerned over the existing tendency towards excessive speculation, and while ordinarily this could be corrected by an advance in discount rates at the Federal Reserve Banks, it is not practicable to apply this check at this time because of Government financing." (From a letter sent by the Federal Reserve Board to the chairmen of the federal reserve banks, June 10, 1919.)

[2] "These warnings, however, were only a transitory expedient and were given only momentary attention by many banks. The Board was prepared, as soon as Treasury exigencies permitted, to resort to the well-known method of advancing the rate of discount." *Annual Report* for 1920, p. 12.

[3] "Fortunately the condition of the Treasury is such that the Board can now feel free to inaugurate discount policies adjusted to peace-time conditions and needs." *Annual Report* for 1919, p. 69.

term borrowings to the state of the money market. It is not for the Federal Reserve Board to estimate the wisdom of the credit policy pursued by it in the year 1920. It may, however, with propriety speak of the attitude which led to that policy. There was nothing "hesitant"[1] in the policy adopted by the board at this time. Rates were advanced as follows in January, 1920: commercial paper rate, from 4¾ per cent at ten banks and 5 per cent at two banks to 6 per cent at all banks; certificate of indebtedness rate, from 4¼ per cent to 4½ per cent according to the rate borne by the certificate to 4¾ per cent on all classes of certificates; liberty bond rate, from 4¾ per cent at ten banks and 5 per cent at two banks to 5½ per cent at all banks. Such marked advances of rate do not betray "hesitation"; they evidence conviction.[2] This first advance in rates not proving effective, further advances were made in the early summer—the commercial rate at the largest Federal reserve banks being advanced from 6 per cent to 7 per cent, rates on certificates from 4¾ per cent to 5½ per cent at seven banks, and from 5 per cent to 6 per cent at five banks, according to the rate borne by the certificate, and rates on liberty bonds from 5½ per cent to 6 per cent at six banks, and 5¾ per cent at one bank, the rate being left unchanged at the remaining five banks.

The reserve ratio for the federal reserve system as a whole on January 2, 1920, was 43.7 per cent as compared with 50.8 per cent on July 3, 1919. It declined to 42.8 per cent on July 2, 1920. The board's action in raising rates was therefore clearly supported by the reserve position of the banks. But there is nothing in the action taken then or at any time later in the year to justify the statement that the board's discount policy in 1920 was not "the expression of a voluntary policy."[3] The board's attitude is clearly indicated in its annual report for 1919: "The expansion of credit set in motion by the war must be checked. Credit must be brought under effective control and its flow be once more regulated and governed with careful regard to the economic welfare of the country and the needs of its producing industries."[4] The action taken by the federal reserve banks in 1920 was taken not primarily to protect their reserves but to control the rate of expansion of credit. It should be distinctly noted in reviewing the situation of the reserve banks during the years 1919 and 1920 that the reserve ratio of the federal reserve system was declining, not because reserves were being depleted through loss of gold, but primarily because the credit facilities of the system were being too freely drawn upon by the banks of the country

[1] The term used by Mr. Sprague in the article already cited, page 24.

[2] "It was the Board's conviction, however, at the close of the year (1919) that a substantial advance in all discount rates was necessary and that it should not be long delayed." *Annual Report* for 1919, p. 4.

[3] "It is, however, by no means certain that the Reserve Board would have taken measures to restrain credit during the course of the winter and spring of this year [1920] if the power of the reserve banks to extend credit within the limits of legal reserve requirements had not been nearly exhausted. The successive advances in discount rates made during the first half of the year were not then entirely the expression of a voluntary policy. It was a policy which in large measure was enforced by the reserve position of the banks." (Sprague, article cited, p. 23.)

[4] *Annual Report* for 1919, p. 71.

and the liabilities of the reserve banks in the form of deposits and notes mounting at a steady and startling rate. The decline of the reserve ratio reflected quite accurately the credit expansion which was in process.[1] The solicitude of the board arose not because of loss of gold—for the total gold holdings of the reserve system showed little variation (amounting on January 3, 1919, to $2,091,194,000; on July 3, 1919 to $2,128,946,000; on January 2, 1920, to $2,062,615,000; on July 2, 1920, to $1,971,696,000; and on December 31, 1920, to $2,059,333,000), but because of the unhealthful credit situation which had been developing since the summer of 1919, and which threatened to culminate in disaster unless subjected to control. While this condition was reflected in the decline of the reserve ratio, the board's discount policy was directed toward improving the reserve position of the federal reserve banks not by increasing their reserves but by checking the constant expansion of their liabilities and by setting in operation forces which would make for a healthier credit situation. It raised rates to protect the reserve banks against abuse of their credit facilities, and to protect the community and the general business and economic situation against the consequences of such abuse.

Whether the federal reserve system would have had the support of public opinion to the extent it had during the past year, had the bad situation which the Federal Reserve Board was undertaking to improve not been unmistakably reflected in the reserve position of the banks, may well be doubted:

"As a guide to discount policy, it must be admitted the reserve ratio has certain conspicuous advantages. It is definite and obvious. Public opinion may be expected to support the always unwelcome policy of credit restraint when that policy is enforced by a depleted reserve. It is unhappily very doubtful whether the public would have been reconciled to the advance in rates made last spring if the reserve banks had had, let us say, a reserve ratio of 55 per cent, and yet, all other things being the same, an advance in rates would have been no less desirable."[2]

It is this consideration, thus well stated, which has given to the bank reserve ratio in the past its authoritative position as a credit and banking indicator. It is this same consideration which will assure it a position of almost equal importance in the future. Tradition, it must never be forgotten, has much to do with matters of banking and credit practice. The popular tradition that the reserve ratio is the index of changes in the credit situation will therefore be slow to disappear. Particularly will this be true in the United States, where long adherence to the principle of legislatively

[1] Studies made by the Statistical Division of the Federal Reserve Board indicate that for the larger part of the year 1920 the reserve ratio has fluctuated in close accord with changes in note and deposit liabilities. As between notes and deposits, the indications are that for shorter periods of time changes in the ratio follow fluctuations in deposits, while for longer periods of time the decisive influence on the ratio is exercised by changes in the volume of notes. An effort has been made to devise an "index of divergence," or formula for estimating the relative effects of changes in liabilities and of changes in reserves on the movement of the reserve ratio. See paper by E. A. Goldenweiser, "Index of Divergence," in the forthcoming September number of the *American Statistical Review*.

[2] Sprague, article cited, p. 27.

prescribed minimum banking reserves has much of the sanctity of a first principle. The proposals often made in recent months to abandon the reserve ratio as an indicator of discount policy and to base discount policy hereafter on the observed effects of credit on prices,[1] have, therefore, the character of academic proposals, even in present circumstances, which, it must candidly be admitted, are less favorable than was ordinarily true in the past to quick responsiveness on the part of the reserve ratio to changing business, credit, and price conditions. As an abstract proposition, the proposal to substitute a price indicator for the reserve ratio as a guide to discount policy has much economic merit. The rigors of the recent price readjustment process through which the United States, in common with the rest of the commercial world, has been passing, have emphasized the value of price stability. Price disturbances not originating from inevitable natural causes are bad and costly alike to producer and consumer. It is not surprising, therefore, in view of the trying experiences of recent years, that effort should be made, in reviewing the working of present-day credit and banking machinery, to find some guide to credit policy that will give to the community greater protection against unsettling changes in the price level. Recent American experience, it may also be admitted, has demonstrated that good banking administration in times of economic disorder, at least, presents more than a problem of merely maintaining the reserve ratio, in a conventional or perfunctory sense.

Without entering upon the discussion of controverted questions of economic theory touching the relation of changes in prices to changes in the volume of credit, it may be assumed that the retardation of the flow of credit in times of expansion, and the acceleration of the flow of credit in times of business recovery following a period of depression, have an appreciable bearing on price movements. As a theoretical proposition, therefore, it is entirely conceivable that the discount policy of the federal reserve system might be governed by indications of impending price changes, with a view of mitigating their cyclical fluctuations. While such an undertaking would raise some new and difficult problems of credit administration, no doubt in time the technique of a plan of credit regulation based on price indices could be worked out and made administratively praticable if public sentiment demanded. But there is now no warrant in the statute under which the federal reserve banks are organized for undertaking to regulate their credit operations on any such basis. The economic logic of the Federal Reserve act is clearly predicated upon the theory that the federal reserve banks shall be operated with regard to reserve ratios, and "rates be fixed with a view of accommodating commerce and business." It would imply a very latitudinarian construction of the term "accommodating commerce and business" for the Federal Reserve Board and the federal reserve banks to adopt the "observed effects of credit on prices" as their rule of action in the future. There is not, however, the slightest reason for supposing that such a procedure on the part of the federal reserve banks would be viewed with public approval. Quite the contrary. Public sentiment in the United States is,

[1] *Ibid.*, p. 28.

and always has been, highly sensitive in matters of credit control, and precisely, among other reasons, because of the bearing that such control has, or is believed to have upon the movement of prices.

The popular dread of "contraction," based, as it is, upon the popular assumption of a close, immediate, causal connection between contraction and falling prices, has seldom, if ever, been appealed to in vain in the United States in times of economic pressure. There is not the slightest warrant in either the remote or recent economic history of the United States for supposing that the American public would sanction or tolerate a discount policy on the part of the federal reserve system avowedly based upon price indexes, even if it were clear that such a practice were otherwise advisable. It would be regarded as tantamount to the setting up of a credit and price despotism. This fear of contraction and its consequences is one of the most persistent phases of American popular economics; practically viewed, it has the force of an instinct and is the explanation of many, if not most, of the otherwise puzzling vagaries of American financial history. One of its earliest and most energetic manifestations, it is well to recall, was the bitter hostility aroused against the Second Bank of the United States because of the financial pressure experienced in 1833–1834, alleged to have been due to the sinister purposes and Czarist methods of the great banking institution against which Andrew Jackson was successfully arraying the forces of public sentiment in many sections of the country. Later manifestations of the same feeling abound in the decades following the Civil War, when the nation was confronted with the problem of correcting currency disorders resulting from the Civil War. Recent events, in the autumn of 1920, have given evidence of the persistence of a similar strain of sentiment.

The problem of credit and currency regulation in a country as vast as the United States, and as complicated in its economic organization with different sections of the country in different stages of economic development and maturity, presents a very difficult problem even under normal conditions.[1] This, among other things, is the explanation and justification of the use of the regional principle in determining the structure of our system of reserve banking, as against the principle of a single central institution, nation-wide in the scope of its operation and control—the regional principle permitting of a closer adaptation of credit policy to regional or local conditions. The discount or credit policy of a reserve bank, whether organized on the regional or the central principle, must always be the expression of a judgment as to when a situation has arisen in business, industry, or credit which indicates the desirability of action on the part of reserve holding and credit and currency regulating institutions. That judgment must be a live judgment, not a mechanical judgment. A great variety of factors enter into the determination of appropriate discount policy. Among these may be mentioned the state of business, industry, and trade (both domestic and foreign), the state of money markets (both domestic and foreign), interna-

[1] See Sprague, article cited, pp. 26–27: "There is no such general market rate of discount as in England. Consequently, the Bank of England practice of a discount rate slightly above the market rate cannot have so pervasive an influence."

tional gold movements, seasonal conditions and needs, accidental economic disturbances, sometimes political conditions and the international situation, the stage of the business cycle, price movements,[1] and the state of banking reserves. No one of these by itself can be conclusive of action to be taken. Each has its own value and significance; and competent judgment on the part of reserve institutions depends in great measure upon the skill and capacity developed to give to each of these several factors its due weight in any given set of circumstances in determining the matter of credit policy. But when all this is said, it may yet be added that ordinarily there is no one indicator which is more suggestive of the occasion of considering action on the part of a reserve bank than a change in its reserve ratio.[2]

[1] "While the Federal Reserve Board will always be mindful of the interdependence of credit and industry and of the influence exerted on prices by the general volume of credit, the Board nevertheless can not assume to be an arbiter of industry or prices." *Annual Report* for 1919, p. 73.

[2] Sprague, article cited, p. 27: "There is no substitute for the reserve ratio which possesses its peculiar virtues of simplicity and definiteness."

APPENDIX K

REVIEWS OF THE MONTH

(From *Federal Reserve Bulletin*)

I. March, 1923

Business and Credit.—Since the opening of the year there has been continued growth in the volume of production, further increases in the prices of basic materials, and a larger demand for credit. Though the general credit trend has been somewhat obscured by seasonal influences, the differences between the developments this year and at the beginning of 1922 indicate an increase in the credit requirements of business. The reduction in loans at member banks during January was only half as large in 1923 as in 1922, and the decrease in reserve bank discounts was much smaller than a year ago. Also, the return flow of Federal reserve note currency was not so pronounced this year as last, and came to an end a week or two earlier. Borrowing for commercial purposes, which has increased steadily since mid-summer of 1922, showed no seasonal decline, but continued to increase during January and February. The effect of this larger credit demand was felt early in February in a higher level of money rates in the financial centers.

In considering the present condition of industry and trade and the prospective demand for credit, it is important to give attention not merely to the financial situation, but to influences affecting the current volume of production and trade. Credit changes tend to lag behind changes in productive output, and consequently the immediate financial developments do not adequately reflect the extent of present industrial activity. The factors of primary importance in estimating the present outlook are the volume and character of goods being produced and marketed, and the sources of demand for these goods.

Recent Increases in Production.—It is well known that the trend of production has been upward since the middle of 1921, and that the current output is large, but the extent of recovery and the magnitude of the present volume of production compared to earlier periods of business activity are not so fully realized. During the last quarter of 1922 production was greater than at any similar period during the past five years. The Federal Reserve Board's index of production in basic industries, which measures the changes in the output of 22 commodities, shows that in September, 1922, production was equal to the monthly average for 1919, and that since that month there has been an almost continuous advance. During so short a period as the last five months there has been a 20 per cent increase in output, and in January the level of production rose above the peak of 1920. During this period industrial disturbances have been few, mining has proceeded on a larger scale, and traffic conditions have improved. The relatively mild winter and the continued demand for housing facilities have led to a continuance of building operations. Greater efficiency, both of labor and of factory equipment, has made larger output possible, and the sustained demand for basic materials at advancing prices has made production profitable.

The chief factor in the larger production during January was the increased output of iron and steel. This output during the first month of 1923 was double that of the same month last year; the output of steel ingots was, in fact, the largest on record for any January and with the exception of March, 1920, the largest for any month since 1918. Recent estimates of the consumption of steel by important lines of industry indicate the character of present demand. Railroads used approximately 25 per cent of last year's steel production; transportation and storage of oil, gas, and water consumed 15 per cent; buildings and bridges approximately 12 per cent; the automobile industry 9 per cent, and the export demand about 8 per cent. Larger steel production during January has been accompanied by a growth in the volume of unfilled orders and by an increase in the price of steel.

A somewhat similar situation exists in the building industry and in the industries producing building materials. Since the latter part of 1922 the volume of orders placed for lumber has exceeded production, some weeks running as high as 50 per cent in excess; in December and January shipments of lumber exceeded production by about 20 per cent. Production of lumber, cement, and face brick during January, 1923, average about 45 per cent greater than a year earlier, and prices of building materials advanced 19 per cent during the same period. The advance in prices of these materials during the past year has been greater than for any other group represented in the index number of the Bureau of Labor Statistics, but the increase in their production has been still greater. The demand for basic materials and for house furnishings resulting from the present building activity has played a large part both directly and indirectly in creating the current volume of production and trade. The construction industry and, in fact, the production of equipment goods in general are fluctuating in character, and the influence of the additional demands arising from such industries upon the volume of employment, and hence on the buying power of workers, is greatest during periods of changing business activity.

While the production of consumers' goods ordinarily fluctuates less than that of basic materials, yet their output has also responded to the recent increase in business activity and to the larger purchasing power resulting from fuller employment. At the beginning of 1922 the production of textiles, shoes, and food declined, but during the latter part of the year the output of these goods again increased. For the year as a whole, cotton consumption at textile mills was the largest since 1918; woolen mills were particularly active during the last quarter of the year and maintained their production during January. The output of food products was greater during 1922 than in either of the two preceding years, although in general less than during 1919. It is estimated that during last year more meat was consumed in the United States than during any previous year. The domestic demand for consumers' goods is the largest market for American products, and the increase in the money income of the Nation during the past year has been reflected in that market.

Production and Stocks.—In order to determine the economic significance of the large volume of current production, it is important to know whether the output is being marketed as it is produced or is accumulating in large quantities. A comparison of the stocks of basic materials in January, 1923, with those for the corresponding month a year ago indicates, as far as information is available, that they are not accumulating. As this conclusion bears an important relation to the current business and credit situation, the evidence is presented in some detail. The following table shows the stocks of basic commodities on hand January 1, 1923, and the percentage of increase or decrease compared with a year ago.

Stocks of Basic Materials, January 1, 1922, and January 1, 1923

	Jan. 1, 1922	Jan. 1, 1923	Per cent increase or decrease (−)
Bituminous coal,[1] tons	48,000,000	36,000,000	−25.0
Anthracite coal,[2] tons	1,230,000	364,000	−70.4
Crude petroleum, barrels	185,623,000	264,578,000	42.5
Gasoline,[3] gallons	439,031,000	[4]567,101,000	29.2
Kerosene,[3] gallons	170,315,000	[4]234,436,000	37.6
Pine lumber,[5] M feet	2,178,000	2,216,000	1.7
Cement, barrels	11,938,000	9,134,000	−23.5
Brick, face, number	160,961,000	118,626,000	−26.3
Wood pulp, tons	169,923	113,301	−33.3
Newsprint,[6] tons	227,235	238,707	5.0
Cattle hides, number	5,819,000	6,346,000	9.1
Calfskins, number	2,965,000	3,298,000	1.2
Goat and kid skins, number	10,380,000	8,730,000	−15.9
Sheep and lambskins, number	12,661,000	9,151,000	−27.7
Sole leather[7]	11,303,000	9,764,000	−13.6
Cotton,[8] bales	6,945,000	5,996,000	−13.7
Flour,[9] barrels	7,776,000	7,700,000	− 1.0
Beef,[10] pounds	84,808,000	116,222,000	37.0
Pork products,[10] pounds	462,637,000	567,312,000	22.6
Lamb,[10] pounds	6,444,000	4,528,000	−35.2

[1] Total commercial stocks; estimate based on 5,000 reports.
[2] Stocks of 516 identical retail dealers.
[3] Refiners' stocks.
[4] Figures for Dec. 1, 1922, the latest available.
[5] Reports of Southern Pine Association and Western Pine Association.
[6] Stocks of mills, jobbers, and publishers and stocks in transit.
[7] Backs, bends, and sides.
[8] At mills and warehouses.
[9] Estimates of Russell's Commercial News.
[10] Cold-storage holdings, Bureau of Agricultural Economics.

The fact that stocks of many basic materials at the beginning of the year were less than a year ago indicates that the goods produced have moved steadily into the channels of trade. A further indication that no large physical volume of goods has been accumulated by industrial corporations is furnished by the recently published annual statements of a considerable number of concerns engaged in the production of raw materials and of finished goods. These statements show that inventories at the close of 1922 averaged somewhat less than in 1921, notwithstanding the fact that prices are higher than a year ago. Information concerning stocks in the hands of retailers is less comprehensive, the only available data being the reports received by Federal reserve banks from 500 department stores in over 100 cities. The merchandise stocks held by these stores at the end of the year were relatively low and during January declined slightly.

The relation between production and stocks is ordinarily regarded as of great value in throwing light upon business and credit conditions and tendencies. In a period of business revival, when prices are advancing, there comes a time when the expectation of further increases in prices furnishes a powerful incentive to manufacturers and merchants to enlarge the volume of their purchases of materials and merchandise, and so to accumulate stocks. Such practice, if generally pursued, may for a time be itself the cause for bringing about the expected price increase. The policy of purchasing far in anticipation of demand because of expected price advances, and of ordering materials in excess of requirements because of fear of shortages, introduces an element of unhealthy speculation into production and trade. Such policies, furthermore, ordinarily lead to increased borrowing to finance the larger inventories, and borrowing for this purpose accounts in part for the enlarged demand for credit which accompanies a rise in prices. How large a volume of credit at any given time is required to maintain a healthy condition of productive industry is not always easy to determine, particularly in a country of such varied and complex economic activity as the United States. But it is well to emphasize that the economic use of credit is to facilitate the production and orderly marketing of goods, and not to finance the speculative holding of excessive stocks of materials and merchandise. So far as the available indications go, the increased demand for credit during recent months appears to have arisen from the larger financial requirements of current production and trade and not from speculation in inventories.

Further evidence as to the movement and marketing of goods is furnished by the car loading of merchandise and the volume of wholesale and retail sales. Railroad loadings of merchandise in the last quarter of 1922 were about 10 per cent larger than those of the last quarter of 1921. During January there was a further increase of merchandise loadings, and the total for the month was 23 per cent larger than the corresponding month of last year. The volume of wholesale and retail merchandising increased in the last quarter of 1922, but the increase of wholesale trade was not unusually large for the season of the year. For 1922 as a whole, however, the volume of wholesale trade was substantially greater than in 1921. In retail trade the sales, both of department stores and mail-order houses, were considerably larger in the fall of 1922 than in 1921. During the last quarter of the year department stores increased their sales over the corresponding period of the previous year by approximately 6 per cent, while, comparing the same periods, mail-order houses reported sales 31 per cent larger. Mail-order sales, however, which reflect the merchandise demand in rural districts and which declined heavily during 1920 and 1921, were still smaller in dollar value than they were in 1919, whereas department-store sales, representing city trade, were much larger. December sales of reporting department stores reached the largest monthly figure of the last four years, and in January were 12 per cent larger than in January, 1922.

The increased buying which made possible this larger marketing of goods came chiefly from fuller employment and the larger pay rolls and from some increase in the net proceeds to the farmer from the sale of his products.

Increased Buying Power.—Restoration of buying power resulting from reemployment after the industrial inactivity of 1921 is one of the causes for the sustained demand that has supported the increase in that activity. During the past year the pay rolls at industrial establishments increased approximately 25 per cent. Moreover, this increased money income was not offset by corresponding increases in the cost of living. Retail prices rose very little during the year, so that the advance in wholesale prices has not yet been fully reflected in the prices of goods bought by the ultimate consumer. These conditions have enabled wage earners to make savings, as is evidenced by the growth of savings deposits throughout the country. The increase during the year in savings deposits for about 880 reporting banks distributed through the 12 Federal reserve districts and holding approximately one-third of the total time and savings deposits of the country was $445,000,000. About 60 per cent of this increase took place during the last three months. The accumulation of these savings represents partly the deposit of funds arising from the redemption of Victory notes and war savings certificates, but it indicates more particularly that current money income has not only been sufficient to purchase a large volume of consumers' goods, but also to contribute to the funds now being invested in houses and other capital goods. It is generally true that in years when production is large both consumption and saving are also greatest.

Foreign Markets as a Factor.—The curtailed buying power of European purchasers under present conditions raises the questions as to the extent of dependency of various lines of industry upon foreign buyers and the relative importance of domestic and foreign markets. In the following table are shown, for selected years for certain basic materials, the proportion of domestic production in terms of quantity which has been sold in foreign markets. No account is here taken of the lag of several months that must ordinarily take place between the time goods are produced and the time they are exported.

PERCENTAGE OF DOMESTIC PRODUCTION EXPORTED IN SPECIFIED CALENDAR YEARS

Commodity	1913	1920	1921	1922
Wheat	13.0	24.7	34.4	19.2
Wheat flour	10.5	18.1	13.9	12.0
Corn	1.9	.6	4.2	5.7
Cotton	60.8	45.8	81.4	61.4
Tobacco	46.6	29.6	48.2	32.5
Beef	.9	2.3	.8	.6
Pork and lard	15.9	24.3	24.9	20.6
Bituminous coal	3.8	6.0	5.0	2.7
Copper	66.8	45.6	117.9[1]	66.5
Gasoline	9.8	8.1	10.3	9.3
Kerosene	57.8	37.5	38.5	38.8
Gas and fuel oil	9.6	9.3	8.7	6.5

[1] Exports greater than production, due to marketing of stocks carried over from previous year.

The figures show the very wide differences in the relative amounts of various products which were shipped to foreign markets, and the relatively large proportion of certain farm products marketed abroad indicates the connection between the condition of world markets and the prosperity of the American farmer. The relation between the total foreign trade and total domestic production is difficult to estimate with accuracy, but both on the basis of physical units and of dollar value it is clear that no large proportion of the country's production during 1922 was marketed abroad. It should not be assumed, however, that the foreign trade of the United States is unimportant because, however measured, it is only a small part of our combined domestic and foreign trade. The cotton growers of the South and the farmers of the Middle West depend to a considerable extent upon foreign demand to insure marketing their crops at profitable prices. Moreover, even for manufacturers, the existence of a foreign market ready to absorb surplus products is an important price stabilizing factor, even though the actual volume of certain kinds of goods sold abroad may not be large.

The physical volume of exports in 1922, according to the foreign trade index of the Federal Reserve Board and other available data, was slightly less than in 1921, but the movement of goods was in general well maintained and was highest in the last three months of the year. The rise in those months was due entirely to increased exports of raw materials, chief among which was raw cotton. The quantities of foodstuffs and manufactures, on the other hand, showed a tendency to decline in the latter part of 1922, following large movements of those classes of goods earlier in the year. The lower priced cereals, such as corn, rye, and oats, were exported in larger quantities than in the previous year, but wheat exports fell sharply on account of strong competition from Canada, which tended to discourage foreign buying. In December, however, wheat exports showed a decided recovery from the level of November and preceding months.

Manufactured goods were shipped abroad in about the same quantity during 1922 as in the preceding year, exports having increased steadily in volume from the summer of 1921 until about the middle of last year. Since then the gain in that direction has not been sustained. Export trade in textile manufactures was larger in 1922 than a year earlier, but shipments of iron and steel manufactures and machinery were smaller. The downward trend of manufactured exports during the latter half of 1922, at the same time that production in this country was expanding, indicates that American manufactures have not depended upon foreign markets to any large extent as an outlet for the recent increase in output.

Prices and Production.—While production and prices have both been increasing during the past year, for many commodities the rate of increase in production has been greater than the rate of advance in price. Wholesale prices, as measured by the index of the Bureau of Labor Statistics, have advanced 13 per cent in the course of the past year, while the volume of production in basic industries has increased 40 per cent. Prices of raw materials taken as a group have advanced 20 per cent during this period, while the prices of consumers' goods have risen only a little more than 6 per cent. During the three months ended January, 1923, the diverse price movement among different groups of commodities balanced one another, so that the combined index has showed no net change. In January it remained unchanged at 156 per cent of the 1913 average. Prices of many basic commodities, however, advanced during January and February to new high levels for the current movement, in some cases reaching the highest points since 1920. During the past year price advances have been effective in calling forth larger output, and the expansion of production has been supported by the larger use of credit. When, however, production reaches the limits imposed by the available supplies of labor, plant capacity, and transportation facilities—in fact, whenever the productive energies and resources of the country are employed at full capacity—output can not be enlarged by an increased use of credit and by further increases in prices.

With production at its present volume, prices of many basic materials advancing, and the buying power of the public apparently considerably strengthened, the question arises, what will be the trend in the demand for credit and how soon will increased loan activity at banks result in a larger demand for accommodation at the Federal reserve banks?

Credit Conditions.—As was stated in the beginning, the credit developments during the early part of this year differ in some significant particulars from those during the corresponding period a year ago. The extent of seasonal liquidation was less this year than last, and the movements in various classes of loans indicate the difference in the character of present borrowing compared with that of a year ago. Last year liquidation was chiefly of commercial loans, while this year it was for the most part confined to loans secured by stocks and bonds, commercial loans continuing to increase. At reporting member banks between the close of the year and the middle of February, loans secured by corporate obligations declined about $47,000,000, while other loans, largely commercial in character, increased by about $243,000,000. The larger part of these commercial loans were made by banks in the industrial and financial East, where the increased demand for credit has been reflected in higher money rates.

The extent to which this increased demand for credit may be met by other means than borrowing at reserve banks is limited. Although during the period between the beginning of 1921 and midsummer of 1922 member banks in leading cities used funds arising from loan liquidation in the purchase of securities to the extent of over $1,000,000,000, it is doubtful how far they will be able to meet the increased financial requirements of business by the sale of these securities. While a portion of these securities might be absorbed by ultimate investors out of current savings, a large volume of sales within a short period is not likely to result in any considerable increase in the total volume of funds available for current operations. The fact is that member banks have made use of all their available funds either for loans or investments, that a reduction in investments will result in increased demand for loans, and that the growing demand for commercial credit will lead member banks to apply for additional accommodation at Federal reserve banks.

The increased demand for credit for commercial purposes is beginning to reflect itself in increased borrowing from certain of the reserve banks, particularly those in the larger centers where borrowings reflect most sensitively the greater industrial demands. The outstanding fact in reserve bank developments during the first eight weeks of 1923, taking the system as a whole, is that seasonal liquidation of discounts this year was negligible compared with last year, the net aggregate reduction this year being only about $2,000,000. Member banks reduced their borrowings at eight of the reserve banks, but these reductions were offset by increases at the Philadelphia, Dallas, San Francisco, and New York reserve banks. The largest increase in discounts for the period was at the Federal Reserve Bank of New York, where member banks increased their borrowings by $96,000,000. To better adjust its relation to the altered condition of the money market thus evidenced, the New York reserve bank has raised its discount rate from 4 to 4½ per cent. Action which was also taken at the Boston and San Francisco reserve banks brought the rates of these banks to the uniform level of 4½ per cent now obtaining at all Federal reserve banks.

Expansion in the volume of reserve bank credit at a time when physical production is approaching maximum, particularly if the growth of business extends to all districts, will bring the reserve banks into a closer relationship through their rediscount operations to the movement of production, trade, and prices than they have sustained for more than a year.

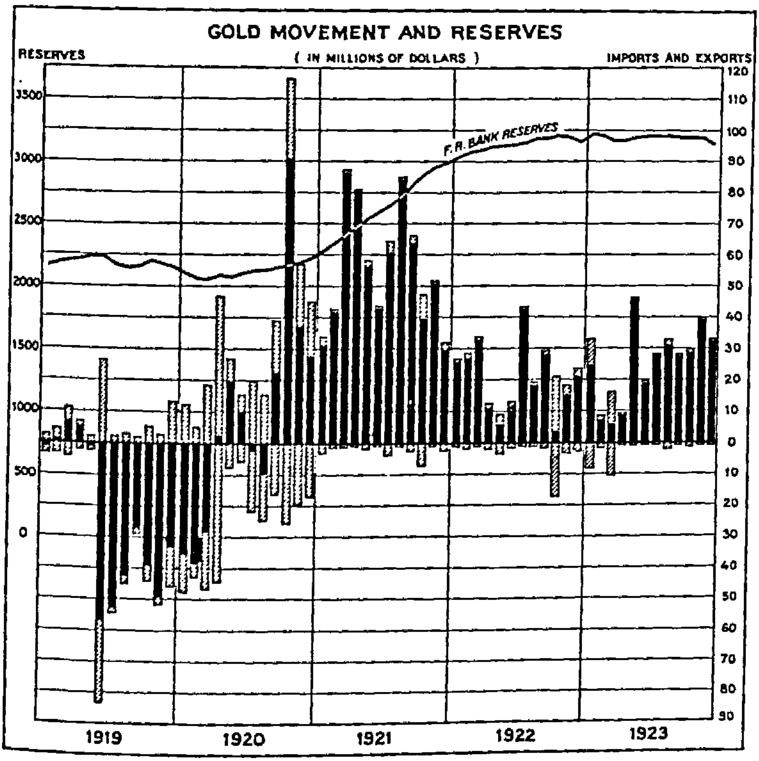
II. April, 1923

Gold and Credit.—During recent months the reserves of the Federal reserve banks, in consequence of continued gold imports, have reached the highest figure since the establishment of the system. Member bank reserves at the Federal reserve banks are also the highest on record. Reserve banks and member banks, however, have utilized these reserves during the past year in altogether different degrees. Measured by total loans and investments the volume of reserve-bank credit is smaller than a year ago, while member-bank credit has increased more than $2,000,000,000. In fact, the aggregate amount of member-bank credit now in use is approximately as large as at the peak of credit expansion in 1920. Member banks have extended this credit without obtaining from the reserve banks an amount of accommodation even approaching the volume of their borrowings in 1920. This large volume of member-bank credit is the result of increased credit demands which began early in 1922 and became more marked during the second half of that year. This expansion in member-bank credit without a corresponding growth in Federal reserve bank accommodation has been made possible by a continued flow of gold from abroad. This gold was deposited by member banks with the reserve banks and was thus the basis of additional credit extended to borrowers. The inflow of gold of over $200,000,000 during 1922 corresponds roughly to the increase in the reserves of the reserve banks and also in the reserve balances of member banks. During this period the total of demand and time deposits of members increased $2,800,000,000. It is impossible to determine the extent to which the influx of gold has stimulated the extension of credit by member banks. From the point of view of the Federal reserve banks, however, it is not so important to know whether bank credit would have expanded to the same extent had there been no gold imports, as it is to realize clearly that, if member banks had not received a steady stream of gold from abroad, they could not have extended the additional credit granted by them during 1922 without applying for a larger amount of accommodation at the Federal reserve banks.

The growth of deposit liabilities of member banks at a rate approximately tenfold the increase in their reserve balances is in accordance with experience which shows that their actual reserves never greatly exceed the legally required minimum. This is in striking contrast to the Federal reserve banks which for more than a year have maintained a reserve ratio of over 75 per cent to deposit and note liabilities combined. Thus the inflow of gold in 1922 has maintained the ratio of reserve bank reserves to their increasing liabilities at a relatively constant and high level, and the utilization of the reserve balances arising out of this gold has enabled member banks to extend their loans and to maintain their reserve requirements without additional borrowing from the reserve banks.

Figures which have recently become available showing the condition of all member banks of the reserve system at the end of December, 1922, show that total loans and investments of these banks at the end of 1922 were $25,700,000,000, indicating but little reduction from the total of $26,100,000,000, shown at the peak of expansion in November, 1920. During the same period, total earning assets of the reserve banks, which measure the total volume of reserve-bank credit in use, declined from $3,400,000,000 to $1,300,000,000, and constituted at the end of 1922, 5 per cent of member-bank credit, compared with 13 per cent in 1920. This change in the proportion of reserve-bank credit to the total volume of bank credit reflects the effect of the billion dollars of gold imported since the autumn of 1920.

Gold Imports and the Credit Situation.—The use made by member banks of gold received from abroad has depended upon the character of the business and credit situation in the United States at the time. Thus the effect upon credit of the present gold movement which began in September, 1920, may be marked off into two distinct periods. During the first period, which con-



tinued until the close of 1921, gold was chiefly used to liquidate borrowings by member banks at Federal reserve banks, while in the second period, with the revival of business activity and the increased demand for credit, gold was used as a basis of additional lending by member banks. The bars on the chart show imports and exports of gold since the beginning of 1919 and the line indicates changes in the reserves of Federal reserve banks. During the 15 months preceding the present gold inflow the United States lost over $400,000,000 in gold to South American and oriental countries which had accumulated balances during the war and withdrew them after the removal of the embargo. This outflow is reflected in the decline of the reserves. The chart clearly brings out the fact that the heavy gold imports, which began in the last quarter of 1920 and continued through 1921, raised the reserves of the reserve banks to a high level. The gold reaching this country from abroad was taken to the reserve banks and there liquidated a corresponding amount of member-bank indebtedness. During 1922, however, when member banks were receiving little accommodation from the reserve banks, gold imports, which continued, though in reduced volume, were used largely as a basis for the extension of new credit.

During the first period of the present gold movement, when the gold inflow amounted to $845,000,000, liquidation of credit in the United States was under way, the demand for credit was relatively small, prices were declining, business activity was at low ebb, and the member banks utilized the gold obtained from abroad to reduce their indebtedness at the reserve banks and thus to strengthen their own position. This use of the foreign gold representing the liquidation of debts owed to America by foreigners accelerated the reduction of bank loans which was proceeding independently as the result of domestic conditions. The reduction in Federal reserve bank assets from their peak in October, 1920, to their lowest point in the summer of 1922, was due approximately to the same extent to the liquidation of domestic and of foreign loans. The former is roughly measured by the reduction in Federal reserve note circulation and the latter by the net imports of gold.

The second period in the gold movement, during which net imports totaled $269,000,000, began about the opening of 1922, but particularly after the first quarter of that year. A large number of member banks, especially in the financial East, had paid off their entire indebtedness to the reserve banks and the gold imported during this period, when deposited with the reserve banks, constituted a basis for extension of credit by the member banks. Thus, gold imports during the first period facilitated liquidation of credit while during the second period they were used as reserves against new credit. Furthermore, during liquidation the imported gold canceled a corresponding amount of indebtedness, dollar for dollar, while during the more recent inflow it supported an approximately tenfold increase in the deposit liabilities of member banks. This increase was in response to the domestic credit demand, but in the absence of gold imports member banks would necessarily have borrowed from the reserve banks to meet their larger reserve requirements.

Reserve Balances and Growth of Credit.—The consequences of any addition to reserve balances, whether they arise from gold imports or from reserve-bank accommodation, are important because of the relation they bear to the lending power of member banks and the growth of credit. The volume of member-bank reserve deposits at Federal reserve banks remains fairly steady, but small changes in these reserves are significant because of their relation to member-bank deposit liabilities. Indeed, over longer periods of time the level of reserve deposits at reserve banks changes less than that of any other big item in the statement. Federal reserve notes, for instance, dropped from a peak of $3,400,000,000 at the end of 1920 to a low point of $2,100,000,000 in the middle of 1922. During the same period the deposits of Federal reserve banks rose from $1,800,000,000 to $1,900,000,000. The difference in the range of fluctuations between the reserve deposits of member banks and Federal reserve note circulation is a reflection of the difference between member-bank and Federal reserve bank credit. Member-bank credit represents a large part of the Nation's volume of credit, and a relatively small percentage of change in that volume may reflect the difference between a period of industrial inactivity and of industrial revival. Reserve-bank credit, on the other hand, is resorted to at times when the ordinary credit facilities are inadequate. When increased credit demands can be met only by recourse to the Federal reserve banks, the volume of reserve-bank lending is a sensitive indicator of credit conditions. But when, as has been the case during the last year, the growing demand for credit has been supported by gold imports, the volume of reserve-bank credit is not an adequate indicator of credit trends. This is evident from the fact that at the present time the volume of reserve-bank credit is at about the same level as a year ago, while the loans and investments of member banks have expanded over $2,000,000,000.

Federal Reserve Notes and Business Activity.—The increase in the volume of member-bank loans and investments has furnished the business community with the credit needed to finance the recent increase in production and trade. Increases in the volume of credit, however, are invariably followed by a larger demand for currency. During the past 12 months a part of this added demand was met by the direct use of gold, as indicated by the fact that the volume of gold in circulation increased by $130,000,000. But this growth of gold circulation was not sufficient to meet enlarged currency requirements and additional supplies of currency could be secured by member banks only through borrowing at Federal reserve banks. It is in this way that the increased demand for credit has led to a demand for additional accommodation at reserve banks, even though the reserves against additional credit have been supplied by the receipt of gold from abroad. It is noteworthy that the increase in the earning assets of the Federal reserve banks since the end of July, 1922, when the demand for bank credit became more pronounced, is closely paralleled by the increase in Federal reserve note circulation. The increased demand for hand-to-hand currency which goes with increased employment, production, and credit caused the banks to borrow from the reserve banks in order to secure Federal reserve notes. Furthermore, when the borrowing is for the purpose of meeting reserve requirements the volume of accommodation needed is on the average only one-tenth as large as the increased deposit liabilities of member banks, but when the borrowing is for the purpose of obtaining currency it equals the amount of currency needed, dollar for dollar. At the present time the relation between the growth of credit and the demand for currency is such that even if gold imports continue at a considerable rate the need for additional currency will keep the reserve banks closely in touch with the credit situation.

Absence of International Gold Standard.—Business and credit developments in the United States at a time when other leading commercial countries are not on a gold basis are not subject to the regulating influences that would be operative under an effective international gold standard. Under existing world conditions of depreciated currencies and gold embargoes, differences in the levels of money rates and prices prevail in various countries without giving rise to corrective gold movements. In pre-war times an unusual degree of loan activity, accompanied by a rise in prices more rapid in this country than abroad, resulted in unfavorable exchange rates and a consequent outflow of gold. Such an outflow tended to check the increase in the volume of bank credit and to bring international price levels and money rates into line. While the United States now has larger gold holdings than ever in its history and its currency is freely convertible into gold for export, this does not constitute an effective gold standard in a regulatory sense. Such a standard presupposes not merely that domestic currency is on a parity with gold but that gold can and does move freely into and out of the country in response to business and credit conditions here and abroad. But present world financial conditions act as an effective check upon our gold exports. The volume of our international balance of payments, Government control of gold movements in most foreign countries, and the depreciation of foreign currencies prevent the outflow of gold. Since the beginning of 1921 there have been almost no gold exports from the United States. The largest exports for any month during the period occurred during October, 1922, when the Canadian dollar was at a slight premium and Canadian banks withdrew balances from New York. A relatively small gold movement corrected the exchange rate and the outflow ceased. More recently gold exports on a small scale have been made to British India, which has had favorable trade conditions during the past year and has also purchased gold in the London market. While moderate outward movements of gold, possibly on a somewhat larger scale, may occur during the present year, net imports will probably continue. Under such conditions there is little immediate prospect of international gold movements exercising a corrective influence on our domestic credit developments.

Reserve Ratio as Credit Indicator.—Large gold reserves, the result of an unprecedented inflow of gold due chiefly to conditions abroad, have increased the lending power of Federal reserve banks far beyond the present domestic credit needs. Consequently the relation of these reserves to the deposit and note liabilities of the reserve banks as expressed in the reserve ratio is not now a satisfactory indicator of changes in credit conditions. In fact, since the beginning of 1922 the reserve ratio has remained relatively constant around 75 per cent, largely as the result of offsetting changes in gold reserves and in reserve balances of member banks. Gold reserves are now approximately $200,000,000 above what they were 15 months ago, and during this same period the deposits of reserve banks have increased also by about $200,000,000. Consequently since the opening of 1922 the effect on the reserve ratio of the growth in liabilities has been largely offset by the increase in gold holdings. Thus the gold received from abroad in liquidation of foreign indebtedness has balanced in the reserve ratio the enlarged volume of deposits which have increased in response to the domestic business situation. Under these circumstances, changes in the reserve ratio, since they are the result of diverse and unrelated influences, do not reflect the developments in the domestic credit and business situation.

III. May, 1923

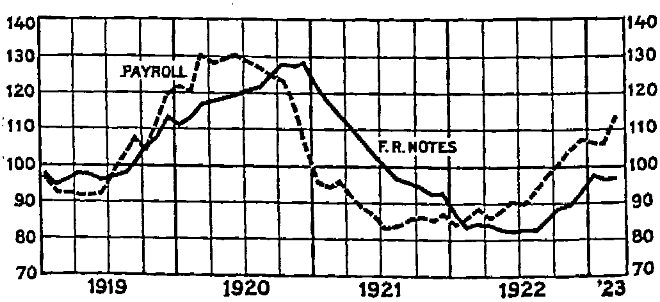
Business Expansion and the Reserve Banks.—Credit developments during the past month have further emphasized the fact that current business expansion is being financed independently of reserve bank credit. In these circumstances, the weekly statement of the reserve banks is not indicative of changes in credit conditions. Changes in reserves, in earning assets, and in Federal reserve note circulation have been relatively slight since last summer and have not reflected the considerable growth in bank credit. The reserve ratio, as was pointed out last month in a discussion of the effect of gold imports on our credit situation, has at present little value as an indicator of credit movements. It was these gold imports that enabled member banks to meet the increased credit and currency demands of their customers without obtaining a corresponding amount of accommodation at the reserve banks. Thus, under immediately prevailing conditions, it is the changes in member bank loans and investments rather than any item in the reserve bank statement that roughly measure the rate of increase in the use of bank credit. This rate of growth for bank credit, compared with the rate of expansion for production and trade, affords, in the absence of such a test as the reserve ratio which is dependent upon free gold movement, an important indicator of changes in credit conditions. The fact that the recent growth of credit has been accompanied by a further increase in the physical volume of production is favorable evidence of the economic effectiveness of the credit in use.

Comparative stability in the volume of reserve bank credit while member bank credit increased has characterized credit developments during the past 15 months. Since the middle of 1922, when renewed demand for credit was first reflected in larger commercial loans, total loans and investments of member banks in leading cities have increased by $1,300,000,000, while earning assets of the reserve banks have increased by less than $100,000,000. At the present time the total of member bank credit is nearly as large as in 1920 and the volume of goods being produced and marketed exceeds the peak reached in that year, yet the volume of reserve bank credit is $2,200,000,000 less.

Present Currency Requirements.—During the past two months Federal reserve note circulation has declined slightly and the growing demand for currency has been met by an increase in other forms of money in circulation. In fact, the total money in circulation is now $242,000,000 larger than a year ago, while Federal reserve notes during this period have increased by only $52,000,000 and Federal reserve bank notes have declined by $58,000,000. Gold and gold certificates in circulation have increased by $127,000,000, silver and silver certificates by $100,000,000, national-bank notes by

$11,000,000, and United States notes by $10,000,000. More than three-fifths of the year's increase in circulation occurred between February 1 and April 1 of this year. A part of this additional currency has been supplied out of the cash reserves of the reserve banks, which declined slightly during the past two months. But, like the additional demand for credit, the recent demand for additional currency has been met without substantial increase in the use of reserve bank credit.

While increases in other forms of money in circulation have largely supplied the recent demand for more currency, the fact is that the present volume of currency is much less than in 1920, even though production, trade, employment, and member-bank credit are now at or near 1920 levels. On April 1, 1923, the total volume of money in circulation was nearly $1,000,000,000 less than at its peak in November, 1920, and over $600,000,000 less than on the corresponding date of 1920. Changes in the demand for hand-to-hand currency arise chiefly, from the pocket-money and till-money requirements of retail trade, from pay-roll needs, and from the habit of accumulating and holding currency as savings. The volume of retail trade, taking the country as a whole, is approximately the same now as at this season in 1920, though retail prices are lower. In certain agricultural sections, however, where hand-to-hand currency is largely used and where business recovery has been slow and incomplete, the volume of business is still much



below the 1920 level, and it is probable that in those sections there is a smaller demand for currency. There is also at present a much reduced amount of currency held as savings. The extent of such holdings depends less upon the current volume of employment than upon the duration of the period of full employment; in 1920 such holdings were doubtless at a record figure, since full-time employment and high wages had continued for several years. During the subsequent period of slack employment much of the currency held as savings was spent, and the present period of fuller employment has not yet continued long enough to result in similar accumulation.

Of the various fluctuating demands for currency the pay-roll requirement is probably the most important because it includes the seasonal demand at harvest time and because it influences other currency demands arising from retail trade and from savings. The accompanying chart shows for recent years the relation between the total pay roll of reporting industrial establishments in the State of New York, which may be taken as fairly representative of changes in factory pay rolls for the entire country, and the volume of Federal reserve notes in circulation. The range of fluctuation in pay roll and in currency has been similar, though the changes in the volume of currency have lagged behind the changes in pay roll. The chart shows that while the pay roll increased since the beginning of 1922, it is still much lower than at the peak in 1920. This, taken together with the lower level of retail prices, is probably the most important single fact in accounting for the smaller volume of currency now in circulation. This lesser demand for currency, together with the gold imports which have supplied member banks with a basis for loans without additional borrowings from the reserve banks, accounts for the present reduced volume of reserve bank credit compared with 1920.

If the relation between pay roll and Federal reserve notes which held during previous years continues, the rapid increase in the pay roll since the middle of 1922 will soon result in a substantial increase in demand for currency, and in order to secure the additional currency member banks will seek accommodation at the reserve banks.

Production and Credit.—The increased use of credit, which is reflected in the larger loans and investments of member banks, but not in the earning assets of Federal reserve banks, has been primarily in response to the increased volume of production. Thus far business expansion has been characterized by a rapid increase in the output of basic commodities. In fact, the growth in the physical volume of production since the middle of 1921 indicates a rate or industrial recovery almost without parallel in American business. Within a year and a half after recovery began the monthly output of 21 basic commodities, as measured by the Federal Reserve Board's index of production, increased over 67 per cent. The volume of goods produced and consumed during the first quarter of 1923 probably exceeds that of any similar period in the history of the country. Fuller employment of equipment and of labor has produced the additional income from which profits and wages were realized. In fact, profits in many lines of industry have been dependent upon quantity production, the lower production cost per unit more than offsetting the increased cost of materials. It is partly in consequence of larger output that the prices of manufactured goods have not more fully reflected the increases in prices of raw materials. Larger pay rolls also until quite recently have resulted chiefly from increased employment rather than from advances in wage rates. These increases in production and employment have thus far economically justified the increases in the total volume of bank credit. For credit extension does not result in overexpansion so long as the additional credit yields proportionate results in the larger production and marketing of goods.

Credit Conditions, 1923 and 1920.—The current volume of wholesale and retail trade indicates that the goods now being produced are moving satisfactorily into the channels of distribution. About 700 firms engaged in various lines of wholesale trade and representing practically all sections of the country are now reporting their monthly sales to the Federal reserve banks. Since the opening of the year the total volume of sales by these concerns has been about 18 per cent larger than during the corresponding period a year ago. In retail trade the sales of 306 department stores located in 100 cities throughout the country have also exceeded the sales of last year by 15 per cent. In March, 1923, sales of these stores were above the level of March, 1920, in spite of the lower retail prices now prevailing. Department-store sales are at present relatively higher in the industrial districts of the East than in the agricultural sections of the South and West. The volume of merchandise buying in rural districts is further indicated by the sales of mail-order houses, which during recent months have been approximately 37 per cent above the sales of a year ago, though the present dollar volume of their buying is still much below the level of 1920.

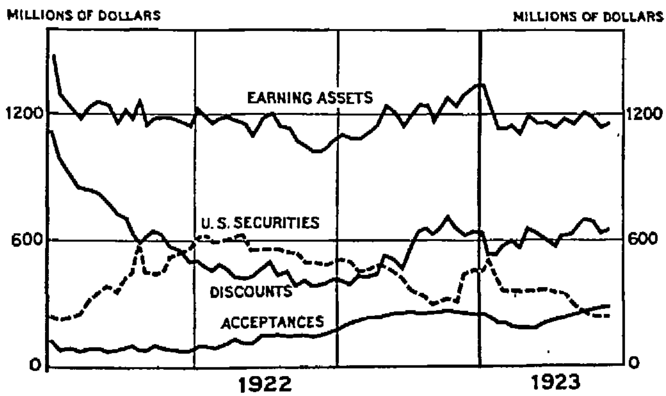
The extent to which various sections of the country have shared in the current growth of business and credit may be shown in a general way by the changes in the volume of check payments and of member bank credit. For this purpose a comparison is made of the total volume of bank debits during the first quarter of 1923 with the corresponding period in 1920, and a comparison of the total loans and investments of member banks at the end of the year 1922 with similar figures for November, 1920. This comparison in the form of percentages, with 1920 figures taken as 100, is shown below, by Federal reserve districts.

Federal reserve district	Check payments, per cent	Member bank credit, per cent	Federal reserve district	Check payments, per cent	Member bank credit, per cent
Boston	105.5	105.0	St. Louis	96.9	105.0
New York	99.6	99.2	Minneapolis	88.2	90.5
Philadelphia	100.6	101.4	Kansas City	81.6	87.5
Cleveland	97.8	105.4	Dallas	87.8	84.6
Richmond	85.6	96.4	San Francisco	101.9	104.0
Atlanta	80.9	90.7			
Chicago	94.6	95.9	System	97.5	98.6

Both in volume of business and in bank credit the more recent figures, taking the country as a whole, show but a slight reduction compared with 1920. When considered by reserve districts there is a close correspondence in the changes since 1920 in credit and in business volume. With but few exceptions, business activity in the industrial East and on the Pacific coast either approximates or exceeds that of 1920 and has been accompanied by corresponding increases in credit. In marked contrast are conditions in the South and Middle West, where both business volume and bank credit are considerably below the 1920 level.

This regional comparison emphasizes the fact that, while the total volume of business and bank credit is nearly as large as in 1920, there are important differences between the situation at that time and now. In 1920 credit expansion was more pronounced in agricultural than in industrial communities, while at the present time it is in the large cities that the volume of credit is relatively larger. Thus the reserve banks in the South and West in meeting the demands of their member banks in 1920 were obliged to rediscount large amounts with the bank in the industrial sections, while at present there are no interbank rediscounts and no Federal reserve bank approaches the limit of its lending capacity.

The lesser dependence of the member banks upon the reserve banks is reflected in the much smaller total volume of reserve bank earning assets and in the smaller proportion which paper discounted for member banks constitutes of that total. On October 15, 1920, of the total earning assets held by reserve banks, discounts for member banks constituted 81 per cent,



while on April 18, 1923, the percentage was 58, and in the middle of 1922, when discounts were at low ebb, the percentage was as low as 35 per cent.

Open-market Policy.—Total earning assets of the 12 Federal reserve banks combined measure the volume of reserve bank credit in actual use and are continuously in process of adjustment to the demand for such credit. It is this total rather than any single class of assets which indicates at a given time the extent to which reserve bank credit is being utilized as a basis of member bank credit and as a source of currency. The relationship between the open-market operations of the Federal reserve banks and the demand for discount accommodation on the part of the members has been brought out clearly by the experience of 1922 and the first quarter of 1923. The chart shows for each week in 1922 and in 1923 to date the volume of discounts, open-market purchases, and total earning assets.

Since the middle of January, 1923, the increase in discounts at reserve banks has been accompanied by a decline in holdings of open-market purchases, with a consequent stability in the total volume of earning assets. This is in contrast to the situation in the early part of 1922, when member banks were rapidly liquidating their indebtedness at the reserve banks. At that time, also, the volume of earning assets remained relatively constant, because the decline in discounts was accompanied by a corresponding increase in the holdings of Government securities. Thus, for a period of more than a year the total of reserve bank credit has fluctuated around $1,200,000,000 and has remained within a range of $1,000,000,000 to $1,350,000,000. During that period discounts have fluctuated between $1,000,000,000 and less than $400,000,000, and Government security holdings between $600,000,000 and $225,000,000. Acceptances have shown an upward trend beginning with June, 1922, and recently have exceeded the Government security holdings. Thus, during the period covered by the chart, fluctuations in the volume of discounts and in the holdings of open-market purchases have offset each other and consequently have not resulted in corresponding changes in the total volume of reserve bank credit in use.

The relation between open-market purchases and discounts has not held true for reserve banks considered individually. There have been large purchases of Government securities by reserve banks in the interior without a corresponding decline in the discounts for their member banks. But the fact that for the 12 banks combined earning assets have remained comparatively constant indicates that a corresponding liquidation has taken place at other reserve banks.

A recognition of the desirability of coordinating more closely the open-market operations of the several reserve banks led to a discussion of open-market policy at the recent conference of the Federal Reserve Board with the governors of the reserve banks. The Federal Reserve Board's position in the matter is indicated by the adoption of the following principle with respect to open-market investment operations of the Federal reserve banks; "that the time, manner, character, and volume of open-market investments purchased by Federal reserve banks be governed with primary regard to the accommodation of commerce and business and to the effect of such purchases or sales on the general credit situation."

By providing that open-market investment operations are to be governed "with primary regard to the accommodation of commerce and business," the principle rests upon the same general considerations as those provided in the Federal reserve act for the determination of discount rates. Since in open-market operations the initiative can be taken by the reserve banks rather than by member banks, these operations may be used as a gauge of the degree of adjustment between the requirements for reserve-bank credit and the volume of it in actual use. The sale of an investment by a reserve bank is a means of testing the demand for credit by placing the initiative for and the cost of such credit directly upon borrowing member banks.

Administration of Credit.—To what extent the member banks will be able to finance a further growth of business without additional accommodation from the reserve banks depends mainly upon the size of gold imports in the immediate future and the further possibilities of shifting from investments and loans on securities to loans for commercial and industrial purposes. Gold imports have recently been small, the net imports for February being $7,000,000 and for March, $5,500,000, compared with a monthly average of $20,000,000 for 1922 and of $55,000,000 in 1921. If the gold movement continues at the present reduced scale, the imported gold will not be sufficient to form a basis for any considerable increase in credit extension by member banks and also to meet a growth in the demand for currency. Furthermore, while member banks since the opening of the year have been able in part to increase their loans for commercial purposes by the use of funds withdrawn from investments and from loans on securities, the extent of such transfer is limited since the sale of securities in excess of current savings indirectly leads to a demand for bank credit. Since the opening of the year the monthly rate of growth in commercial loans at member banks in leading cities has been nearly 2 per cent. A continuance of this credit trend must soon result in increased borrowings by member banks at the reserve banks.

The relation between the expansion of bank credit and the expansion of business, as well as the responsibility of the banking community for the economic use of credit, is clearly set forth in a recent report of a committee on unemployment and business cycles, appointed by Secretary Herbert Hoover, as chairman of the President's Conference on Unemployment, held in September, 1921. The report states: "Expansion of bank credit is a necessary condition of expansion of business operations. . . . But an overexpansion of credit may so increase the purchasing power of business men that it will merely result in enabling them to bid against one another for limited supplies of goods and materials so as to force prices above what consumers are willing and able to pay. Bank credit often expands so rapidly that it lifts the buying or investment power of business men out of line with the general buying power of the community. Because of their strategic position the banks have an unusual duty and an exceptional opportunity to give sound information and counsel to business men. . . . While the relationship between the volume of credit and the volume of business and the movement of prices is not always simple to interpret, it appears to be sufficiently close to make it a matter of first importance that the volume and the flow of credit should at all times be tested by the contribution which additions to the volume of credit make to the total of economic production. Additions to credit which can not be economically validated by a commensurate effect in actual production are speculative, and as such should be subjected to control, so that business and industry can be maintained in a healthy state."

The present lending capacity of the country's banking system, in view of the great growth of the reserves at the reserve banks, is now far in excess of the credit needs of the country's productive capacity. In such a situation it is the available supplies of labor and equipment and not the potential supply of credit that in the end must fix the limit which may be attained by aggregate national production. As these limits are approached credit policy must be increasingly influenced by careful consideration of the continued effectiveness of further additions to the total volume of credit in contributing to increased productivity.

APPENDIX L

EXTRACT FROM ANNUAL REPORT OF THE FEDERAL RESERVE BOARD FOR 1923

FEDERAL RESERVE DISCOUNT POLICY

These banking and business developments constituted the circumstances in which the Federal reserve system functioned during 1923 and with reference to which Federal reserve credit policy was formulated. In carrying out this policy the system has not relied upon changes in discount rates as the only means of influencing the general credit situation. The open-market transactions of Federal reserve banks during 1923, which are later considered in some detail, as well as their discount policy, have reflected Federal reserve credit policy. Furthermore, the experience of several of the reserve banks is demonstrating that changes in discount rates need not be in all circumstances the main reliance or in any situation the exclusive reliance in making the credit policy of the reserve banks effective. By maintaining constant, close, and direct contact with the loan policies and operations of its member banks, through examination or otherwise, a reserve bank can do much by other means than changes in discount rates to establish an effective supervision and control of the credit released by it to its member banks.

Discount Policy in 1923.—Discount rates in 1923 underwent fewer changes than in any other year in the history of the system. The only changes in discount rates were at the Federal reserve banks of Boston, New York, and San Francisco, where near the end of February rates were advanced from 4 per cent to 4½ per cent, bringing the rates at these banks to the level prevailing at all other reserve banks.

These advances gained significance from the fact that they were the first rate advances in more than two years. At the time there had been a considerable increase on a national scale in the demand for credit and the existing inequality between discount rates in various districts tended to attract an undue proportion of borrowing to the centers with low rates. The effect of the rate advances of the three banks was to bring about a better regional distribution of credit and to test the character and soundness of the credit demand by having the obligations of borrowers passed upon by banks in their own locality.

The attitude of the Federal reserve system, as expressed in these rate changes, was not immediately reflected in any change of the volume of bank credit in use. This, however, is not to be taken as indicating that the advances of rates, slight as they appeared, were without consequence.

The influence of the change of discount rates by the reserve banks can not be measured by any immediate effect that they might be expected to have on the total volume of borrowing at member banks. The credit process which finally gives rise to a granting of credit by a member bank has its beginning in the business plans and decisions of the bank's customers. The movement in the volume of credit at any given time, and particularly in times of business expansion, has a momentum which can not be immediately checked, and while the expansion is actively going on the movement tends to gain momentum at an increasing rate. The volume of banking credit in use and outstanding, as recorded in the statements of the banks, is the outcome of commercial plans and commitments which may antedate by many months the extension of credit by the banks. Business transactions which are already under way will ordinarily be carried through to completion, quite irrespective of changes that have supervened in credit conditions and money rates. The rise in discount rates is not intended to interrupt or interfere with antecedent commitments that are in process of completion but rather to induce a more prudent attitude on the part of borrowers with regard to new commitments. It requires, therefore, some time for a rate change to show its effects in the altered lending operations of the banks.

In the months immediately following the rate advances made in February, 1923, the volume of credit, especially the borrowings for commercial and industrial purposes, continued to increase at a rapid rate. Prices, particularly of those commodities which had been advancing rapidly for about a year, ceased their rise in May, chiefly because the increased volume of production which the rise in prices had stimulated was reaching the market and taking effect in supplies of goods available for consumption. While consumers' demand was maintained and the volume of trade continued large throughout the year, there was some recession in industrial activity in the second half of the year and a decline in the price level from the peak reached in May to approximately the level of the corresponding months of the previous year.

The rise of prices during the early months of 1923, which in comparison with the price movements experienced under more settled business conditions of the years before the war was proceeding at a relatively rapid rate, led to expressions of concern that the country might once more be entering upon a period of credit expansion and gave rise in certain quarters to a demand for further discount rate advances. The judgment of the Board, however, was that the increasing volume of credit was justifying itself in the continued increase in the volume of production and consumption; the fact that there was little indication of speculative activity was regarded as sufficient evidence that credit was not being put to uneconomic uses.

In commenting on the business and credit situation at the time, the Board said in its Review of the Month for March that "the economic use of credit is to facilitate the production and orderly marketing of goods and not to finance the speculative holding of excessive stocks of materials and merchandise. So far as the available indications go, the increased demand for credit during recent months appears to have arisen from the larger financial requirements of current production and trade and not from speculation in inventories. When production reaches the limits imposed by the available supplies of labor, plant capacity, and transportation facilities—in fact, whenever the productive energies and resources of the country are employed at full capacity—output can not be enlarged by an increased use of credit and by further increases in prices." The view of the Board at the time that the upward movement of prices was not due to an unwarranted expansion of credit, as tested by the volume of trade and industry, was confirmed by the subsequent course of economic events.

During the closing months of 1923 prices became more stable, the reduced volume of production became better adjusted to the current demand, and the volume of commercial and agricultural borrowing, after reaching a peak during the crop-moving period, declined slightly. All of these developments indicated that the year 1923 by comparison with previous years attained a considerable degree of economic stability. The outcome for the year shows that the banks of the country through the extension of credit supported the industrial and trade recovery that was under way and that the Federal reserve banks through their discount policy performed the function laid down in the act of "accommodating commerce and business."

Relation of Discount Rates to Market Rates.—The experience of the last year throws light upon the important and much discussed but as yet little understood problem of the basis of Federal reserve discount policy and rates.

Discussions have usually addressed themselves to the question of relationship that should exist and be maintained between Federal reserve bank rates and the rates in the open market and between Federal reserve bank rates and prevailing rates charged by member banks to their customers for current commercial accommodation. The view most widely held in financial and banking circles is that the Federal reserve bank rate should move in sympathy with general money rates, rising as they rise and falling as they decline. A further development of this theory, based upon the leadership which it is felt the Federal reserve banks should assume in the money market, asserts that when money conditions are tightening the Federal reserve bank rates should lead the rise of money rates. A still further and more extreme view holds that Federal reserve bank rates normally should be above the level of member bank rates. A comparison of money rates in the New York market during the year 1923 with the discount rate maintained by the Federal Reserve Bank of New York is presented in the following table:

	Federal reserve discount rate	Prime bankers' accept-ances, 90 days	Treasury certificates	Prime commercial paper, 60 to 90 days
1923:				
January	4.00	4.00	3.66	4.63
February	4.00	4.00	3.65	4.63
March	4.50	4.00	4.12	4.98
April	4.50	4.125	4.13	5.13
May	4.50	4.125	3.95	5.10
June	4.50	4.125	3.84	4.91
July	4.50	4.125	3.91	4.94
August	4.50	4.125	3.86	5.02
September	4.50	4.125	4.01	5.125
October	4.50	4.125	4.22	5.125
November	4.50	4.125	3.94	5.10
December	4.50	4.125	3.88	4.88

It appears that the Federal reserve bank discount rate of 4½ per cent was in excess of the rate on bankers' acceptances and Treasury certificates of short maturity throughout the year and below the commercial paper rate.

The relation in 1923 between Federal reserve bank rates and rates charged by member banks in the different districts to their customers is indicated by a comparison of the practically uniform rate throughout the year at all the Federal reserve banks and the rates paid by customers to member banks on paper rediscounted with the Federal reserve banks. This comparison is presented in the following table:

	Federal reserve bank rate	Member bank rate
Boston	4.42	5.07
New York	4.42	5.22
Philadelphia	4.50	5.31
Cleveland	4.50	5.58
Richmond	4.50	6.09
Atlanta	4.50	6.25
Chicago	4.50	5.62
St. Louis	4.50	5.59
Minneapolis	4.50	7.93
Kansas City	4.50	7.15
Dallas	4.50	8.41
San Francisco	4.44	5.84
Average for all districts	4.47	5.48

The table brings out the fact that the margin between the Federal reserve bank rate and member bank rates varies considerably from district to district, and that in general the spread is narrowest in those districts where the financial centers are located. The differences in the margin reflect in part the differences in the costs and risks of member bank lending in various sections of the country. These differences between districts also represent the wider margin between the Federal reserve bank rate and member bank rates in smaller cities as compared with the larger centers. With the Federal reserve bank rate at 4½ per cent, the rates charged to customers in December, 1923, were 5.44 per cent for cities of 100,000 population and over, 6.34 per cent for cities from 15,000 to 100,000, and 7.54 per cent for cities of less than 15,000. The diversity in member bank rates, whether considered by Federal reserve districts or by size of cities is, therefore, apparent. It follows that the Federal Reserve Board, in approving the maintenance by all Federal reserve banks of rates at a uniform level practically throughout the year, was guided by no mechanical rule as to the necessity of maintaining a fixed and invariable relationship between reserve bank rates and member bank customer rates. Indeed, the observations of the Federal Reserve Board and the experience of the Federal reserve banks make it certain that the Federal reserve banks and the Federal Reserve Board can not adequately discharge their function of "fixing rates with a view of accommodating commerce and business" by the simple expedient of any fixed rule or mechanical principle.

GUIDES TO CREDIT POLICY

It is to the reserve ratio that the public in most countries looks to get an indication of changes in the banking position and in the credit situation. This habit of looking at the reserve ratio as an indicator is particularly prevalent in the United States, because the United States is more than any other the country of legally regulated reserves. However theoretically imperfect any reserve ratio may be as a credit and banking index even in normal circumstances, and however defective reserve ratios may have become as a result of the suspension of the gold standard in many countries, the reserve ratio is nevertheless the one banking index that has uninterruptedly enjoyed the prestige of tradition and there is little or no indication of the displacement of this tradition in the near future. The reserve ratio must, therefore, be reckoned with as a fact in banking administration.

In thus recognizing the importance generally attached by the business public to changes in the reserve ratio as an index of the banking position, the board is not oblivious of, nor indifferent to, the fact that central bank practices associated with an effective international gold standard are now inoperative and that this seriously affects the serviceability of reserve ratios as working guides in credit and currency administration.

The reserve ratio can not be expected to regain its former position of authority until the extraordinary international gold movements which, in part, have occasioned and in part have resulted from the breakdown of the gold standard, have ceased and the flow of gold from country to country is again governed by those forces which in more normal and stable conditions determine the balance of international payments. The gold standard as a regulatory influence can not be effective for one country alone, no matter how impregnable its gold position. Gold movements in the years before the war were in response to changes in the trade and financial position of countries operating on the gold standard, and the changes in the reserve ratios of the central banks, which reflected these movements, were therefore indicative of trade movements and current banking and credit developments. A decline in the reserve ratio reflected either a growth in the liabilities arising chiefly from domestic business or a loss of reserves owing to an unfavorable balance of international payments. Under an effective international gold standard the movements of gold among the money markets of the world exercised a corrective influence on exchange rates, tended to equalize money rates in various countries, and to keep domestic price levels in line with the world price level. In these circumstances, changes in the reserve ratios of the various central banks served as valuable indicators of the changes in the credit and trade relations of the countries and were consequently important guides in the shaping of discount policies. Under the present conditions with gold embargoes in force in most foreign countries and the United States practically the only free gold market of the world, the movement of gold to this country does not reflect the relative position of the money markets nor does the movement give rise to corrective influences, working through exchanges, money rates, and price levels, which tend to reverse the flow. The significance which movements in the reserve ratios formerly possessed rested upon the fact that they were the visible indicators of the operation of the nicely adjusted mechanism of international finance. With this mechanism now inoperative, the ratios have lost much of their value as administrative guides. It has therefore been necessary for banking administration even in those countries that have been most successful in maintaining a connection with the gold standard to develop or devise other working bases. This has been as true in the United States where the gold standard has been consistently maintained as in other countries where that standard is for the time being inoperative.

The anomalous situation thus confronting central banking administration in all countries had led to much discussion in the United States and elsewhere as to workable substitutes for reserve ratios as guides to credit and currency administration. Particular prominence has been given in discussions of new proposals to the suggestion frequently made that the credit issuing from the Federal reserve banks should be regulated with immediate reference to the price level, particularly in such manner as to avoid fluctuations of general prices. Entirely apart from the difficult administrative problems that would arise in connection with the adoption of the price index as a guide and entirely apart from the serious political difficulties which would attend a system of credit administration based on prices, there is no reason for believing that the results attained would be as satisfactory as can be reached by other means economically valid and administratively practicable. In saying this the board is not unmindful of the abundant evidence recent years have given of the economic and business disturbances occasioned by violent fluctuations of prices. But it must not be overlooked that price fluctuations proceed from a great variety of causes, most of which lie outside the range of influence of the credit system. No credit system could undertake to perform the function of regulating credit by reference to prices without failing in the endeavor.

The price situation and the credit situation are no doubt frequently involved in one another, but the interrelationship of prices and credit is too complex to admit of any simple statement, still less of a formula of invariable application. An oversimplified statement of complex problems contributes nothing toward the development of an effective administrative procedure. It is the view of the Federal Reserve Board that the price situation and the credit situation, while sometimes closely related, are nevertheless not related to one another as simple cause and effect; they are rather both to be regarded as the outcome of common causes that work in the economic and business situation. The same conditions which predispose to a rise of prices also predispose to an increased demand for credit. The demand for credit is conditioned upon the business outlook. Credit is created in increasing volume only as the community wishes to use more credit—when the opportunity for the employment of credit appears more profitable. Sometimes borrowers want to borrow more and sometimes they are content with less. Sometimes lenders are ready to lend more and at other times less. Why this should be so depends on all those multifarious conditions and circumstances that affect the temper of the business community. For the most part these conditions lie beyond the radius of action of the Federal reserve banks. When the business outlook is inviting business men are apt to adventure and new business commitments are made in increasing volume. But only later will these commitments be reflected in the possible rise of prices and an increase in the volume of credit provided by the commercial banks of the country. The Federal reserve banks will not to any considerable extent feel the impact of the increased demand for credit until the whole train of antecedent circumstances which has occasioned it is well advanced on its course; that is, until a forward movement of business, no matter from what impulse it is proceeding, has gained momentum.

Credit administration must be cognizant of what is under way or in process in the movement of business before it is registered in the price index. The price index records an accomplished fact. Good credit administration in times of active business expansion should not encourage or assist the excessive accumulation of forward commitments in business and banking which only later on will definitely reflect the rate at which they have been taking place in resulting changes of credit volume and changes of price levels; and in times of business reaction should discourage enforced liquidation of past commitments which also will only later on reflect the rate at which it has been taking place in altered credit volume and price levels. The problem of efficient credit administration is, therefore, largely a question of timeliness of action.

No statistical mechanism alone, however carefully contrived, can furnish an adequate guide to credit administration. Credit is an intensely human institution and as such reflects the moods and impulses of the community —its hopes, its fears, its expectations. The business and credit situation of any particular time is weighted and charged with these invisible factors. They are elusive and can not be fitted into any mechanical formula, but the fact that they are refractory to methods of the statistical laboratory makes them neither nonexistent nor nonimportant. They are factors which must always patiently and skillfully be evaluated as best they may and dealt with in any banking administration that is animated by a desire to secure to the community the results of an efficient credit system. In its ultimate analysis credit administration is not a matter of mechanical rules, but is and must be a matter of judgment—of judgment concerning each specific credit situation at the particular moment of time when it has arisen or is developing.

There are among these factors a sufficient number which are determinable in their character, and also measurable, to relieve the problem of credit administration of much of its indefiniteness, and therefore give to it a substantial foundation of ascertainable fact. In large part these factors are recognized in the Federal reserve act. The act, therefore, itself goes far toward indicating standards by which the adequacy or inadequacy of the amount of credit provided by the Federal reserve banks may be tested.

The Federal reserve act has laid down as the broad principle for the guidance of the Federal reserve banks and of the Federal Reserve Board in the discharge of their functions with respect to the administration of the credit facilities of the Federal reserve banks the principle of "accommodating commerce and business." (Sec. 14 of the Federal reserve act, par. (d).) The act goes further. It gives a further indication of the meaning of the broad principle of accommodating commerce and business. These further guides are to be found in section 13 of the Federal reserve act, where the purposes for which Federal reserve credit may be provided are described as "agricultural, industrial, or commercial purposes." It is clear that the accommodation of commerce and business contemplated as providing the proper occasion for the use of the credit facilities of the Federal reserve banks means the accommodation of agriculture, industry, and trade. The extension of credit for purposes "covering merely investments or issued or drawn for the purpose of carrying or trading in stocks, bonds, or other investment securities, except bonds and notes of the Government of the United States," is not permitted by the Federal reserve act. The Federal reserve system is a system of productive credit. It is not a system of credit for either investment or speculative purposes. Credit in the service of agriculture, industry, and trade may be described comprehensively as credit for productive use. The exclusion of the use of Federal reserve credit for speculative and investment purposes and its limitation to agricultural, industrial, or commercial purposes thus clearly indicates the nature of the tests which are appropriate as guides in the extension of Federal reserve credit. They clearly describe the nature or character of the purposes for which such credit and currency may be extended. The qualitative tests appropriate in Federal reserve bank credit administration laid down by the act are, therefore, definite and ample.

But the problem of credit and currency administration implies the use not only of qualitative tests but also of quantitative tests. By what means may it be known whether the volume of credit provided by the Federal reserve banks is in any given set of circumstances adequate, excessive, or deficient? The problem in good administration under the Federal reserve system is not only that of limiting the field of uses of Federal reserve credit to productive purposes, but also of limiting the volume of credit within the field of its appropriate uses to such amount as may be economically justified —that is, justified by a commensurate increase in the Nation's aggregate productivity. The Board is fully aware of the fact that the problem of credit extension involves the question of amount or volume as well as the question of kind or character; otherwise stated, involves a *quantitative* as well as a *qualitative* determination. But it is the view of the Board that it is not necessary to go outside of the Federal reserve act to find suitable methods of estimating the adjustment of the volume of credit provided by the Federal reserve banks to the volume of credit needs. The Federal reserve act itself suggests the nature of the tests, guides, or indicators—whatever they may be called—to be used in gauging the need for and the adequacy of Federal reserve credit. The provisions of the act already quoted indicate that the needs for credit which are recognized by the act as appropriate are those derived from agriculture, industry, and trade. It is the belief of the Board that there will be little danger that the credit created and contributed by the Federal reserve banks will be in excessive volume if restricted to productive uses.

A characteristic of the good functioning of the economic system is to be found in the smooth unobstructed movement of goods from the producer through the channels of distribution to their several ultimate uses. The characteristic of the good functioning of the credit system is to be found in the promptness and in the degree with which the flow of credit adapts itself to the orderly flow of goods in industry and trade. So long as this flow is not interrupted by speculative interference there is little likelihood of the abuse of credit supplied by the Federal reserve banks and consequently little danger of the undue creation of new credit. The volume of credit will seldom be at variance with the volume of credit needs as they are reflected in the demands of productive industry as long as (1) the volume of trade, production, and employment, and (2) the volume of consumption are in equilibrium. Credit for short-term operations in agriculture, industry, and trade, when these operations are genuinely productive and nonspeculative in character, that is to say, credit provided for the purpose of financing the movement of goods through any one of the successive stages of production and distribution into consumption, is a productive use of credit. But when the effect of the credit used is to impede or delay the forward movement of goods from producer to consumer, unless such delay is made necessary by some unavoidable cause, e.g., the interruption of transportation facilities, credit is not productively used. The withholding of goods from sale when there is a market or the accumulation of goods for an anticipated rise of price is not a productive use. It is the nonproductive use of credit that breeds unwarranted increase in the volume of credit; it also gives rise to unnecessary maladjustment between the volume of production and the volume of consumption, and is followed by price and other economic disturbances. Administratively, therefore, the solution of the economic problem of keeping the volume of credit issuing from the Federal reserve banks from becoming either excessive or deficient is found in maintaining it in due relation to the volume of credit needs as these needs are derived from the operating requirements of agriculture, industry, and trade, and the prevention of the uses of Federal reserve credit for purposes not warranted by the terms or spirit of the Federal reserve act.

There are no automatic devices or detectors for determining, when credit is granted by a Federal reserve bank in response to a rediscount demand, whether the occasion of the rediscount was an extension of credit by the member bank for nonproductive use. Paper offered by a member bank when it rediscounts with a Federal reserve bank may disclose the purpose for which the loan evidenced by that paper was made, but it does not disclose what use is to be made of the proceeds of the rediscount. A farmer's note may be offered for rediscount by a member bank when in fact the need for rediscounting has arisen because of extensions of credit by the member bank for speculative use. Similarly, the note of a member bank collateraled by United States Government securities may be offered for discount to a Federal reserve bank when in fact the proceeds are to be used in supporting the extension of credit for "agricultural, industrial, or commercial purposes." Protection of their credit against speculative uses requires that the Federal reserve banks should be acquainted with the loan policies and credit extensions of their member banks—such acquaintance as can be obtained by examination of their member banks or by other forms of contact with them. In brief, the technical administrative problem presented to each reserve bank is that of finding the ways and means best suited to the circumstances in which it operates of informing itself of when and to what extent the extension of credit for speculative uses is the real occasion of member bank rediscounting.

The administrative problems presented to the Federal Reserve Board are of different character and require a different technique. Unlike the Federal reserve banks, the Federal Reserve Board makes no loans. It is not an operating body, but a supervising body. As a supervising body it is not primarily concerned with the detail of the transactions of the Federal reserve banks. Its concern lies rather with the total volume and the aggregate effects of the credit transactions of the Federal reserve banks. In the discharge of the responsibility placed upon it by the act for the "review and determination" of the discount policy and discount rates of the Federal reserve banks "with a view of accommodating commerce and business," the Federal Reserve Board must look for guidance primarily to information concerning the state of industry and trade and the state of credit. Changes in the volume of bank credit in use are the outcome of changes in the volume of business. A proper and effective credit policy, considered in its broader aspects must, therefore, be based on that wide variety of economic facts which, when brought together, throw light on the changes taking place in the business situation and their relation to current banking and credit trends.

While statistical information concerning production and distribution, covering the whole range of business activity from producer to consumer, is not complete, it is sufficient to indicate currently the rate at which goods are being produced and marketed. Information of this character, as a result of the growing recognition of its value and of the activities in collecting such information both by governmental and private agencies, is now available more currently and in more lines of industry and trade than ever before. The changes from month-to-month recorded in these figures, when brought together and interpreted, indicate the nature and rate of readjustments which are constantly taking place in the industrial and business situation. The activity of business, as measured by these current statistics, is the outcome of the decisions and actions of a large number of individual business men. They are, to be sure, in form and in substance an account of the immediate past, but they also give indications of the conditions affecting the course of business in the future. While this information does not make it possible to measure or estimate in advance the probable aggregate volume of credit needs or to combine into any single formula the elements of judgment applicable to varying credit situations as they arise, it provides basic data needed in banking administration. No statistical analysis can ever be a substitute for judgment in matters of credit administration, but such analyses of economic conditions are indispensable as furnishing the factual basis for credit judgment and for the development of credit policy.

In view of the importance of this information in the determination of credit policy the Board and the Federal reserve banks collect through their statistical organizations, in addition to current reports on banking and credit conditions, basic economic data bearing on changes in the volume of production, trade, and employment, and the movement of prices both in the United States and abroad. The volume of production in physical units indicates the extent of industrial activity and measures the output of goods which will subsequently come into the market. Monthly data are available for basic industries, and while fluctuations in the volume of production in these industries are wider than those in the total for all industries, the data are sufficiently representative to indicate at any given time the direction and trend of industrial activity. Changes in the volume of employment at industrial establishments, figures for which are available for a larger number of industries, not only reflect the degree of current productive activity and thus supplement the figures on production, but because of their bearing on the earnings of workers, also indicate changes in the purchasing power of a large body of consumers. It is the buying power of consumers which primarily determines the demand for goods and the rate at which current production can be maintained. The movement of goods into the hands of final purchasers is measured by the volume of retail buying, which for many lines of trade throughout the country is reported monthly. The rate at which goods are moving through the intermediate channels of distribution is reflected in the volume of wholesale trade and of the shipments of merchandise. A smooth distribution of goods requires that stocks of raw materials and merchandise shall be held at different points in the marketing process, and the extent to which the marketing is orderly—that is, without undue accumulation or exhaustion of stocks—is shown in the changes in the volume of stocks held by producers and distributors. While information concerning stocks is not yet as complete or as current as information on production and trade, it is now available for many commodities and is steadily becoming more satisfactory.

Since the purpose of the Board and of the Federal reserve banks in collecting and compiling this current economic information is to measure changes in the volume of production and trade in relation to changes in the volume of credit, the various lines of information are put into the form of index numbers for purposes of comparison. The use of index numbers, by placing the wide variety of information on a common basis, makes possible comparisons of the direction and rate of change in the basic industrial and commercial activities in their relation to credit trends.

In the current surveys of business conditions published by the Board and the Federal reserve banks, the economic data which they collect are made available to the business community. These publications and the activities of other Government and private agencies in the gathering and interpretation of information with reference to current economic conditions are contributing to a better understanding of the factors at work in the business situation and a better appreciation of the relation between business movements and the volume of credit. The business community from which the demand for credit arises is in a position, on the basis of the more adequate information now available, to shape its policies with reference to the use of credit in accordance with fundamental factors and thus to cooperate with banking authorities in the maintenance of sound credit conditions.

The circumstances which have unavoidably led central banking administrations in all countries to exercise a more direct judgment concerning credit conditions and needs than was necessary in periods when the gold standard functioned as an effective regulator of international trade and financial movements have been discussed earlier in this report. Under the conditions that formerly obtained, action of a central bank was largely determined by forces that were registered in changes in its reserve position. No test so simple, so definite, so easily understood, and so practicable has been found, nor is likely to be found, as the old reserve ratio. The banking and business community in prewar days, looking at the position of the central bank—that is, the state of its reserve and the position of its reserve ratio—could see for itself what the state of credit was and what course of action was indicated. The business community could, therefore, closely approximate both the kind of action and the time of action to be taken by central banking authorities. In circumstances which made necessary the protection of their gold reserves, little scope was left for the exercise of large discretion. Under present conditions, however, and until the restoration in some form of the international gold standard, discretion must inevitably play a larger rôle in central banking administration than in prewar days when more reliance could be placed on changes in the reserve ratio. There is much evidence that this altered situation in which the banking community finds itself is being more fully understood by the general business and borrowing public, and that a more intelligent comprehension of present day credit problems is resulting.

The more fully the public understands what the function of the Federal reserve system is and on what grounds and on what indications its policies and actions are based, the simpler and easier will be the problems of credit administration in the United States. For this reason it has been the policy of the Board to inform the public, either through its official monthly publication or by statements to the press, on matters in which the public has an interest and to which its attention should be drawn. By this means the Board presents to the public a statement of the problems confronting the system and of the attitude of the Board toward current banking and credit developments. The public is a partner in the Federal reserve system. The cooperation of the public based upon an understanding of the broad outlines of Federal reserve credit policy is of the greatest advantage to a good functioning of the system. The difficulties and disturbances which have confronted business men, both in this country and abroad, during the period of postwar readjustments, have obliged them to take cognizance of the fundamental factors which influence the movement of trade and industry and of the relation between these factors and the volume of credit. In the United States more than in any other country business men in recent years have shown a disposition to use current statistical data measuring the rate and movement of basic factors in the economic situation and to adjust the policies of their individual business enterprises to the underlying economic forces. The Federal reserve system in developing its policies is also in a position to use as guides these indicators of changes in the state of industry and trade, and with the increasing public appreciation of the value and meaning of these guides will to a larger degree have the cooperation of an informed public opinion in the carrying out of its policies. It is the belief of the Board that out of the experience of the United States and other countries that are now endeavoring to adapt their banking systems to the changing conditions and needs of industry during this period of unprecedented disturbance, there may result a larger conception of the function of these banking systems and the development of a new and more competent basis of credit administration.

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