

UNIVERSAL
LIBRARY

OU_156353

UNIVERSAL
LIBRARY

OSMANIA UNIVERSITY LIBRARY

Call No. 332.1 K31A . Accession No. 18603.

Author Kemmerer, E. W.

Title ABC of the Federal reserve system

This book should be returned on or before the date last marked below.

**THE ABC OF THE
FEDERAL RESERVE SYSTEM**

*London: Humphrey Milford
Oxford University Press*

Tenth Edition ∞ Revised

THE ABC OF THE FEDERAL RESERVE SYSTEM

*Why the Federal Reserve System was
called into being, the main features
of its organization, and how it works*

BY EDWIN WALTER KEMMERER, PH.D., LL.D.
Research Professor of International Finance
in Princeton University

PRINCETON
PRINCETON UNIVERSITY PRESS

1936

Copyright, 1918, 1928, 1929, 1932, 1936, Princeton University Press



Published, September 1918
Second Edition, December 1918
Revised, March 1919
Second Printing, April 1919
Third Edition, November 1919
Fourth Edition, April 1920
Fifth Edition, January 1922
Second Printing, March 1924
Third Printing, October 1925
Sixth Edition, August 1926
Seventh Edition, January 1928
Eighth Edition, February 1929
Ninth Edition, April 1932
Second Printing, June 1933
Tenth Edition, July 1936

Printed at Princeton University Press
Princeton, New Jersey, U.S.A.

PREFACE

WITH this volume *The A B C of the Federal Reserve System* appears in its tenth edition. Of the previous editions over sixty-two thousand copies have been sold.

The book was first published in 1918, when the federal reserve system was less than four years old and while the United States was in the throes of the World War. It was written in response to a suggestion made to the author by the late Henry B. Thompson, a director of the Federal Reserve Bank of Philadelphia, "to write a brief A B C of the newly established federal reserve system that would enable the ordinary American citizen not having technical economic training to understand why the federal reserve banks were established and what services they were performing." Mr. Thompson said that in a democracy at all times, and particularly in time of war, it was exceedingly important that the electorate should have at least an elementary understanding of the nation's currency and banking system and that he believed it to be my patriotic duty as a citizen to write a book that would serve this purpose.

During the two decades and more of its history the federal reserve system has undergone at the

hands of Congress several fundamental changes, and numerous minor changes. On this statutory foundation there has been built up an enormous superstructure of legal interpretations and administrative regulations and practices. From the beginning the system has been a vigorously growing organism, continually adapting itself to an environment that has been undergoing frequent changes, both economic and political. Under such conditions any description of the federal reserve system has quickly become outdated. This explains why this book is now appearing in its tenth revised edition and why the text of this edition is nearly three times as long as that of the first edition and over 65 per cent longer than that of the ninth edition published only four years ago.

The size of the book, however, has not been increased since the last edition, because the enlarged text has been offset by the elimination of the appendix covering the text of the Federal Reserve Law which was contained in the earlier editions. The law has now grown to such a length that it has become impracticable to publish it as an appendix. Furthermore, the need for doing so has been greatly reduced recently by the Board of Governors through their publication of *The Federal Reserve Act as Amended to October 1, 1935*, with an appendix containing other related acts, and with an analytical table of contents and a detailed index.

In the preparation of the last two editions of this book the author received invaluable aid from his colleagues, Professor James G. Smith and Dr. Courtney Pitt of Princeton University, which he wishes gratefully to acknowledge.

CONTENTS

I

PURPOSE AND PLAN OF BOOK PAGES 1-2

II

DECENTRALIZATION OF AMERICAN BANKING
PRIOR TO FEDERAL RESERVE SYSTEM PAGES 3-7
Reserves Widely Scattered, 4-6. Reserves Immobile, 6-7.

III

INELASTICITY OF AMERICAN BANK CREDIT
PRIOR TO FEDERAL RESERVE SYSTEM PAGES 8-19
*Extent to Which Bank Credit is Used as a Medium of Exchange, 8-11.
Bank-note Inelasticity, 11-17. Inelasticity of Deposit Credit, 17-18. Evil
Results of Credit Inelasticity, 18-19.*

IV

DEFECTIVE EXCHANGE AND
TRANSFER SYSTEM PAGES 20-24
*Domestic Exchange Difficulties, 20-23. Foreign Exchange Difficulties,
23-24.*

V

DEFECTIVE BANKING MACHINERY FOR FEDERAL
GOVERNMENT PAGES 25-27
*Difficulty of Apportioning Government Funds Among Nine Sub-
Treasuries and over Fifteen Hundred Depositary Banks, 25. Four Evil
Results of Practice, 25-26. Summary of Defects of Old Banking
System, 26-27.*

VI

HOW THE FEDERAL RESERVE SYSTEM HAS REMEDIED THE
OLD EVIL OF THE DECENTRALIZATION OF AMERICAN
BANKING PAGES 28-57
*Federal Reserve Districts, 28-29. Membership in Federal Reserve Sys-
tem, 29-34. Democracy of Federal Reserve Banks' Plan of Organization,*

35-38. *Coordination of Federal Reserve System by Well Balanced Organization*, 38-41. *District Centralization of Bank Reserves*, 41-45. *Mobilization of Reserves*, 45-46. *Inter-District Mobility*, 46. *Rediscounting by One Federal Reserve Bank for Another*, 46-48. *Open-market Operations*, 48-52. *Creation of a Broader Discount Market for Commercial Paper*, 52. *Trade Acceptances*, 52-54. *Bank Acceptances*, 54-55. *Acceptances Promote Inter-district Mobility of Reserves and Uniform Discount Rates*, 55-56. *Intra-district Mobility of Reserves*, 56-57.

VII

CREDIT ELASTICITY UNDER THE
FEDERAL RESERVE SYSTEM

PAGES 58-79

Bond Secured Bank Notes, 58-60. *Federal Reserve Notes*, 60-62. *Elasticity of Federal Reserve Notes*, 62-66. *Emergency Elasticity of Federal Reserve Notes Provided by the Glass-Steagall Act of 1932*, 67-69. *Elasticity of Deposit Currency*, 69-70. *Removal of Old Rigid Legal Reserve Requirements*, 70-73. *Rediscounting*, 73-74. *Collateral Loans*, 74-76. *Provisions of the Glass-Steagall Emergency Measure of 1932 Relating to Collateral Loans*, 76-78. *Contraction of Circulating Credit*, 78-79.

VIII

DOMESTIC AND FOREIGN EXCHANGE UNDER
THE FEDERAL RESERVE SYSTEM

PAGES 80-97

Domestic Exchange, 80-84. *Present Clearing and Collection System*, 84-89. *The Interdistrict Settlement Fund*, 89-91. *Foreign Exchange*, 92-97.

IX

THE FEDERAL RESERVE SYSTEM AND THE
FEDERAL TREASURY

PAGES 98-114

Defective Organization of Old Banking System from the Standpoint of the Federal Treasury, 98-108. *Fiscal Agency Services Rendered by Federal Reserve System While Nation Was Engaged in World War*, 108-114.

X

THE FEDERAL RESERVE SYSTEM FROM THE END OF THE
WAR TO THE BREAK-DOWN OF THE GOLD STANDARD
IN ENGLAND

PAGES 115-154

I. Gold and Federal Reserve Credit, 116-118. *Mobilization of Gold in Reserve Banks*, 118-121. *Gold Movements, Federal Reserve Credit and Money Rates*, 121-124. *Relationship between Gold Movements, Fluctuations in Federal Reserve Credit, and Money in Circulation*, 124-128.

II. Member Bank Credit Expansion and Velocity of Deposits, 128-130. Member Bank Credit and Time Deposits, 130-131. Velocity of Deposits, 131-134.

III. Discount Rates and Open-market Operations, 134-135. Discount Policy, 135-139. Open-market Operations, 139-140. Importance of Open-Market Purchases and Sales of United States Government Securities, 140-142.

IV. Federal Reserve Policy and Business Activity, 142-145. Relationship between Member Bank Borrowing and Federal Reserve Bank Security Purchases, 145-148. Federal Reserve Credit and Security Speculation, 148-150. Experiment with "Moral Suasion," 150-152. Federal Reserve Credit and the Depression, 152-154.

XI

**THE REORGANIZATION OF THE FEDERAL RESERVE SYSTEM
DURING THE EARLY YEARS OF THE WORLD ECONOMIC
DEPRESSION**

PAGES 155-189

The Glass-Steagall Act, 156-159. Extension of the Circulation Privilege of National Bank Notes, 159-161. Loans to Individuals, Partnerships, and Corporations, 161-162. Capital Loans to Industries or Commercial Businesses, 162-164. The Banking Panic of 1933, 164-170. Why the Federal Reserve System Could Not Prevent the Panic, 171-174. Emergency Banking Legislation, 175-180. Reopening the Banks, 181-185. The Thomas Inflation Amendment, 185-189.

XII

**FURTHER DRASTIC BANKING AND CURRENCY
LEGISLATION**

PAGES 190-234

The Banking Act of 1933, 190-202. The Gold Purchase Plan, 202-205. Rising Dollar Exchange Rates, 205-206. The Gold Reserve Act of 1934, 206-215. The Silver Purchase Act of 1934, 215-220. Control of Credit Used for Speculative Purposes, 220-223. Retirement of All National Bank Notes, 223-225. Federal Insurance of Bank Deposits, 226-231. Pros and Cons of Deposit Insurance, 231-234.

XIII

**THE BANKING ACT OF 1935 AND THE PROBLEM OF EXCESS
RESERVES**

PAGES 235-257

The Banking Act of 1935, 235-249. The Problem of Excess Reserves, 249-257.

XIV

THE PRESENT STATUS OF THE FEDERAL RESERVE
SYSTEM

PAGES 258-266

*Functions of a Central Bank, 258-259. Effects of Recent Legislation on
the Federal Reserve System, 259-266.*

APPENDIX

PAGE 267

INDEX

PAGE 273

CHARTS

CHART I	PAGE 14
<i>National Bank-note Circulation and Prices of United States Bonds, 1880-1914.</i>	
CHART II	PAGE 16
<i>Elasticity of Bank-note Circulation in United States and Canada, 1904-1914.</i>	
CHART III	PAGE 30
<i>Map of the Twelve Federal Reserve Districts.</i>	
CHART IV	PAGE 66
<i>Federal Reserve Notes in Circulation and Total Money in Circulation in the United States, 1926-1935.</i>	
CHART V	PAGE 96
<i>Acceptances Outstanding, 1926-1935.</i>	
CHART VI	PAGE 117
<i>Gold, Federal Reserve Credit and Member Bank Reserves, 1916-1935.</i>	
CHART VII	PAGE 129
<i>Velocity of Demand Deposits, 1919-1935; and Money and Member Bank Deposits, 1916-1935.</i>	
CHART VIII	PAGE 137
<i>Federal Reserve Bank of New York Acceptance Rate and Discount Rate Compared to Corresponding Rates in the Money Market.</i>	
CHART IX	PAGE 143
<i>Index of Industrial Production Compared to the Principal Items of Federal Reserve Credit Outstanding.</i>	
CHART X	PAGE 165
<i>Record of Bank Failures by Calendar Years, 1921-1932.</i>	
CHART XI	PAGE 249
<i>Reserve Balances of Member Banks, 1929-1935.</i>	
CHART XII	PAGE 262
<i>United States Government Securities Held by Federal Reserve and Member Banks, 1928-1935.</i>	

CHAPTER I

PURPOSE AND PLAN OF BOOK

THIS book is an attempt to set forth in non-technical language the chief reasons why the federal reserve system was called into being, the main features of its organization, and how it works. Although the Federal Reserve Act of 1913 is one of the most important pieces of financial legislation enacted in modern times, and although it has been in operation for over two decades, many of our people are still unfamiliar with its fundamental principles. It is looked upon by the majority of people as too technical and complicated a matter to be understood by persons other than bankers and economists. As a consequence there has been a lack of public interest in the workings of the system and in the important legislative and administrative modifications which the system has undergone since its establishment. This is not surprising when one considers the complex character of much of the federal reserve machinery and the technical language in which this machinery is usually described. In a democracy, however, widespread ignorance, among the voters, of the country's financial system is fraught with danger.

America's leading manufacturing, transportation and commercial concerns years ago attained

heights of economic efficiency which made them the envy of foreigners. None, however, envied us our banking system. None followed it except soon regretfully to turn back. This was true, despite the fact that our old American banking system had many substantial merits. It was fairly safe, it was adaptable to the local needs of widely varying communities, and it developed the check and clearing system to a degree of perfection found in few if any other countries. Along with these meritorious features, however, it contained a number of serious defects. The chief of these may be grouped conveniently under four heads: I. Decentralization. II. Inelasticity of credit. III. Cumbersome exchange and transfer system. IV. Defective organization as regards relationship with the Federal Treasury. In the succeeding chapters these four groups of defects will be considered, and in the following chapters will be discussed the respective remedies provided by the federal reserve system as well as the development of the system itself.

CHAPTER II

DECENTRALIZATION OF AMERICAN BANKING PRIOR TO FEDERAL RESERVE SYSTEM

IN 1912 the United States had many times more commercial banks than any other country in the world, and these banks were much smaller, on the average, than those of any other important country. Official figures at that time placed the number of independent banking establishments of all kinds in the United States at approximately 30,000, and of this number something like 28,000 were banks whose business was wholly or partly of a commercial character. These commercial banks were owned for the most part by the residents of the communities in which they were located, and the business of most of them was chiefly local in character. The great majority of national banks was national in nothing but name. Except for the rather loose association of the banks in the clearing houses of our principal cities and a growing community of interest, most of these banks were independent units, each working for itself. There was little team work. In times of threatened panic the different parts of the system worked at cross purposes. They were without effective leadership at those times when prompt cooperation under national leadership was urgently needed.

Reserves Widely Scattered

¶The most serious feature of this decentralization was the widely scattered reserves. Thirty thousand different banks meant 30,000 cash reserves, and these reserves for the commercial banks were more than the mere "till money" which the "cash balances" of most foreign banks represent. They were actual reserves, substantial in amount, upon which the banks placed their prime dependence in times of emergency. It is true that most banks had so-called "deposited reserves," namely, funds on deposit in other banks, which they were allowed to count as part of their "legal reserves"; and they had so-called "secondary reserves," namely, funds invested in securities and call loans, which were supposed to be quick assets that could be liquidated at once in time of need. Strictly speaking, however, neither of these "reserves" was a reserve at all. The deposited reserve was after all merely a deposit in another bank, which the depositary bank loaned out—commonly at call on the stock exchange—and against which it held its own reserve, a reserve which in turn was often further attenuated by being placed on deposit in a third bank, there likewise to be loaned out on stock exchange collateral. In times of emergency, therefore, the "deposited reserve" could be realized upon only to the extent that call loans could act-

ually be called, and this meant to the extent that stock exchange securities could be sold. Invested "secondary reserves" could be realized upon, likewise, only to the extent that securities could be sold. In times of threatened panic, however, stocks and bonds cannot be sold on any extensive scale except at great sacrifices and at the risk of financial collapse. Experience has shown that securities are not sold to any large extent by banks at such times. The losses would be too great. The result was that in times of serious danger the banks of the country were forced to rely chiefly upon their own cash reserves, which, as a consequence, had to be maintained at a high level—higher than in other advanced countries. This situation gave the vault reserve in American commercial banks an importance not found in the commercial banks of Europe. European joint-stock banks normally carry little cash in vault; they place their reliance for emergency funds directly or indirectly upon the central banks. In America bank reserves were so scattered and so jealously guarded that in times of threatened panic they were comparatively ineffective in staying the storm. The situation was analogous to what would happen today if after drilling our American army to a high point of fighting efficiency, we should scatter the men in small units all over the United States to protect the country from a threatened invasion. Each community would be

jealous of its own squad of soldiers, but if the invader should come, the efficiency of our well-drilled soldiers would be practically nil. The point of the illustration will be clear to everyone familiar with the mad scramble for reserve money on the part of banks throughout the country at the time of the panic of 1907. Our supply of reserve money was large. In fact we had at that time in the United States the largest supply of gold in the world. It was ineffective, however, because widely scattered.

Reserves Immobile

(Obviously a country's reserve money must be concentrated mainly in one reserve or, at most, in a few large reserves, if it is to be effective.) It must be marshalled in armies, not scattered in small squads. But these armies must be mobile so that they can be quickly moved singly or in combinations to places of threatened attack. An army's mobility is a big factor in its efficiency—a truth which the great mobility of the armies of the Central Powers in the World War emphasized. Our American bank reserves were not only scattered, they were also immobile. There was no effective way of quickly gathering them together and massing them at the points of financial danger.)

These then were the three most serious phases of our banking decentralization: (1) Absence of

a responsible national conservator of the money market, like the Bank of France or the Bank of England. (2) Scattered bank reserves. (3) Immobile bank reserves.

CHAPTER III

INELASTICITY OF AMERICAN BANK CREDIT PRIOR TO FEDERAL RESERVE SYSTEM

THE second group of defects of the old banking system, defects closely related to those of decentralization, were those of credit inelasticity.) A large part of the country's current business in normal times is carried on by means of funds borrowed from commercial banks. These borrowed funds are left on deposit with the banks, and the deposits are circulated by means of checks, the debits and credits of individual accounts being offset in such a way that the total commercial deposits of the country do not normally vary greatly in short periods of time.

Extent to Which Bank Credit Is Used as a Medium of Exchange

A rough idea of the amount of business normally transacted through the instrumentality of this so-called deposit currency may be obtained from the following figures. The amount of bank deposits transferable on demand by check held in the commercial banks of the United States in the pre-depression year 1928 was probably in the neighborhood of \$22 billion. Exact figures are not available. These deposits turned over on the average about

thirty times a year;¹ in other words for every dollar kept on deposit throughout the year by individuals, corporations and governmental bodies, in check accounts of commercial banks, an average of thirty dollars of check transactions was made. This gave for the year 1928 a total check business for the country of about \$660 billion.

But this was not all the transactions effected by media of exchange created by our banks. Investigations made for the National Monetary Commission in 1909 by David Kinley showed that between 80 and 85 per cent of the country's total business was transacted by means of checks. This percentage doubtless increased substantially by 1928 as a result of the development of the federal reserve system and other improvements in our banking facilities. If we assume that by 1928 the proportion of our total business done by means of checks had risen to 90 per cent, we arrive at \$73 billion (namely 10/90 of the amount of business done by checks) as the amount performed by means of money inclusive of bank notes. Approximately 48 per cent of the money in circulation in 1928 consisted of federal reserve notes and national bank notes—namely, bank money. Adding to the \$660 billion of business transacted by means of deposit currency during the year 48 per cent of the \$73 billion business

¹ Burgess, W. Randolph, "Velocity of Bank Deposits," *Journ. Amer. Statistical Assoc.*, June 1928, pp. 727-40.

estimated to have been transacted by money, we have \$695 billion per year, or nearly \$2 billion a day, as a rough estimate of the total amount of business transacted in 1928 by means of circulating bank credit—deposits and bank notes.

It may be noted here, parenthetically, that the total amount of money in circulation in 1928 was approximately \$4.8 billion (inclusive of federal reserve notes and national bank notes). Hence, if this amount of hand-to-hand currency performed directly \$73 billion of business during the year, the average rate of monetary turnover in the United States in 1928 was approximately 15. This is just half the estimated rate for bank demand deposits.

The amount of money and of deposit currency which a country needs to carry on its business, at a price level in equilibrium with the price levels of other countries, depends upon the amount of business or of money work to be done. In years of active business a larger supply of circulating media is needed than in years of business depression. Furthermore, in a country like the United States, in which agriculture is a particularly important industry, there are very pronounced seasonal fluctuations in the amount of business to be done, and consequently in the demand for cash and for deposit currency. One important postulate of a good banking system is its capacity to adjust the supply of deposit currency and of bank notes to variations

in trade demands, increasing it, for example, at the time of the heavy crop-moving demands in the fall, and reducing it at the time of inactive business, which normally sets in shortly after the opening of the year. Capacity to contract the circulating media when business demands decline is as important as capacity to expand them when these demands increase.

Under the old régime our American bank credit, both note and deposit, was peculiarly inelastic, although the seasonal character of much of the country's business is such as to make credit elasticity a desideratum of unusual importance in the United States.

Bank-note Inelasticity

Our national (bank notes, which should have furnished the elastic element in the country's hand-to-hand money, were notoriously inelastic. National banks were authorized to issue these notes by depositing with the government United States bonds equal in par value to the notes issued.¹ The banks were supposed to realize a "double profit" on the bank notes, namely, interest on the bonds, and interest on the notes when they were loaned out as money.) After 1900 the bonds used, however, were

¹ If the market value were below the par value, additional bonds were to be deposited so as to make the market value at least equal to the value of the notes issued. In recent years the market value of these bonds, down to the time of their retirement in 1935, was usually above the par value.

mostly 2 per cent bonds of 1930. (The issuance of bank notes involved a number of incidental expenses, including a semi-annual tax of one-fourth of 1 per cent upon the amount of notes issued, and the maintenance with the government of a 5 per cent redemption fund. Furthermore, not more than \$100 in notes could be issued against \$100 par value of bonds, regardless of how high a premium the bonds bore in the market.) Since these issues of bonds sold substantially above par during the greater part of their life, the banks usually realized considerably less than $1\frac{1}{2}$ per cent net interest on them.

Obviously the higher the premium paid on the bonds, other things equal, the lower the net interest yield; and the lower the premium, the higher the yield. The result was a tendency for the banks to

¹ The 2 per cent Consols of 1930 were issued under authority of the Act approved March 14, 1900. They were dated April 1, 1900, and the law provided that they should be payable at the pleasure of the United States after thirty years from the date of their issue. The bonds were given accordingly an indeterminate maturity after April 1, 1930. The Panama 2 per cent bonds likewise were subject to call and both series had fixed maturities, one in 1936 and the other in 1938. On June 30, 1930, a total of \$666,219,750 of an aggregate total of \$674,625,630 of these bonds outstanding, was on deposit with the Treasury of the United States as security for the issue of circulating notes by national banks. *Annual Report of the Secretary of the Treasury of the United States for 1930*, pp. 25-6.

On March 11, 1935 the Treasury Department called for redemption at early dates the 2 per cent Consols of 1930 and both series of 2 per cent Panama Canal bonds, which together constituted the only outstanding government securities that permanently carried the circulation privilege. *cf. Federal Reserve Bulletin*, April 1935, pp. 202-4.

buy bonds and increase their bank-note circulation when the price of bonds declined and to decrease their circulation when the price rose. Thus, the expansion and contraction of the bank-note circulation was not, as it should have been, in response to variations in trade demands, but in response to variations in the price of the government debt. This often gave an inverse elasticity, since the price of government bonds often declined at times when business was slack and the currency was already redundant, and often rose at times when business was active and an increase in the bank-note circulation was desirable. In other words, the bank-note circulation frequently declined at just the time when business needs demanded an increase, and increased when the business situation called for a decline. The character of these fluctuations will be seen from Chart I.¹

From season to season the bank-note circulation was unresponsive to varying trade demands. There was considerable delay and red-tape involved in obtaining the necessary bonds, depositing them at Washington and obtaining bank notes for circulation; and these obstacles, together with the expenses involved and the restrictions upon the subsequent retirement of notes once issued,² made it imprac-

¹ Figures plotted on the chart do not include the issues of Aldrich-Vreeland emergency notes. See note 1, p. 15.

² Down to May 30, 1908, the law limited the amount of national bank

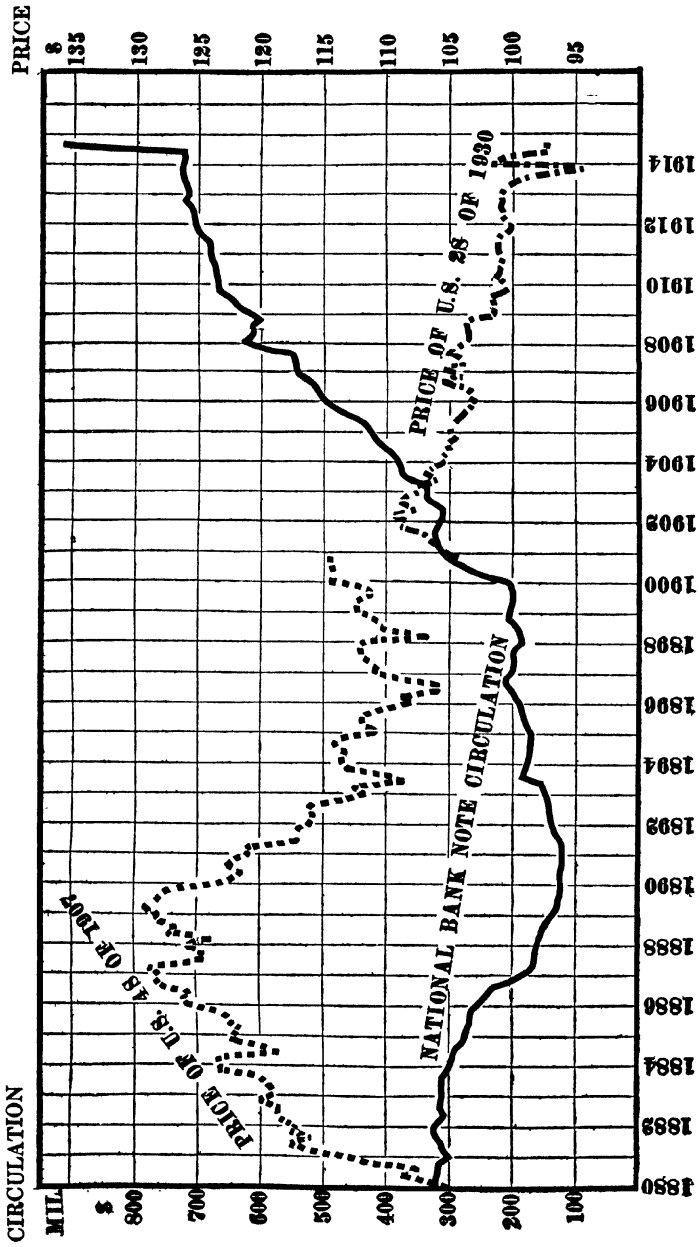


CHART I

National Bank-note Circulation and Prices of United States Bonds, Dates of Comptroller's Calls 1880-1914

licable for banks to meet temporary needs for additional currency, like those of the crop-moving period, by issuing additional notes. About all that can be said favorable to the seasonal elasticity of the national bank notes is that banks planning to increase permanently their bank-note circulation tended to make the increase in the fall when the demands for currency were normally largest. In the matter of seasonal elasticity our national bank-note circulation showed up very unfavorably in comparison with the bank-note circulation of Canada, which, under the system of branch banks and an asset bank-note currency, was highly responsive to seasonal variations in currency needs. The contrast will be made clear by Chart II showing the variations in the monthly bank-note circulation of the two countries prior to November 1914, the date when the federal reserve banks were opened.¹

In times of crisis national bank notes could not be depended upon to provide additional currency. Government bonds were usually difficult to obtain on favorable terms at such times, and the machinery for taking out new circulation worked too

notes that could be withdrawn in any one calendar month to \$3 million. On that date the law raised the limit to \$9 million.

¹ The figures plotted on the chart do not include the circulation of the so-called Aldrich-Vreeland emergency notes, which were first issued in August 1914, reached their maximum in October, and were all retired by the following July. Legal authority to issue such emergency notes expired by limitation June 30, 1915. Federal Reserve Act, section 27.

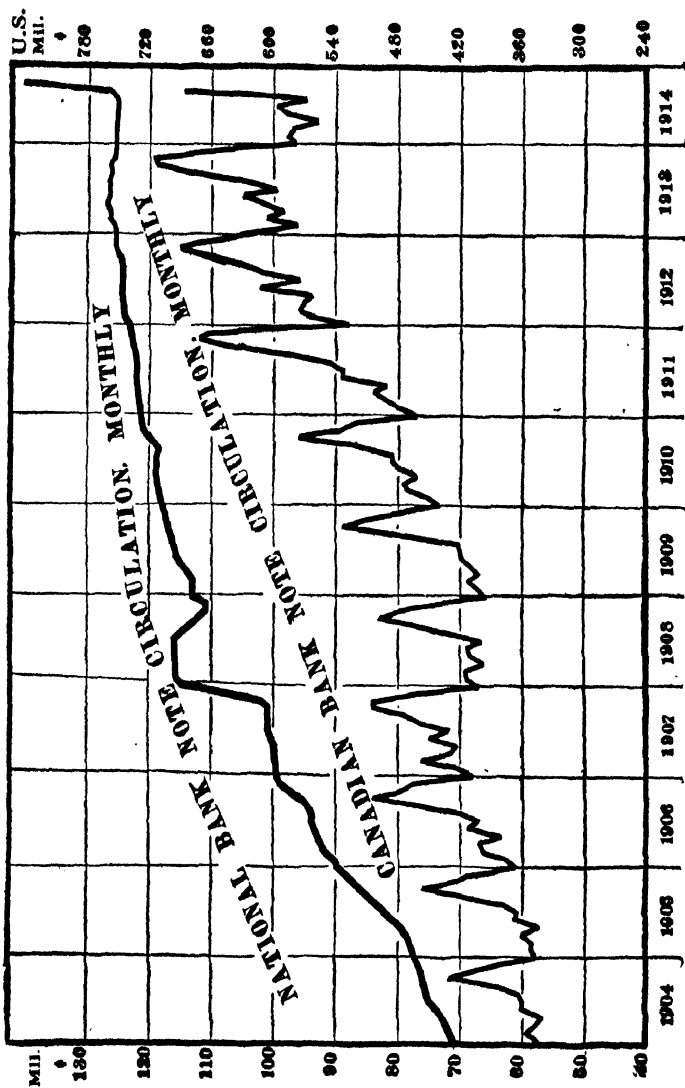


CHART II
Elasticity of Bank-note Circulation in United States and Canada 1904-1914

slowly. Some progress was made in the direction of improving the system in this regard during the latter years of the old régime; and, as a result of strong appeals to the banks and of active assistance from the Treasury Department, there was some helpful increase in the national bank-note circulation at the time of the panic of 1907 and the crisis of 1914. At best, however, the bond-secured notes were a weak reed to rest upon in time of crisis.

Inelasticity of Deposit Credit

Our loan and deposit credit was likewise deficient in the quality of elasticity. Rigid legal minima for bank reserves set up an obstacle to loan and deposit expansion at times of increasing business activity. Banks which were "loaned up" and could not make further advances to regular customers of good standing were prevented from loaning their credit to these customers by accepting bills, which the customers might draw upon them, as is the common custom in Europe, because our courts had ruled that bank acceptances were illegal. (The rediscount business among our banks was almost negligible, and most of that which existed was done on the quiet. Rediscounting was frowned upon by bankers and business men, and there was no central institution like the central banks of Europe, whose business it was to rediscount the paper of other banks in times of need.) Our American commercial

paper was largely local paper and we had comparatively little that could be sold in distant markets, either at home or abroad. In other words, rigidity rather than elasticity was a characteristic feature of our American deposit credit.

Evil Results of Credit Inelasticity

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

money market, which was wont to collapse frequently in panics, imposed the burden of great financial anxiety.

CHAPTER IV

DEFECTIVE EXCHANGE AND TRANSFER SYSTEM

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

Domestic Exchange Difficulties

Of the hundreds of billions of dollars in checks drawn every year in the United States, a very large proportion are for local payments, and, being settled promptly through local clearing houses or directly between the banks concerned, offer no difficulties. Our American clearing house machinery has long been a marvel of perfection for the settlement of local checks. In addition to the checks drawn for purely local payments, however, checks whose span of life is but one day and which are born, live and die within the narrow limits of one town or city, there are millions of checks drawn

daily for out-of-town payments, checks whose span of life often covers many days and which in the range and speed of their movements excel the proverbial American tourist party in Europe. The supply of these checks that was continually in transit, running into the hundreds of millions of dollars, was what is known among bankers as the "float." The problem of efficiently and cheaply handling this float and of equitably apportioning the expenses involved had been for years a perplexing one. Some clearing houses, as for example that of New York, imposed specified charges for the collection of checks on points beyond a certain radius from New York City. Other clearing houses imposed no charges. The Boston clearing house developed a system for the parring of checks throughout New England, thereby eliminating all collection charges on items drawn on banks entering the system. Similar devices were adopted in a number of other sections of the country, notably in the Middle West. Some cities, like Albany for example, became known as free cities and others were notorious for their high collection charges. Many banks imposed exchange charges—some high and some low—for the collection of out-of-town checks received over their counters, and some made a charge for the collection of checks drawn upon themselves when presented from out-of-town sources. These practices led among other evils

to the practice of "routing checks," which meant that checks in the process of collection would often be sent by roundabout and devious routes in order to avoid or reduce collection charges. In this way the length of time in which checks were in transit was increased and the economic cost to the community for the collection of checks was made greater.

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

Another defect of the domestic exchange system was the expense and trouble, for which it was largely responsible, of requiring heavy shipments of currency back and forth over the country. As previously noted, American money markets are subject to pronounced seasonal swings. At one season of the year the relative demand for bank funds is heaviest in the cotton belt of the South; at another time it is heaviest in the great cereal-producing sections of the West and Middle West; and at another season it is heaviest in the financial centers of the East. The area of heaviest demand often shifts from one section to another within a very brief period of time. Under our old banking system these shifts resulted in large shipments of currency—shipments amounting in the course of a year to hundreds of millions of dollars—and frequently a shipment would hardly be received and unpacked before a shift in the monetary demand would require the money to be sent to another section or perhaps to be returned to the place whence it came. All this involved expense, including packing, shipping, insurance, and interest items.

Foreign Exchange Difficulties

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

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

We now come to the fourth and last of the old banking system's defects, which were outlined at the beginning of this book. That was a defect growing out of the relation of our banking system to the Federal Treasury.

CHAPTER V

DEFECTIVE BANKING MACHINERY FOR FEDERAL GOVERNMENT

THE general funds of the Treasury were kept in part in the country's nine sub-treasuries, and in part in those national banks which qualified as depositories of government funds. There were 1,584 such national bank depositories at the close of the fiscal year 1914. The apportionment of the funds between the sub-treasuries and the banks on the one hand, and among the various depository banks on the other hand, was entrusted to the Secretary of the Treasury. The amount of treasury funds to be thus apportioned varied widely from year to year and from season to season.

In a number of respects this system worked badly. Briefly summarized, the defects were as follows: (1) It led to the continual hoarding in treasury vaults of large sums of money, involving substantial administrative expenses and a heavy loss of interest. (2) At certain seasons of the year the government's receipts greatly exceeded its disbursements, as for example at the times when tax payments were heaviest; while at other seasons, as for example, when pension money or interest on the public debt was being paid, the disbursements exceeded the receipts. In the former case the money

market was disturbed by the government's suddenly withdrawing large sums from circulation and thereby contracting the currency. In the latter case it was disturbed by the sudden pumping into circulation of large sums of money. These operations, when on any substantial scale, tended to affect the interest rates on call loans and the prices of speculative securities. The task imposed upon the Secretary of the Treasury, therefore, of apportioning these large government balances among the banks and the sub-treasuries was a difficult one and one which placed too great power and responsibility over the money market in the hands of a government official. It also led to criticism and jealousy among depositary banks. (3) The system caused depositary banks to rely unduly upon the Secretary of the Treasury for aid in the form of increased government deposits in times of financial pressure, instead of depending upon themselves and keeping "their houses in order" so as to be ready for emergencies. "The grandfatherly attitude of the Secretary of the Treasury toward the banks" in the matter of government deposits was an expression frequently heard.

The four chief defects of our American banking system as it existed prior to the enactment of the federal reserve law have now been briefly described. They were decentralization, inelasticity of credit, cumbersome transfer system, and defective gov-

ernment depository system. To remedy these defects the federal reserve system was created by the Federal Reserve Act of December 23, 1913; and the federal reserve banks opened their doors for business November 16, 1914. Since that date the system has developed rapidly. It is not our task here to trace this interesting development, but rather to answer briefly the question: How is the federal reserve system as now developed remedying the defects of the old banking system? Let us consider the remedy in its relation to the four general defects in the order in which they have been discussed.

CHAPTER VI

HOW THE FEDERAL RESERVE SYSTEM HAS REMEDIATED THE OLD EVIL OF THE DECENTRALIZATION OF AMERICAN BANKING

THE Federal Reserve Act has not destroyed our American system of many independent banks. The law continued these thousands of independent banks with all their essential functions and was designed to federate them into a unified system, democratic in its organization and nationwide in its field of operation, a system dedicated to public service.)

Federal Reserve Districts

There are twelve federal reserve banks, each of which operates in one of the federal reserve districts into which the country is divided. In determining the boundaries of these districts the authorities were required to have "regard to the convenience and customary course of business," to make each district large enough to provide the minimum capital of \$4 million required by law, and to make none so large as to dominate the others, thereby endangering the federal principle which the law sought to establish. A map showing the boundaries of the twelve federal reserve districts and of each of the twenty-five branch districts, and the

location in each district of the federal reserve city, namely, the city in which the main office of the federal reserve bank is located, and of each federal reserve branch bank city, is given on the following page.¹

The fact that the number of banks and the amount of banking capital in different sections of the country vary so widely explains the great disparities in the geographic sizes of the federal reserve districts.

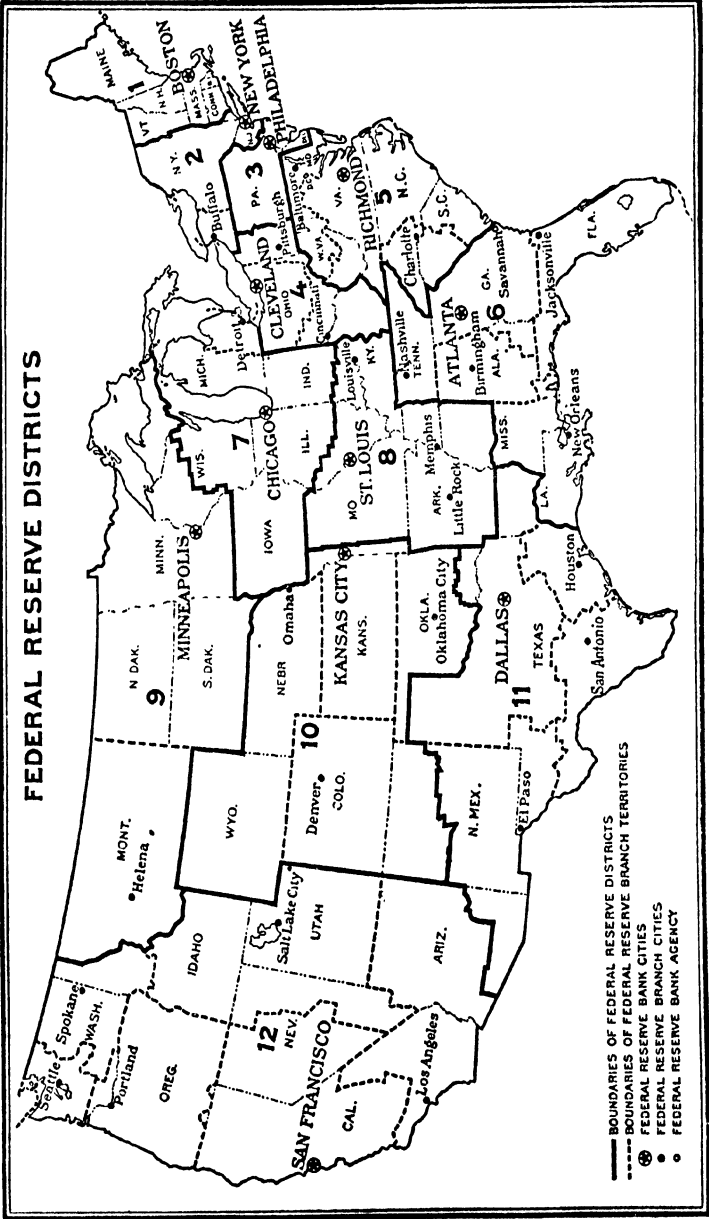
Membership in Federal Reserve System

All national banks are required to be members of the system, and state banks and trust companies (which conform to certain standards as to size and character of business) are encouraged to join.² Comparatively few state institutions joined during the first two years the system was in operation, but the liberal policies of the federal reserve authorities, together with later amendments to the law and a feeling during the War period that it was the patriotic duty of state institutions to join the system in such a time of national emergency, made the state institutions more favorably disposed toward the system. By the end of June 1922, 1,648

¹ The map is a reproduction of the one published in the *Federal Reserve Bulletin*.

² The Banking Act of 1933 provided for the admission of mutual savings banks to the federal reserve system, but to date none of them has taken advantage of the opportunity to join.

FEDERAL RESERVE DISTRICTS



- BOUNDARIES OF FEDERAL RESERVE DISTRICTS
- - - - BOUNDARIES OF FEDERAL RESERVE BRANCH TERRITORIES
- ⊙ FEDERAL RESERVE BANK CITIES
- FEDERAL RESERVE BRANCH CITIES
- FEDERAL RESERVE BANK AGENCY

CHART III

state institutions were members. Since that time the number has declined to 1,001, but the state member banks on December 31, 1935 were operating 952 branches. During the same period, the number of non-member banks (exclusive of mutual savings banks) declined from 19,636 in June 1922 to 8,879 on December 31, 1935. At the end of June 1922 there were 29,528 banks in the country (exclusive of mutual savings banks) of which 8,244 were national banks and therefore all members of the federal reserve system and 21,284 were state banks of which 1,648 or less than 8 per cent were member banks. By the end of December 1935, after the holocaust of bank failures that occurred during the depression of 1929-33, the number of national banks had declined to 5,386 or by 35 per cent in thirteen years, the number of state banks (exclusive of mutual savings banks) had declined to 9,880 or by 54 per cent, and the number of state member banks from 1,648 to 1,001 or by 39 per cent. In 1922 approximately 8 per cent of the state banks belonged to the federal reserve system and comprised 16.7 per cent of all banks in the system, while in 1935 about 10 per cent of the state banks were member banks and constituted 15.6 per cent of the membership. On the whole it is the larger state institutions rather than the smaller ones that belong to the federal reserve system. At the end of 1934, for example, the average deposits (other than inter-

bank deposits) of the state member banks were three times as large as for the national banks.¹ Approximately 40 per cent of the commercial banks in the United States belonged to the system at the end of 1935. These member banks possessed resources equivalent to about four-fifths of the banking resources of all the commercial banks of the country.

In the recent legislation for the government insurance of bank deposits, there is a provision that no state commercial bank having average deposits of \$1 million or more shall have the benefit of the government's deposit insurance after July 1, 1934, unless it shall be a member of the federal reserve system.² This provision is apparently intended to bring heavy pressure on all non-member commercial banks of any considerable size to join the system.

Member banks are required to subscribe to the capital stock of the federal reserve bank in their district to an amount equal to 6 per cent of the member bank's capital and surplus.³ Only one-half of this subscription has so far been called, giving the federal reserve banks a paid-in capital of

¹ On the general subject of membership of state banks in the federal reserve system, consult Tippetts, Charles S., *State Banks and the Federal Reserve System*.

² Federal Reserve Act, section 12b, paragraph y.

³ In the case of mutual savings banks, the basis of subscription is six-tenths of 1 per cent of total deposit liabilities.

\$130,512,000 at the end of 1935, but the other half may be called at any time by the federal reserve authorities.

The Federal Reserve Act as originally passed, provided that after the 6 per cent cumulative dividend on the stock of the federal reserve banks had been paid, the balance of the net earnings for each year should "be paid to the United States as a franchise tax, except that one-half such earnings shall be paid into a surplus fund until it shall amount to forty per centum of the paid-in capital of such bank." By the Act of March 3, 1919, this distribution of the earnings above the amount required for the 6 per cent cumulative dividend was required to be paid to surplus until the surplus should amount to 100 per cent of the subscribed capital stock of such bank. After this 100 per cent surplus had been attained, 10 per cent of these earnings should go to surplus and 90 per cent to the government as a franchise tax. Fourteen years later, an amendment contained in the Banking Act of 1933 provided that after the 6 per cent cumulative dividend claims had been met, the entire balance of the net earnings should be paid indefinitely to surplus. From the beginning the law has provided that "should a federal reserve bank be dissolved or go into liquidation, any surplus remaining, after the payment of all debts, dividend requirements . . . and the par value of the stock,

shall be paid to and become the property of the United States. . . .”

In the legislation providing for federal deposit insurance enacted June 16, 1933, there is a provision requiring every federal reserve bank to subscribe to shares of stock in the Federal Deposit Insurance Corporation to the extent of one-half of the bank's surplus as of January 1, 1933, and calling for an immediate payment of one-half of this subscription.

Up to the close of the year 1935, “more than one-fourth of the aggregate net earnings of the reserve banks since their organization was paid to the government as a franchise tax, approximately one-fourth was paid in dividends to member banks, nearly one-fourth, under act of Congress was contributed to the capital of the Federal Deposit Insurance Corporation, and a fourth remains in the surplus accounts of the reserve banks.”¹

Provisions for the establishment of the federal reserve branch banks are contained in the Federal Reserve Act (section 3). At the end of 1935 there were twenty-five branches, which handled 233 million checks aggregating \$43 billion and counted over a billion pieces of currency and coin amounting to approximately \$2,700 million during 1934.²

¹ *The Federal Reserve System Today*, published by the Federal Reserve Bank of New York, March 1936, p. 14.

² *Annual Report of the Federal Reserve Board for 1934*, p. 44.

*Democracy of Federal Reserve Banks' Plan of
Organization*

(There are two noteworthy features of a federal reserve bank's plan of organization. They are first, its democracy, and second, its recognition of the quasi-public nature of the banking business through its grant to the public of participation in the bank's management.)

The administrative control of a federal reserve bank is democratic. "One bank, one vote" is the rule. Furthermore, in order to prevent the large banks from dominating the small ones by reason of their greater prestige and to assure the small banks of representation on the board of directors, there is a device by which all the member banks are divided according to their capital into three groups, which, reminiscent of the three bears in the Goldylock story, may be called (big banks, little banks, and middle-sized banks. All the member banks in a federal reserve district are classified into these three groups.) Each of the groups was originally required to contain approximately the same number of banks, but by the amendment of September 26, 1918, this requirement was discontinued. At present the Board of Governors has authority to determine the number of banks which shall constitute each group, being merely subject to the requirement that "each group shall consist as nearly as may be of banks of similar capitaliza-

tion." The largest bank in the group of little banks is therefore normally smaller than the smallest one in the group of middle-sized banks, and the largest one in the group of middle-sized banks is normally smaller than the smallest one in the group of big banks. In the autumn of 1934 a classification of member banks for the twelve districts, when taken by totals for all districts, placed 563 banks or 8.7 per cent of the total number of member banks at that time (i.e., 6,443 banks) in group I, the large-bank group; 2,004 banks or 31.1 per cent of the total number in group II, the middle-sized-bank group; and 3,876 banks or 60.2 per cent of the total number in group III, the small-sized-bank group. After this classification of member banks was made, the capital and surplus of the member banks in each group became as follows:

Group	Amount (In millions)	Per cent of Total
I	\$3,333	76.9
II	668	15.4
III	333	7.7
	Total	100.0
	\$4,334	

(On the basis of the one-bank-one-vote principle, each group elects two directors, one of whom, called a Class A director, is a banker and represents the stock-holding banks, while the other, called a

Class B director, is a business man or farmer and represents the business community.) To these six directors so elected there are added three others known as Class C directors, who are appointed by the central federal reserve authorities at Washington to represent the interests of the federal government and of the general public.) One of these Class C directors, who is required to be a person of "tested banking experience," is designated by the central authorities as chairman of the board and as federal reserve agent. (The board thus consists of nine directors, who hold office for three years (the term of office of one director of each class terminating each year),) and who are representative of different interests among the American public. Broadly speaking, "Class A directors represent lenders of funds, Class B directors represent borrowers, and Class C directors represent the interests of the general public."¹)

The board of directors appoints the officers and employees of a federal reserve bank. Prior to March 1, 1936, the chief executive officer was known as the governor and was elected by the board, although there was no specific provision in the law for the office of governor. The Banking Act of 1935 made definite provision for a president and a first vice-president to be appointed by the board of

¹ *The Federal Reserve System Today*, published by the Federal Reserve Bank of New York, p. 12.

directors, with the approval of the Board of Governors of the Federal Reserve System, for a term of five years. The president is the chief executive officer of the bank and all employees of the bank are made directly responsible to him. In the absence or disability of the president or during a vacancy in the office of the president, the first vice-president acts as president.

Coordination of Federal Reserve System by Well-Balanced Organization

Crowning the arch, of which (the twelve federal reserve banks constitute the structural stones, and forming its keystone, is the central Board at Washington, known as the Board of Governors of the Federal Reserve System.¹ This Board consists of seven members, appointed by the President of the United States with the advice and consent of the Senate, who hold office for a period of fourteen years. The law requires that the President in the selection of the members "shall have due regard to a fair representation of the financial, agricultural, industrial, and commercial interests, and geographical divisions of the country." Not more than

¹ An amendment to the Federal Reserve Act made August 23, 1935 changed the name of the central governing board of the federal reserve system from Federal Reserve Board (the name it had previously had from the beginning) to Board of Governors of the Federal Reserve System. Hereafter the new name will be used in this book except where the period prior to the Banking Act of 1935 is contemplated.

one member shall be selected from any one federal reserve district. The President designates one member as chairman and one as vice-chairman, each to serve a term of four years. The chairman is the Board's active executive officer. Members are not eligible for reappointment after they have served a full term of fourteen years.)

The Board of Governors has very large supervisory powers over the federal reserve system, as will appear in the discussion which follows concerning the manner in which the system has functioned since its establishment in 1914.¹

¹ "In connection with its supervision of member banks, the Board is authorized among other things (1) to pass on the admission of State banks and trust companies to membership in the federal reserve system and on the termination of membership of such banks; (2) to examine member banks and receive condition reports from State member banks and their affiliates; (3) to limit by regulation the rate of interest which may be paid by member banks on time and savings deposits; (4) to issue voting permits to holding company affiliates of member banks entitling them to vote the stock of such banks at any or all meetings of shareholders of the member banks; (5) to regulate interlocking relationships between member banks and organizations dealing in securities or, under the Clayton Antitrust Act, between member banks and other banks; (6) to remove officers and directors of a member bank for continued violations of law or unsafe or unsound practices in conducting the business of such bank; (7) to suspend member banks from the use of the credit facilities of the federal reserve system for making undue use of bank credit for speculative purposes or for any other purpose inconsistent with the maintenance of sound credit conditions; (8) to pass on applications of State member banks to establish out-of-town branches; (9) to pass on applications of national banks for authority to exercise trust powers or to act in fiduciary capacities; (10) to grant authority to national banks to establish branches in foreign countries or dependencies or insular possessions of the United States, or to invest in the stock of banks or corporations engaged in international or foreign banking; (11) to supervise the organization and activities of corporations organized under Federal law to engage in international or foreign banking. In

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

The appointment by the Board of three of the nine directors (including the chairman) of each of the federal reserve banks, the requirement that the selection of the president and first vice-president of each reserve bank shall be approved by the Board of Governors, and the appointment by each federal reserve bank of a member of the Federal Advisory Council are intended to federate together the twelve federal reserve banks under the Board of Governors and to give a common knowledge and a unity of purpose. Conferences from time to time of the presidents of the twelve federal reserve banks and the federal reserve agents of the banks, and conferences of the presidents and the federal reserve agents with the Board of Governors add much to the smooth and unified working of the system. In matters of general policy the Board of Governors is

exercising its supervisory functions over the federal reserve banks and member banks, the Board of Governors promulgates regulations governing certain of the activities of federal reserve banks and member banks." *The Federal Reserve System Today*, published by the Federal Reserve Bank of New York, pp. 7-8.

given large powers and is the directing head of the system.¹

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

In considering the manner in which the old evil of decentralization is being remedied by the federal reserve system, we may now pass from the administrative machinery of centralization to the methods by which the old evils of scattered and immobile reserves are being eliminated.

District Centralization of Bank Reserves

The Federal Reserve Act as originally passed provided for the gradual withdrawal of legal reserve money from deposit in the banks of reserve and central reserve cities by the end of a three-year period beginning with the date of the establishment of the federal reserve system. Accordingly, after November 16, 1917, all legal reserve money of

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

member banks was to be held "in the vaults of the member banks or in the federal reserve bank, or in both, at the option of the member bank." In conformity with this requirement the percentage of the legal reserves of member banks kept on deposit in the banks of reserve and central reserve cities declined very much by the summer of 1917. On June 21, 1917, an amendment was passed to the Federal Reserve Act requiring every bank, banking association or trust company belonging to the federal reserve system to maintain its entire legal reserve in the form of a deposit at the federal reserve bank of its district. Thus by about five months the time was anticipated when legal reserve money of member banks should cease to be kept on deposit in banks other than federal reserve banks. The time therefore arrived in the summer of 1917 when commercial banks belonging to the federal reserve system ceased tying up their legal reserve money by depositing it in the banks of our money market centers there to be loaned out at call to speculators on the stock and produce exchanges. This divorcing of the legal reserves of our commercial banks from the speculative and capital loans of the stock market—mainly that of Wall Street—is one of the achievements of the federal reserve system. The federal reserve law, as amended, recognizes only one form of legal reserve, and that is a member bank's deposit in its federal reserve bank. Member banks

may keep as much or as little cash on hand for till money as they wish to. They may keep balances in other banks if it suits their convenience to do so—all that is their own affair¹ for which their responsibility is to their stockholders and their customers—but their legal reserve, the reserve which the government looks upon as the minimum below which the public interest demands that banks should not go, except in time of great emergency, must all be kept on deposit in federal reserve banks, the nation's reservoirs of reserve money.

For reasons that will soon be made clear the concentration of the country's reserve money in a few large reservoirs makes possible a much more efficient use of each dollar of reserve money than under the old system of scattered reserves, and, as a result, legal reserve requirements have been greatly reduced—many authorities believe reduced too much—since 1914. The percentage reserves at present required against demand deposits and time deposits are as follows:²

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

² Under the provisions of the National Bank Act, national banks are classified into three groups according to their location, namely, central reserve city banks, reserve city banks and country banks. There are now two central reserve cities, New York and Chicago, and sixty-one reserve cities which are listed regularly in the annual reports of the Comptroller of the Currency. The banks in all other places are classified as country banks.

Banks located in the outlying districts of a central reserve city or a

Banks	Demand	Time
	Deposits	Deposits
	i.e.,	i.e.,
	Deposits	Deposits
	Payable	Payable
	Within 30	After 30 Days'
	Days	Notice
Central reserve city banks	13 %	3 %
Reserve city banks	10 %	3 %
Country banks	7 %	3 %

If a member bank permits its reserve at the federal reserve bank to fall below this minimum, the Board of Governors imposes as a basic penalty a charge on the amount of the deficiency at the rate of 2 per cent per annum above the 90-day discount rate of the federal reserve bank of the district. Progressively heavier penalties may be imposed for subsequent deficiencies.

On February 5, 1936, the twelve federal reserve banks held deposited reserves of member banks to the amount of \$5,869 million. Reserve money collected in a few large reservoirs is quickly available in large quantities either to meet export needs or for domestic uses, and the fact that it is readily avail-

reserve city, or banks located in territory added to such a city by the extension of its corporate charter, may, upon the affirmative vote of five members of the Board of Governors, reduce their legal reserves to the percentages required of country banks. In the case of banks located in central reserve cities the reduction may be authorized to the percentage required of country banks or merely to that required of reserve city banks.

able in large quantities inspires public confidence and lessens the danger of financial panic. The federal reserve banks, of course, do not keep on hand all the reserve money deposited by member banks. Like other banks, they invest it. The law, however, requires them to keep a reserve of 35 per cent in gold certificates or lawful money against deposits,¹ and it is their established policy to maintain reserves much larger than this normal legal minimum.

Mobilization of Reserves

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

¹ See section 16 of the Federal Reserve Act.

namely the movability of reserves from one federal reserve district to another; and second, the intra-district mobility of reserves, or the movability of reserves within the boundaries of one district.

Inter-district Mobility

(Broadly speaking, and in addition to certain small advances made by federal reserve banks directly to industry,¹ there are three ways in which the federal reserve law has increased the inter-district mobility of reserve money. They are: (1) Rediscounting by one federal reserve bank for another. (2) Open-market operations of federal reserve banks. (3) Creation of a broader discount market for commercial paper.)

Rediscounting by One Federal Reserve Bank for Another

Under the old banking system, as we have seen, in time of emergency, each bank held tight its own reserves, or, to change the figure, "sat firmly on the lid." In the controversy for banking reform, which culminated in the Federal Reserve Act, the advocates of a single central bank contended that a system of eight to twelve banks like that proposed in the federal reserve bill would perpetuate the old evil by leading to the same sort of scramble for

¹ *Infra*, pp. 162-4.

reserves, in time of emergency, among the different federal reserve banks, that had formerly existed among the individual banks of the country. Specifically to meet this danger a provision was inserted in the Act (section 11b) empowering the Federal Reserve Board "to permit, or, on the affirmative vote of at least five members of the Reserve Board to require federal reserve banks to rediscount the discounted paper of other federal reserve banks at rates of interest to be fixed by the Federal Reserve Board." This means that in case there is an exceptionally heavy demand for reserve money in any section of the country—a demand heavier than the banks of that section can reasonably meet—the reserve banks in other sections where money is more plentiful will come to the rescue, either voluntarily or under compulsion of the Board of Governors, and will rediscount the paper of the reserve bank in the section under financial stress. This process, of course, will cause a flow of cash from the reserves of the former banks to the reserve of the latter, thereby easing the money market in the threatened section.

After the United States entered the World War there developed a strong tendency for a compensatory movement of reserves among the federal reserve banks. Reserves of some of the banks frequently fell rapidly while those of others were rapidly rising, often with little or no change in the

reserve position of the twelve federal reserve banks as a whole. This compensatory movement was due largely to operations of the government which often resulted in heavy withdrawals of funds from banks in one section of the country for the making of payments in another. Here was a situation that made it desirable from time to time that one federal reserve bank should make advances to another. At times the Board has taken the initiative in this matter, but apparently the banks, in most cases, have willingly complied with the Board's request. The twelve federal reserve banks have so far worked harmoniously in this matter, so that it seems improbable that compulsion by the Board will often be necessary to require the more favorably situated banks to come to the rescue of those less favorably situated, in time of danger. The reserves of the twelve reserve banks are now so closely piped together, that they may reasonably be considered to be closely connected tanks of a single reservoir.

Open-market Operations

While the federal reserve banks are essentially bankers' banks, since their stock is owned exclusively by member banks and since their principal domestic customers are banks and the federal government, it is none the less true that Congress found it necessary to confer upon these

banks certain limited rights of dealing with the public at large. At the time of the passage of the Federal Reserve Act, the possession of such rights by the federal reserve banks appeared necessary for two reasons.

The first reason was to put them in a stronger position for making their discount rates effective. If, for illustration, a federal reserve bank raises its discount rate in order to prevent dangerous loan expansion on the part of member banks or to prevent an undue outflow of gold from the country, it may happen that the member banks may not be convinced of the need of such precautionary measures, and, not being in need of obtaining funds from the federal reserve bank by way of rediscount, may ignore the efforts of the federal reserve bank to conserve the money market. The banks may accordingly continue the policy of loan expansion at low discount rates. Under such circumstances the federal reserve rate would be said to be "ineffective." To meet such situations and to force the member banks "into line," the federal reserve banks may raise their buying rate for bank acceptances in the open market or they may actively go into the market and sell government securities, and, by withdrawing from the market the funds received in payment therefor, may tighten the market, and force up the market discount rate into harmony with the federal reserve discount rate.

The second reason for open-market operations was to provide the federal reserve banks with a method of profitably employing their funds in times of easy money, when member banks are making few calls upon them for rediscount. In the early days of the federal reserve system, for example, when the member banks were making very small demands upon the federal reserve banks for rediscounts or other advances, the federal reserve banks invested substantial sums in municipal warrants and bank acceptances in the open market, and by that means covered a large part of their running expenses.

The "open-market operations" are provided for in section 14 of the Federal Reserve Act. Into the details of this important section we need not go. For our purposes here it is sufficient to note that federal reserve banks may buy and sell in the open market either at home or abroad commercial bills of exchange, bankers' acceptances, United States government obligations, bonds of the Federal Farm Mortgage Corporation and of the Federal Home Loan Bank System, with short maturities, and bills, notes, revenue bonds and warrants with short maturities, issued in anticipation of taxes and other revenues by States and minor political divisions of the continental United States. During the period of the World War and since the economic crash of 1929, these open-market operations, par-

ticularly in their application to United States government obligations, have assumed great importance in the operations of the federal reserve system.¹

Under the authority of section 14 a federal reserve bank in one section of the country may buy and sell eligible paper in any other section of the country. Such dealings, of course, tend to cause a flow of reserve money from the district of the buyer to that of the seller. If the Federal Reserve Bank of San Francisco, for example, buys \$1 million worth of trade acceptances, bank acceptances and municipal warrants in the open market in New York, its settlement check to whomever paid is likely to be deposited in a New York bank, and for that bank to be collected by the New York Federal Reserve Bank from the San Francisco Federal Reserve Bank. Unless offset by payments in the other direction, the payment by San Francisco will necessitate a transfer of reserve money, presumably through the "Interdistrict Settlement Fund" in the United States Treasury from San Francisco to New York. If the New York bank, in which the million dollar check was originally deposited, leaves the proceeds on deposit with the New York Federal Reserve Bank, federal reserve bank "reserve money" will be transferred from the Bank in San Francisco to the Bank in New York. In this manner open-market

¹ *Infra*, pp. 139-42, and pp. 197-202.

operations transfer reserve money from places of redundancy to places of scarcity, and tend to maintain a national equilibrium in our money rates.

Creation of a Broader Discount Market for Commercial Paper

The third method by which the federal reserve system is rendering more mobile our reserve money is through the creation of a broader discount market for commercial paper. As we have already seen, under the old banking system the great bulk of American commercial paper was essentially local paper with little or no market outside the community in which it was created. The federal reserve system has provided the machinery by which high grade commercial paper can be rediscounted throughout the United States, and, in this connection, has sought to encourage in the United States the use of trade acceptances and bank acceptances—credit devices widely used in Europe.

Trade Acceptances

When the seller of merchandise draws a trade bill upon the buyer at, say, 60 days' sight for the amount of the bill, and the buyer writes across its face "accepted" and signs his name with the date of acceptance, a credit instrument is created which has very pronounced advantages over the

open-book account, from the standpoint of the seller, the buyer and the bank. The seller has a definite acceptance of the goods which the buyer cannot question in the future without very good reason; he has a promise from the buyer to pay at a definite date; and he has the buyer's obligation expressed in the form of a negotiable instrument which is highly liquid. The buyer of the merchandise who accepts the bill places his credit standing at a higher level than it would be if he bought on open-book account. His improved credit should enable him to buy on better terms. Having his accounts thus given definite maturities he is less likely to be tempted to overbuy than he would be under the loose open-book account method. The buyer is also a seller, and if he uses trade acceptances in connection with his purchases he is in a stronger position to demand them in connection with his sales. From the banker's point of view the trade acceptance is an ideal form of commercial paper. It bears two names, usually carries with it evidence that it represents a self-liquidating commercial transaction and is not an accommodation loan, is usually paid at maturity and is not subject to the provision of the national banking law which prohibits a national bank from loaning to one customer an amount in excess of 10 per cent of the bank's capital and surplus. It is easy to turn into cash before maturity either by sale in the open

market or by rediscount at a federal reserve bank. The trade acceptance is therefore incomparably more liquid than the open-book account, and, other things equal, is more liquid than one-name paper. Like any other credit device the trade acceptance, of course, can be misused and, unfortunately, frequently is misused.

Bank Acceptances

Even more liquid than the trade acceptance, because the acceptor is usually of more widely recognized financial standing, is the domestic bank acceptance authorized by the federal reserve law. The bank acceptance is similar to the trade acceptance. It differs from it, however, in the fact that the seller of the merchandise draws his bill not upon the buyer but upon the buyer's bank, which accepts the bill for the buyer whose financial standing is known to the bank and who has arranged with the bank in advance to lend him its credit in this way. The seller of the merchandise having received an acceptance of the bill from the buyer's bank may discount the bill at his own bank or sell it in the open market if he does not wish to hold it until maturity. The type of domestic bank acceptance made eligible for rediscount at federal reserve banks covers bills having not more than 90 days, exclusive of days of grace, to run and which are endorsed by at least one member bank and grow

out of transactions involving the importation or exportation or the domestic shipment of goods, provided that documents conveying or securing title are attached at the time of acceptance. It also covers bills which are secured at the time of acceptance by a warehouse receipt or other such document conveying or securing title covering readily marketable staples. When such acceptances are drawn for agricultural purposes, their maturity may be as long as six months' sight exclusive of days of grace.

Acceptances Promote Inter-district Mobility of Reserves and Uniform Discount Rates

Inasmuch as bank acceptances and high-grade acceptances have a wide market, their use tends to cause paper to flow away from the banks in sections of the country where the discount rate is relatively high to be discounted in the banks of those sections where the rate is relatively low. Such a flow of commercial paper from the dear markets to the cheap ones, obviously causes a counter-flow of bank reserves from the cheap markets to the dear ones and thereby tends toward the maintenance of territorial equilibrium in discount rates. Of course, this flow is not an absolutely free one and perfect equilibrium is never obtained. The point is, however, that the widened marketability of our commercial paper under the federal reserve system has

made this flow of reserve money much less sluggish than it was formerly. During recent years the discount rates for different kinds of paper, and those for the same kind of paper among the twelve federal reserve banks have been much nearer uniformity than they were in the early days of the federal reserve system. For example, at the present writing in March 1936, the rediscount rates for member banks on all classes of paper (under section 13 and 13a of the Act) are 2 per cent in ten of the federal reserve banks and $1\frac{1}{2}$ per cent in the other two banks.

Intra-district Mobility of Reserves

The forces which act for the increasing mobility of reserve money within the boundaries of a federal reserve district, are essentially the same as those just explained for that between districts. Obviously paper of wide acceptability flows from place to place within a district more freely than paper whose merits are less widely recognized; and, within a district, as between districts, the widely marketable paper flows from the places where discount rates are high and bank funds are scarce to the places where the rates are low and funds are more plentiful. Furthermore, the bank reserves of the district which have been piped to the one reservoir, namely, the federal reserve bank, can be readily pumped to the banks of any section where funds

are in heavy demand. If banks throughout the district were rediscounting in moderate sums with the federal reserve bank, and if a sudden emergency should cause an exceptionally heavy demand for funds in any section, the federal reserve bank could raise its rate of discount, thereby reducing the rediscount demands of the banks less urgently in need of funds, and could then turn larger amounts into the section where the demand was heaviest. Additional funds could be secured by the federal reserve bank within the district (as well as outside) by the sale in the open market of securities held in its "secondary reserve."

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

CHAPTER VII

CREDIT ELASTICITY UNDER THE FEDERAL RESERVE SYSTEM

BOTH bank-note currency and deposit or check currency are more elastic under the new system than under the old.

Bond-secured Bank Notes

(In order to prevent the alleged danger of an undue contraction of the currency and to protect from loss the banks owning the 2 per cent bonds, which were largely pledged with the government as security for national bank-note circulation and which by reason of the circulation privilege had a value far above their investment value, the government decided not to withdraw from circulation at once the old bond-secured bank notes. The federal reserve law accordingly continued the circulation of these notes, but contained provisions looking toward their gradual retirement. From the time of the enactment of the Federal Reserve Act (December 23, 1913), accordingly, to December 31, 1929, the national bank notes in circulation decreased from \$726 million, representing about 21 per cent of our total monetary circulation to a minimum of \$597 million, representing about 12 per cent. They then increased during the depression

years to a maximum of \$938 million in February 1934, when they constituted 17½ per cent of our total monetary circulation. Their circulation declined almost continually throughout the remainder of 1934 and until March 1935, when it stood at \$810 million. In that month the Treasury Department called for redemption at early dates, all the bonds that permanently carried the so-called "circulation privilege," with the result that all bond-secured national bank notes are now in the process of being retired from circulation.¹⁾

Very similar to the bond-secured national bank notes are the so-called federal reserve bank notes, which are bond-secured bank notes issued by the federal reserve banks. They were originally secured by a specific deposit, with the United States Treasurer, of bonds or of certain short-time obligations of the United States. Up to the early fall of 1918 these federal reserve bank notes were of comparatively little consequence. After that time they were gradually substituted for silver certificates and silver dollars in circulation, under the provisions of the Pittman Act of April 23, 1918, and assumed an increasing importance, until a maximum net circulation of \$261 million was outstanding in December 1919. Their retirement from circulation began early in 1920 when the government commenced to repurchase silver under the Pittman

¹ *Infra*, pp. 223-5.

Act, and to replace federal reserve bank notes in circulation by silver certificates. After 1919, their circulation declined to less than \$3 million in February 1933. For a time thereafter the government began to expand their circulation, as a minor factor in its "reflation" policy. Their circulation rose continually every month until December 1933, when it stood at \$208 million. Since then it has been steadily reduced and at the end of 1935 was only \$66 million.

Federal Reserve Notes

(The notes upon which the federal reserve system places its sole reliance for bank-note elasticity are the so-called federal reserve notes. These notes, which are issued to the federal reserve banks by the Board of Governors and which are obligations of the United States government, are a "first and paramount lien on all the assets" of the federal reserve banks, including the double liability of member banks on their subscriptions to federal reserve bank stock. The Board of Governors issues these notes for circulation purposes to the federal reserve banks only on receipt from the federal reserve banks of collateral equal at least to the amount of the notes applied for. The collateral is deposited with the federal reserve agent, who represents the Board of Governors, and is limited to certain types of assets specified by law.) They in-

clude: (1) Paper endorsed by member banks and drawn for commercial, industrial or agricultural purposes, or for the purpose of carrying or trading in securities of the United States government, in other words, paper of the types hereafter described¹ as eligible for rediscount or collateral loans at a federal reserve bank under section 13 of the Federal Reserve Act. (2) Bills of exchange endorsed by a member bank and bankers' acceptances bought by a federal reserve bank in the open market. (3) Until March 3, 1937, in the discretion of the President and upon the affirmative vote of not less than a majority of the Board of Governors, direct obligations of the United States government. Such obligations, however, since the Banking Act of 1935 may be bought by the federal reserve banks only in the open market.² (4) Gold certificates.

Except under special circumstances, to be considered later,³ a gold certificate reserve of not less than 40 per cent must be kept by each federal reserve bank against its outstanding federal reserve notes. Gold certificates specifically pledged with the federal reserve agent as collateral for the notes may be counted in making up this 40 per cent reserve, as may also gold certificates kept in the redemption fund with the Treasurer of the United

¹ *Infra*, pp. 73-5.

² *Infra*, pp. 240-1.

³ *Infra*, pp. 62-3.

States at Washington for the redemption of the notes.

Elasticity of Federal Reserve Notes

(As regards the matter of elasticity, these notes have in a high degree the quality of expansibility, namely, of having their circulation easily increased in times of need. If member banks in a given section of the country need an increased supply of currency to meet local demands, they may rediscount eligible paper with their federal reserve bank, and take the proceeds of the rediscounts in federal reserve notes, which pass readily as hand-to-hand money and are satisfactory till money for the banks. The federal reserve bank, if its supply of notes is inadequate, secures, on application to the federal reserve agent additional notes by depositing with the agent, gold certificates, eligible paper in its portfolio or (for the time being) direct obligations of the United States government. This process may continue as long as the federal reserve bank has satisfactory collateral available for deposit with the federal reserve agent and its gold certificate reserve does not fall below the normal legal minimum of 40 per cent. In case of great emergency, however, the Board of Governors may permit a reduction of the note reserve below 40 per cent, provided it imposes a graduated tax upon the amount of the deficiency—a tax which must

be added to the rates of interest and discount fixed by the Board of Governors. Furthermore, to meet extreme emergencies the Board is authorized 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 by the Act. It is thus seen that the federal reserve notes have ample power of expansion in time of emergency and that there no longer exists a stonewall limit beyond which expansion cannot go and go promptly. (There is no fixed limit, but after the gold-certificate reserve ratio has declined below 40 per cent, further expansion of note circulation could normally be secured only at an increasing expense to those wishing the notes.)

The notes issued to the twelve federal reserve banks amounted to \$3,962 million on February 5, 1936; and of these, \$3,640 million were in actual circulation. Back of these notes there was held the following collateral:

	Thousands
(1) Gold certificates on hand and due from United States Treasury	\$3,888,343
(2) Eligible paper.....	7,832
(3) United States government securities	125,000
Total collateral	<u>\$4,021,175</u>

For the purpose of contracting the circulation of federal reserve notes when the business demands for currency decline, the machinery is as follows. When the demand for notes in the pockets of the people and the tills of merchants falls off, as it does, say, after the Christmas holiday season, the surplus notes are deposited by the public in the banks. The banks in turn tend to send to their federal reserve banks for deposit any notes they receive in excess of the amount needed for till money. Transportation charges on such shipments of notes are paid by the federal reserve bank. Notes which were issued by the federal reserve bank of the district may thus be withdrawn from circulation. Notes so received which were issued by other federal reserve banks are sent back to the issuing banks. On this subject the law says: "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" (section 16). This requirement that federal reserve banks shall send back promptly the notes of other

federal reserve banks will obviously increase in its effectiveness as a means of currency contraction with the increase in the number of branches of federal reserve banks established throughout the country.

Another device calculated to encourage the retirement from circulation of bank notes whenever they become redundant is the provision of the law authorizing the Board of Governors to charge such a rate of interest as it may deem desirable on federal reserve notes uncovered by gold certificates and issued to federal reserve banks. Up to the present time such an interest charge has never been imposed.

These provisions have in fact resulted in a large degree of seasonal elasticity in the total amount of money in circulation, owing principally to the seasonal elasticity of the federal reserve note circulation, which today constitutes over three-fifths of the total circulation. This is clearly evident from Chart IV on page 66 showing the total amount of money in circulation by months for the years 1926-35, compared with the volume of federal reserve notes in circulation. The seasonal variation here apparent in the circulation of federal reserve notes should be compared with the lack of seasonal variation in national bank notes shown in Chart II on page 16 above.

MONEY IN CIRCULATION

(END-OF-MONTH FIGURES)

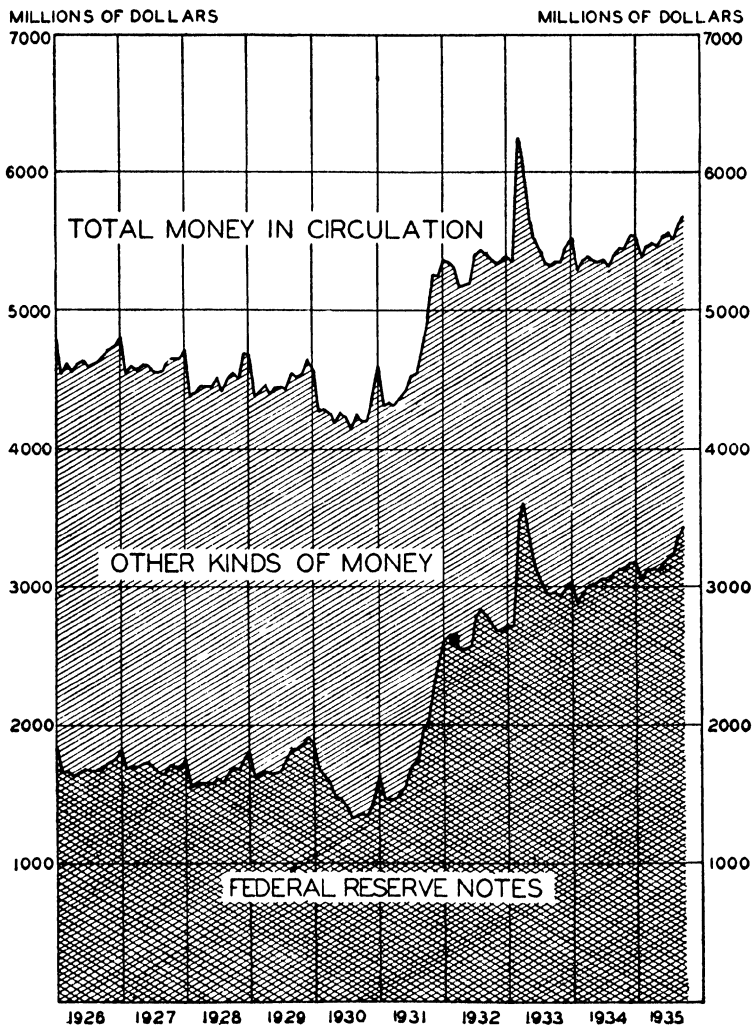


CHART IV

Showing what part of total money in circulation consists of federal reserve notes, and showing also the clearly defined seasonal variations in federal reserve notes in circulation.

*Emergency Elasticity of Federal Reserve Notes
Provided by the Glass-Steagall Act of 1932*

The theory underlying the circulation of federal reserve notes is that they will increase automatically in volume with growing trade requirements, as reflected in an increasing volume of commercial paper rediscounted with the federal reserve banks; and similarly that there will occur an automatic retirement of federal reserve notes as trade needs decline. However, in an emergency such as existed in the United States from 1929 to 1936, it may happen that currency demands lose their normal relationship to the rise and fall of trade demands. The amount of currency demanded relative to the amount of business being done may become greater, because of the hoarding of money, decreased rate of monetary turnover, and numerous bank failures, at a time when trade is rapidly declining and when the volume of rediscounted commercial paper is likewise declining. This demand for an increase in the amount of money in circulation is not due to increased trade requirements, but to an extensive substitution of cash payments for check payments in communities when banks have failed and to a break-down of confidence resulting not only in private hoarding but also in the taking of precautionary measures by many commercial banks which substantially increase their vault cash at such times to enable them to meet the hazards of bank

runs. While it is true that published figures reveal that there was a large aggregate volume of commercial paper eligible for rediscount in the portfolios of the member banks in the autumn of 1931 and early in 1932, many individual banks, nevertheless, had little or no such eligible paper. In order to take care of this situation, the Glass-Steagall bill was enacted as an emergency measure by Congress and was approved by the President on February 27, 1932. This and subsequent legislation amended section 16 of the Federal Reserve Act so as to make possible the acceptance of the direct obligations of the United States government purchased in the open market as collateral against the issuance of federal reserve notes. However, in each instance that a federal reserve bank desires to obtain federal reserve notes in return for the deposit of United States government bonds with a federal reserve agent, the approval of a majority of the members of the Board of Governors is required. This privilege was originally to extend only until March 3, 1933, but was subsequently renewed on various occasions. Its expiration date according to present law is March 3, 1937.

The largest amount of United States government securities used as collateral for federal reserve notes in 1932 was \$682 million in July, and in 1933 the largest amount in use at the end of any month was \$885 million for March, which at that time con-

stituted about one-fourth of the total collateral so held. The maximum end-of-the-month figure for 1934 was \$570 million, and there was a decline throughout the years 1934 and 1935, the figure for December 31, 1934 being \$241 million, and for the end of 1935, \$127.5 million. This total was still further reduced to \$67 million by April 1, 1936.

Now that our United States government bonds are no longer specifically payable in gold but merely in inconvertible legal tender money and federal reserve notes have been made unlimited legal tender, the policy of securing the notes by the bonds is fundamentally unsound. The notes are secured by the bonds and the bonds are payable in the notes, which in turn are no longer convertible into gold on demand. Such notes are in important respects similar to the German reichsbank notes that after the World War depreciated to a trillionth of their original gold value. Since the emergency which led to this policy in the United States is passed, the policy should be promptly discontinued.

Elasticity of Deposit Currency

Elasticity of deposit currency, although it has not received the attention in our economic literature devoted to the elasticity of bank-note currency, is of greater importance because the amount of business done by means of deposit currency is many times greater than that done by means of

bank notes. Prior to the establishment of the federal reserve system, as we have seen,¹ our deposit currency, although not as inelastic as our bank-note currency, was none the less deficient in the quality of elasticity. How has the federal reserve system remedied this defect?

*Removal of Old Rigid Legal Reserve
Requirements*

The federal reserve system increases the elasticity of our deposit currency in a number of ways. In the first place, it has removed the old rigid legal reserve requirements of our national banking system and has put in their place much less rigid ones. The only legal reserves now required of national banks are reserves deposited in the federal reserve banks. For till money banks are permitted to hold in their own vaults as much or as little money as they individually need, and the kinds of money they desire.

A potentially powerful new element of elasticity has recently been incorporated into our banking system by giving to the Board of Governors authority to raise or lower legal reserve requirements for member banks, thereby tending respectively to contract, or to expand the country's deposit currency circulation. A provision to this effect was first included in the Thomas amendment

¹ See pp. 17-18.

to the Agricultural Adjustment Act of May 12, 1933 (section 46). This was revised and re-incorporated in the Banking Act of 1935, and in its present form authorizes the Board of Governors, upon the affirmative vote of at least four of its members, "in order to prevent injurious credit expansion or contraction" to change "the requirements as to reserves to be maintained against demand or time deposits or both by member banks." The minimum reserve, however, can in no case be fixed below that existing on August 23, 1935, the date of the enactment of the law, and the maximum cannot be more than twice that amount. Up to the present time this authority has not been used by the Board of Governors, but the enormous excess reserves now (April 1936) being carried by member banks, and the pressure they are exerting toward inflation and excessive speculation in the stock market are at present leading many economists and bankers to urge an initial use of this authority in the direction of increasing legal reserves.

The federal reserve banks themselves are required to hold against deposits a legal reserve of lawful money equivalent to 35 per cent. Unlike member banks, however, the federal reserve banks are not strongly pressed by competition and by the desire for profits to take up all the slack and reduce their reserves in ordinary times to this nor-

mal legal minimum. There has been no evidence that the federal reserve banks will keep their credit extended to near the legal limit, as individual banks have commonly done in the past. Despite the urgent need of funds brought about by post-War conditions, during the 'twenties our federal reserve banks adopted the policy of maintaining reserves well above the legal minimum. They have little profiteering motive to reduce their reserves to a dangerously low figure, because no earnings of a federal reserve bank above the amount required to pay an annual 6 per cent cumulative dividend on its stock can ever be paid to a member bank.

Fortunately there has appeared no evidence of competition among the federal reserve banks to see which can show the largest profits. Under the leadership of the Federal Reserve Board, the great emphasis was on competition for public service.

The most important device of the federal reserve system for securing elasticity of deposit currency, as well as of bank-note currency, is found in the machinery enabling member banks to borrow funds of their federal reserve bank.¹ Funds so

¹ A member bank, say a country bank, whose reserve is in danger of running below 7 per cent of demand deposits, and 3 per cent of time deposits, required by law, or which is in need of more cash for till money, may take say \$10,000 of its eligible commercial paper to its federal reserve bank and have it rediscounted for, say, 60 days at 4½ per cent. The proceeds would be \$9,925, which at 7 per cent would represent a legal reserve sufficient for \$141,786 of demand deposits, and would therefore greatly increase the bank's lending power. Any part of the proceeds of the re-

borrowed, when left on deposit with the federal reserve bank, serve as legal reserve money for the member banks. The making of such loans to member banks is one of the chief functions of federal reserve banks. Broadly speaking the loans are of two kinds, rediscounts, and loans on collateral. Let us consider briefly each of these types of loans.

Rediscounting

Federal reserve banks always stand ready to rediscount in time of need eligible paper for member banks and for federal intermediate credit banks.

For the purpose of keeping the assets of federal reserve banks liquid, the law and the administrative regulations of the federal reserve authorities place limitations upon the kinds of paper eligible for rediscount. These limitations have reference both to the length of time the paper is to run, and to the purpose for which it is issued. As to time, notes and bills rediscounted must have a maturity at the time of rediscount of not more than 90 days (exclusive of days of grace); except that when such paper has been issued or drawn for an agricultural purpose, or is based upon live stock, it may have a maturity, at the time of rediscount, of nine months (exclusive of days of grace). The Board

discount in excess of that needed to maintain the bank's 7 per cent legal reserve with the federal reserve bank could be checked against and taken in cash, presumably in federal reserve notes, for the bank's till money.

of Governors may regulate the volume of such agricultural rediscounts.

As to the purpose for which rediscountable bills and notes may be issued, the law limits rediscounts to two classes of paper. They are: (1) Notes, drafts and bills of exchange bearing the endorsement of a member bank or of a federal intermediate credit bank issued, drawn, or used for agricultural, industrial or commercial purposes; and (2) notes, drafts and bills of exchange bearing the endorsement of a member bank and issued or drawn for the purpose of carrying or trading in bonds and notes of the government of the United States.

Collateral Loans

The second type of loan to member banks consists of short-term advances on their secured promissory notes, and such advances for periods not exceeding fifteen days can be made by the federal reserve banks on the promissory notes of member banks when secured by a deposit or pledge of the direct obligations of the United States government, or its fully-guaranteed obligations (including Federal Farm Mortgage Corporation bonds or Federal Home Owners Loan Corporation bonds), or the debentures or other obligations issued by a federal intermediate credit bank. Similarly, loans can be made to member banks on their promissory notes, for periods not exceeding

ninety days, when secured by notes, drafts, bills of exchange, or bankers' acceptances that are eligible for rediscount or purchase by the federal reserve banks.

There was no provision in the original Act for collateral loans, but experience soon showed that member banks frequently wished to obtain advances from the federal reserve banks for brief periods, so brief that they were reluctant to rediscount customers' paper for the purpose. To meet the difficulty an amendment to the Federal Reserve Act was passed September 7, 1916, authorizing these short-time collateral loans, and several subsequent amendments to the law on this subject have been made. The authority to make such loans proved to be particularly useful in connection with the war-time financing by the banks of Liberty bond and certificate of indebtedness purchases either for themselves or for their customers—purchases which were likely to involve heavy drain upon the banks for very brief periods. During the years 1917 to 1920 these collateral loans constituted by far the most important form of advance made by federal reserve banks to member banks. Most of these loans were secured by United States certificates of indebtedness and Liberty bonds. After the summer of 1920, however, there was a great decline in the amount of short-time loans collateralized by the public debt which were

held by federal reserve banks. During 1928 and 1929 the volume of such loans to member banks again increased so that in March 1929 member bank collateral notes secured by United States government obligations amounted to nearly \$676 million, compared with \$1,158 million on December 31, 1919, and with only \$186 million on December 31, 1924. The amount of such loans to member banks had decreased again to less than \$7 million on February 5, 1936.

Provisions of the Glass-Steagall Emergency Measure of 1932 Relating to Collateral Loans

During 1931-33 in the period of extraordinary business depression and low business confidence, accompanied by widespread hoarding, many banks, and particularly the smaller banks, reached a point where they had little opportunity to make loans which fell within the category of eligible paper. Furthermore, they found their credit expansibility brought to a sudden halt by the unprecedented decline in value of the secondary reserves which they held in the form of investments in government bonds, corporation bonds, and other securities.

The great severity of the 1931-33 break-down may be realized by comparing the volume of bank suspensions and commercial failures which occurred then with the corresponding figures for previous depression years:

Year	Bank Suspensions		Commercial Failures	
	Number	Liabilities	Number	Liabilities
1893	414	\$ 172,188,000	15,242	\$346,779,889
1908	132	209,836,000	15,690	222,315,684
1921	505	116,220,000	19,652	627,402,000
1931	2,294	1,590,669,000	28,285	736,300,000
1932	1,456	715,626,000	31,822	928,313,000
1933 ¹	5,148	4,497,969,000	20,307	502,831,000

It will be noted, when comparison is made with previous depression years, that the three years of this period were characterized by a relatively much larger ratio in the volume of bank failures to commercial failures.

In order to relieve the extreme pressure upon the banks, a number of emergency measures were adopted by Congress and by the various state governments. The most important of the early measures was the Glass-Steagall Act of February 27, 1932. This act added two sections to the federal reserve law, sections 10a and 10b.

¹ This was the year of the "banking holiday" in early March, when for a time all the banks of the country were closed. The figures here given cover (1) all banks suspending prior to the "banking holiday"; (2) all banks that remained closed after the expiration of the "banking holiday"; and (3) all banks that closed subsequent to the "banking holiday." Many of these banks subsequently reopened. Of the 1,492 suspended national banks with deposits of \$2,062 million, 421 with deposits of \$766 million did not reopen and of the 3,656 state banks suspending with total deposits of \$2,436 million, those not reopening had deposits of \$1,272 million. See *Annual Report of the Federal Deposit Insurance Corporation for 1934*, p. 95.

The amendments provided that member banks either in groups of five or more, or as individual banks, might borrow from the federal reserve banks upon other security than that heretofore defined as eligible for rediscount, if approval was given by five or more members of the Federal Reserve Board. This privilege could be used, however, only if the member banks in question did not have in their individual portfolios eligible paper on which they could borrow from a federal reserve bank in the ordinary way sufficient to meet all reasonable demands made by their depositors. Furthermore, the rate of interest on such loans was to be 1 per cent above the discount rate of the federal reserve bank; and finally, the security offered as collateral for the loan was to be scrutinized and approved by the federal reserve bank; and in no case could such security be foreign obligations of any sort. Although the Glass-Steagall Act in part (section 10b) was intended as an emergency measure to be in force only one year, this legislation (with slight change) has since been made a permanent part of the Federal Reserve Act.

Contraction of Circulating Credit

So far we have been speaking of the elasticity of deposit currency under the new banking system in the direction of expansion in times of increasing currency demand. According to the theory on

which the federal reserve system was established, the contraction of deposit currency, when that becomes necessary, should be brought about by the pressure of rising discount rates and the sale of government securities and bankers' acceptances in the open market. Such sales withdraw money from the market when payment is made for them, reduce member bank reserves, and tend to increase the indebtedness of the member banks to the federal reserve banks. Rising discount rates, in turn, make all borrowing from the federal reserve banks more expensive. The result is that the member banks become more reluctant to make new loans to their customers and less disposed to renew loans already outstanding.

These facts and the increasing restrictions which the federal reserve banks place upon rediscounts as money market conditions become tighter, tend to contract the volume of deposit currency outstanding and to prevent a sharp upward movement in prices. In this respect a great public responsibility rests upon the federal reserve authorities to conserve the banking strength of the country in times of easy money, so that it will be adequate to meet the calls made upon it in times of emergency.

There is no question but that the federal reserve system has added to the elasticity of both our deposit currency and our bank-note currency.

CHAPTER VIII

DOMESTIC AND FOREIGN EXCHANGE UNDER THE FEDERAL RESERVE SYSTEM

WE may now pass to the consideration of how the federal reserve system is meeting the difficulties of the old banking régime as regards domestic and foreign exchange. Domestic exchange will be considered first.

Domestic Exchange

Under the old régime the collection and clearing of out-of-town checks for country banks was handled largely by the banks in reserve and central reserve cities, which were the depositaries of the legal reserves of the country banks.¹ The service of collecting these out-of-town checks was rendered to the country bank as a partial compensation for the use of its reserve deposits at a low rate of interest, and as a lure to secure other business from the country bank, since competition was keen among large banks in money market centers for the accounts of out-of-town banks. When Congress decided, therefore, that the practice of pyramiding the legal reserves of national banks by permitting them to be deposited to a large extent in other national banks was a bad one and should be dis-

¹ *Supra*, pp. 20-2.

continued, it was naturally forced to provide machinery to take the place of the reserve and central reserve city correspondent banks for the work of collecting out-of-town checks. If the country bank was no longer to be permitted to count a deposit with its city correspondent as legal reserve money, but was to be compelled to maintain its entire legal reserve in its own vaults or on deposit with its federal reserve bank, it would naturally withdraw or at least greatly reduce its deposit balance with its correspondent banks. But under such circumstances, who would collect its out-of-town checks and otherwise serve it in connection with out-of-town business? The city bank, no longer holding the country bank's reserve deposits, would not be disposed to perform without charge these services for the country bank; and further, having ceased to be the country bank's reserve agent, the city bank would very likely want to compete for some of the country bank's most attractive business. Obviously if the new federal reserve banks were to displace city correspondent banks as the holders of the country banks' deposited reserves, they should also perform for the country banks the service of collecting or clearing their out-of-town checks.¹ To this end, section 16

¹ Dr. H. Parker Willis, formerly Secretary of the Federal Reserve Board, states concisely the distinction between collecting and clearing checks, as follows: "A check is said to be collected when it is sent home to the bank on which it is drawn, and arrangement is made to remit the

of the Federal Reserve Act provides that the Board of Governors of the Federal Reserve System "may at its discretion exercise the functions of a clearing house for . . . federal reserve banks, or may designate a federal reserve bank to exercise such functions, and may also require each such bank to exercise the functions of a clearing house for its member banks." The Act also requires a federal reserve bank to "receive on deposit at par from member banks or from federal reserve banks checks and drafts drawn upon any of its depositors, 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."

Member banks are permitted to make reasonable collection and exchange charges, to cover the expenses involved in the collection and remittance of funds. These charges, however, are subject to regulation by the Board of Governors and may not in any case exceed 10 cents per \$100 or fraction thereof, based on the total of checks and drafts presented at any one time. The law specifically provides that no such collection or exchange

proceeds; it is said to be cleared when the bank receiving it offsets it against checks in favor of the institution by which it is to be paid, and then collects or remits only the balance, if any." *The Federal Reserve*, p. 223.

charges shall be made against the federal reserve banks.

The problem of establishing a satisfactory clearing and collection system was looked upon as perhaps the most difficult and complicated one confronting the federal reserve authorities in the early days. At first they moved slowly and allowed the different reserve banks a wide discretion in the matter of arrangements for the clearing and collection of checks. Moreover, in most districts the utilization of the clearing and collection system established by the federal reserve banks was optional with member banks. Some joined the system and many did not. It soon became evident that to be really effective a clearing and collection system needed to be approximately uniform in its workings throughout the country and to embrace the largest possible number of banks. Any system in which only a limited number of banks should utilize the federal reserve clearing and collection system and a large number handle their checks in the old way would be unsatisfactory. It would mean a wasteful duplication of machinery analogous to that which exists when a city has two separate telephone services. After nearly two years of experimentation, therefore, the Federal Reserve Board issued regulations for a clearing and collection system, which was put into operation July 5, 1916, in all federal reserve districts—a system whose privileges, under

certain limitations, were extended by an amendatory act of June 21, 1917, to qualifying banks which are not regular members of the federal reserve system.

Present Clearing and Collection System

Briefly summarized the main features of the plan are as follows:

Each federal reserve bank exercises the functions of a clearing house in its district for member banks and for qualified non-member banks, known as "clearing member banks." From such banks in its district the federal reserve bank will receive at par "checks drawn on all member and clearing member banks and on all other non-member banks, which agree to remit at par through the federal reserve bank of their district." Clearing and collection services for member and clearing member banks and for other federal reserve banks are also rendered by each federal reserve bank in the case of checks received from outside the district, which are drawn upon member and clearing member banks of the district and upon all non-member banks of the district, whose checks can be collected at par by the federal reserve bank.

These two provisions make the field of the par clearing and collection system coextensive with the United States and provide a machinery for the handling of checks received from practically all

important points without the district as well as from within the district. All banks belonging to the clearing system are required to pay without deduction checks drawn upon themselves when presented by a federal reserve bank. On December 31, 1935 there were 12,653¹ banks on the par list of the federal reserve clearing system, of which 6,387 were member banks and 6,266 non-member banks, exclusive of mutual savings banks, but including most of the commercial banking resources of the country, since the commercial banks remaining outside the system are for the most part small ones. Of the 2,694 commercial banks which are still refusing to remit at par to the federal reserve bank for checks drawn upon them, 1,447 are situated in the eleven Southern States and 1,129 of them are in the West North Central States and the adjoining State of Wisconsin. There are no such banks in the Boston, New York or Philadelphia districts, and there are only two in the Cleveland district. During the year 1935 the twelve federal reserve banks handled in their check clearing and collection operations a total of nearly 883 million items,² and the volume of checks handled through the reserve system aggregated \$203 billion. Commenting upon similar figures for 1925 the Federal Reserve Board said:³

¹ Includes private banks, excludes mutual savings banks.

² Two or more checks handled as a single item are counted as one.

³ *Annual Report of the Federal Reserve Board for 1925*, p. 23.

“... In the ordinary course of their transactions from day to day member banks constantly make deposits to be credited to their reserve accounts and make payments to be cleared against these accounts. It is far from true, therefore, that member banks' reserve balances with the reserve banks, on which no interest is paid, are idle assets available for no purpose other than to meet legal requirements. On the contrary, in addition to their use as reserves, member bank balances are available as clearing accounts through which member banks can make continuous settlements with other banks in the most expeditious and economical manner.”

The old evil previously described¹ of carrying the “float” as a part of a bank's legal reserve is eliminated by a provision to the effect that, although checks received by the federal reserve bank will be immediately credited (subject to final payment) to the bank sending them, the proceeds thereof will not be counted as part of the legal reserve, nor become available to meet checks drawn against them, until a sufficient time has elapsed to allow for their actual collection. If the bank sending in checks is not to be permitted to draw against the credit which they create until a sufficient time has elapsed for their collection, obviously the checks should not be charged by the federal reserve bank against the reserve account of the bank upon which

¹ *Supra*, p. 22.

they are drawn until sufficient time has elapsed "for the checks to have reached the member bank and for returns in due course to have reached the federal reserve banks."¹ This is the rule now in force.

If a bank's deposit at the federal reserve bank is insufficient to cover its legal reserve requirement and in addition to meet an adverse balance which arises against it out of clearing operations, it is authorized to ship currency or specie from its own vaults at the expense of its federal reserve bank in order to cover the deficiency. In case of a deficient balance at the federal reserve bank, the member bank, of course, also has the privilege of making good the deficiency by borrowing from the federal reserve bank.

In handling items for member and clearing member banks, a federal reserve bank acts as agent only.

Under the federal reserve clearing and collection system checks are sent to federal reserve banks and to member and clearing member banks by the most direct routes, and the number of par collection points in the United States is made almost equal to the number of places of any considerable size where commercial banks are located. The result is that the new system is rapidly doing away with the old evil of routing checks.

¹ See *Annual Report of the Federal Reserve Board for 1916*, pp. 9-12.

The cost of collecting and clearing checks for member and clearing member banks is borne by the federal reserve banks. For some time service charges of so much per item were imposed. But these charges, so far as they relate to cash items, were discontinued by an order of the Federal Reserve Board effective June 15, 1918.¹

Banks which formerly charged their customers excessive rates for collection are being forced by competition or by the Board of Governors' regulations to reduce their charges. They may, as a compensation, require customers to carry larger balances, or they may find the expense a productive one as an item of advertising.

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

¹ See *Federal Reserve Bulletin*, May 1, 1918, pp. 371-2.

ing the clogging of the federal reserve collection system with dunning drafts.

The Interdistrict Settlement Fund

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

The mechanism by which the necessity of a large proportion of these currency shipments is avoided is that of the Interdistrict Settlement Fund, which was formerly known as the Gold Settlement Fund. This Fund, although planned in its essentials early in 1914, was not established until June 1915. The order of the Federal Reserve Board establishing the Fund¹ required each federal reserve bank to forward to the Treasury or the nearest sub-treasury of the United States for credit to the account of the Gold Settlement Fund \$1 million in gold or gold certificates, and in addition an amount at least equal to its indebtedness due to all federal reserve banks. These sums are made payable to the order of the Board of Governors. Each federal reserve

¹ Regulation L, Series of 1915.

bank is required to maintain a balance in the Fund of not less than \$1 million. As a matter of fact all the banks carry balances many times as large as this minimum. Credit on the books of the Fund is counted as a part of a federal reserve bank's legal reserve. The settlement of balances between federal reserve banks is effected daily, through the instrumentality of telegrams sent to the Board of Governors, by transfer of debits and credits on the books of the Interdistrict Settlement Fund.

Through the machinery of this Fund transfers may be made among all the federal reserve banks, between any federal reserve bank and any federal reserve agent, and between any federal reserve bank or any federal reserve agent and the Treasury of the United States. Also, by means of the Fund and of the other transfer facilities of the federal reserve banks, these banks are now enabled to make telegraphic transfers of funds to all parts of the United States for their members without any charge whatever. They have been able, in addition, to inaugurate a system of federal reserve exchange drafts, according to which a member bank may draw special drafts on its federal reserve bank for amounts not exceeding \$5,000, which are receivable for immediate availability at any other federal reserve bank.

The Interdistrict Settlement Fund used in effecting payment between federal reserve banks has

almost eliminated the necessity of shipping money between federal reserve banks. On December 31, 1935, that Fund amounted in round numbers to \$3,970 million. The clearings of interbank transfers effected through the Interdistrict Settlement Fund during 1935 averaged about \$1,800 million per week. These large operations involved only minor changes in the balances of the various federal reserve banks, however, for the weekly change averaged from 1 to 5 per cent of the total amount of the Fund.

The federal reserve clearing and collection system is therefore providing a means of eliminating the evils of the old system. Excessive collection charges are rapidly becoming things of the past. Banks are enabled to dispense with the necessity of tying up large sums in scattered deposits with correspondent banks for the purpose of securing for themselves adequate facilities for the collection of checks. These deposits can now be brought home and the funds loaned out. The routing of checks is being eliminated and the "float" is being greatly reduced, all of which are important gains to the public. Heavy currency shipments are avoided, and the expenses of a large part of the currency shipments that do take place are assumed by the federal reserve banks for the member banks.

Foreign Exchange

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

accepted by the American bank and sold in the American discount market.

The foreign exchange division created by the Federal Reserve Board in December 1917, rendered valuable service during the War in stabilizing exchange both with our allies and with neutrals.

Under the provisions of the Federal Reserve Act, national banks with a capital and surplus of a million dollars or over may be authorized by the Board of Governors under certain restrictions to establish branches abroad; and many such branches have already been established. Similarly, national banks may invest an amount not exceeding 10 per cent of their capital and surplus in the stock of banks chartered in the United States and principally engaged in international or foreign banking or banking in American dependencies, or engaged in such phases of international or foreign financial operations as may be necessary to facilitate our foreign trade. In this way a number of banks have been established which are owned either wholly or in part by groups of national banks.

In order to encourage American trade and the investment of American capital in foreign enterprises, there was added to the Federal Reserve Act on December 24, 1919, an amendment popularly known as "the Edge amendment."¹ This amendment authorizes the organization of corporations

¹ The amendment comprises section 25a of the Federal Reserve Act.

“for the purpose of engaging in international or foreign banking or other international or foreign financial operations.” The field of operation includes the insular possessions of the United States. Corporations organized under this amendment may conduct their business either directly or through the agency, ownership, or control of local institutions abroad. They may not carry on any part of their business in the United States except such as, in the judgment of the Board of Governors, shall be incidental to their international or foreign business. The minimum capital of one of these corporations is \$2 million. In addition to the right of receiving deposits outside of the United States, they are specifically granted the right “to issue debentures, bonds, and promissory notes,” but in no event may a corporation have liabilities outstanding in the form of such obligations exceeding ten times its capital stock and surplus.

There are two important respects in which corporations organized under this Edge amendment may be affiliated with the federal reserve system, although these corporations cannot become regular member banks. In the first place, they operate under the supervision of the Board of Governors which is given by the law large powers of examination and control.¹ In the second place, any

¹ The Federal Reserve Board on March 23, 1920, issued its Regulation K, Series of 1920, governing the organization and operation of corpora-

national bank may invest in the stock of these corporations, subject to the restriction that its total investment in the stock of these corporations and of other banks incorporated in the United States for foreign business shall not exceed 10 per cent of the subscribing bank's capital and surplus.

This Edge amendment has been on the statute books since December 24, 1919, but not until 1927 were debentures issued by a corporation organized under the act; although as early as February 1921 two international financial corporations had been organized under the Edge amendment, one with a capital stock of \$2,100,000 and the other with a capital stock of \$7,500,000. Later another such corporation was organized with a capital stock of \$100 million.¹

As a result of the World War and of subsequent changes in our banking system, we are now financing directly a large proportion of our foreign trade. This development is shown in Chart V on page 96,²

tions organized under the Edge amendment. See also *Annual Report of the Federal Reserve Board for 1924*, pp. 267-72. Regulation K was revised very substantially by the Federal Reserve Board in June 1927 and again amended in August and October 1927. See *Annual Report for 1927*, p. 42, and for a copy of Regulation K, Series of 1928, see *ibid.*, pp. 301-7. The *Annual Report of the Federal Reserve Board for 1930* contains a complete copy of regulations of the Federal Reserve Board revised to date. For subsequent regulations and amendments see the *Annual Reports for 1931, 1932, 1933, and 1934*.

¹ *Annual Report of the Federal Reserve Board for 1927*, p. 42. See also *ibid.*, 1928, p. 36.

² This Chart is copied with some modification from one appearing in the *Federal Reserve Bulletin* for March 1931, and brought up to date.

ACCEPTANCES OUTSTANDING

(END-OF-MONTH FIGURES)

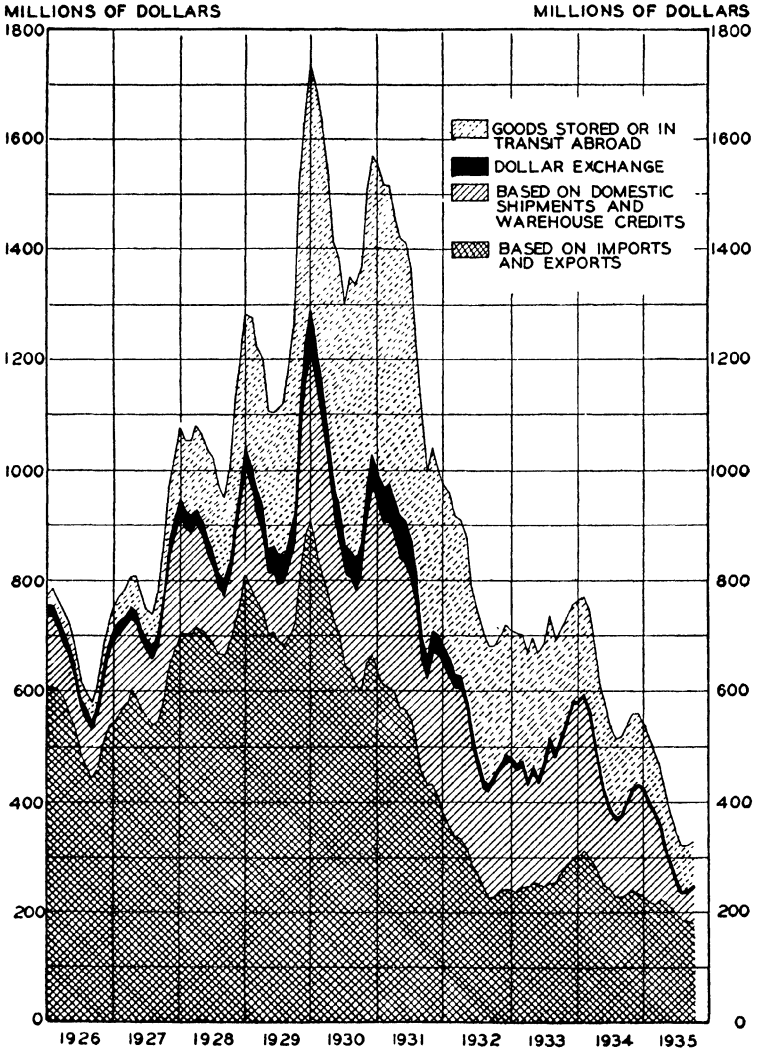


CHART V

Showing the total volume of acceptances outstanding by months, classified according to transactions covered. The use of the New York acceptance market for financing in foreign markets is shown in the top zone.

which pictures not only the movement of the acceptance credit used in financing foreign trade, but also the relative importance of the dollar as a means of financing the foreign trade of this country and in addition that between other countries where the United States is not a party to the trade.

CHAPTER IX

THE FEDERAL RESERVE SYSTEM AND THE FEDERAL TREASURY

THE fourth and last of the general defects of the old banking system which were discussed in the early part of this book, was the defective organization from the standpoint of the Federal Treasury. How is the federal reserve system remedying this defect?

The provisions of the Federal Reserve Act concerning the deposit of government funds are in section 15. They are: "The moneys held in the general fund of the Treasury, except the five per centum fund for the redemption of outstanding national-bank notes and the funds provided in this Act for the redemption of Federal reserve notes may, upon the direction of the Secretary of the Treasury, be deposited in Federal reserve banks, which banks, when required by the Secretary of the Treasury, shall act as fiscal agents of the United States, and the revenues of the Government or any part thereof may be deposited in such banks, and disbursements may be made by checks drawn against such deposits.

"No public funds of the Philippine Islands, or of the postal savings,¹ or any Government funds,

¹ Under certain conditions, the deposit of postal savings funds is

shall be deposited in the continental United States in any bank not belonging to the system established by this Act:¹ *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.”

Many of the advocates of the federal reserve system believed that this section did not go far enough. They maintained that the practice of depositing government funds in thousands of banks scattered over the country was a bad and expensive one, and wished the law to make the federal reserve banks the depositories of practically all general funds, dispensing with the use of individual banks as depositories and ultimately with the independent treasury system. It was felt by many, however, that the immediate adoption of such a plan would be moving too rapidly and that it was undesirable to limit so narrowly the Secretary of the Treasury, who is responsible for the safety of government funds. The extent to which the Secretary of the Treasury should keep general funds in the federal

permitted in banks not members of the federal reserve system. See Kemmerer, Edwin W., *Postal Savings*, pp. 112-16.

¹ But see pp. 102-3.

reserve banks, in member banks, and in the sub-treasuries was, therefore, left to his discretion. There appears, however, to have been a widespread belief that the federal reserve banks would become to an increasing extent the depositaries of federal funds, and that national banks and the sub-treasuries would, as time went on, receive an ever-declining proportion of these funds.

There is much to be said in favor of the proposition that banks desiring government funds should present their claims for advances to their respective federal reserve banks, and receive such funds only by the ordinary method of borrowing. This would simplify the problem, remove from the Secretary of the Treasury the onerous task of apportioning funds among thousands of individual banks, and discourage the banks from depending upon the Secretary of the Treasury as a sort of grandfather for aid in time of need. The federal reserve bank, which is having continual dealings with all its member banks, would presumably be in a better position to judge the comparative needs of different banks than would the Secretary of the Treasury. Moreover, how can a federal reserve bank by advancing discount rates, contracting loans and making sales in the open market place adequate pressure on member banks to conserve their strength in time of need, if the member banks can "go around" the federal reserve bank and the Board of Gov-

ernors and obtain funds directly from the Secretary of the Treasury?

For these and other reasons it was expected that the Secretary of the Treasury, in the exercise of the discretion granted him by the law, would deposit the government funds to a large and increasing degree in federal reserve banks. Events pointed clearly in this direction prior to our entrance into the War. Governor Strong of the New York Federal Reserve Bank wrote me: "The first deposit of government funds made by the Treasury with the federal reserve banks was on September 4, 1915, when certain special deposits were made in a number of banks. Later, arrangements were made to have the collectors of customs and collectors of internal revenues in the twelve federal reserve bank cities deposit all of their funds in the federal reserve banks and as a matter of fact, for a long period prior to the passage of the bond act of April 24, 1917, which altered the status of public deposits, the federal reserve banks had been receiving the principal revenues of the government outside of postal funds and had been paying a very large proportion of government checks and warrants. The limitation of this fiscal agency service in the collection of revenues and payment of checks to the twelve federal reserve bank cities was, of course, due to the inconvenience of extending these operations to places where federal reserve banks had not

yet established branches. The plan therefore of actively employing the federal reserve banks as fiscal agents had been put into operation some time before the first bond bill was passed and was an important and very active part of the work of the reserve banks almost immediately after the arrangement was established.”

The abnormal conditions, however, created by the World War set up obstacles in the way of the government's discontinuing the use of individual banks as depositaries of government funds. During the early days of the War the heavy demands for funds in America to meet obligations due abroad and the frenzied condition of the money markets throughout the world naturally prevented the inauguration of a policy of withdrawing government funds from individual banks and depositing them in the federal reserve banks. Later the heavy buying in this country by European belligerents discouraged this policy. Such was not a time for withdrawing large sums from individual banks. Finally our own entrance into the War and the floating of our huge Liberty loans rendered a transfer of this kind out of the question. In the interest of reducing to a minimum the disturbance to the money market involved in the floating of these loans, the government wisely adopted the policy of keeping the funds widely scattered and to as large an extent as practicable in the banks of the

communities where they were received. The result was that during 1917 and 1918 there were more government funds in individual banks than at any previous period in our history. The deposits of government funds, moreover, were then not limited as they are today, to banks that are members of the federal reserve system, since the law under which government bonds and certificates of indebtedness were issued after we entered the War provided for the deposit of their proceeds in qualified national banks and state banks and trust companies against certain approved collateral. Numerous non-member banks then qualified as depositories in connection with Liberty loans and issues of certificates of indebtedness.

An idea of the present situation as regards the deposit of federal government funds may be obtained from the following table based upon figures as of February 21, 1936, given in the daily statement of the United States Treasury of that date:¹

DEPOSITARIES Kind	AMOUNT OF DEPOSITS (ooo omitted)
Federal reserve banks	\$511,267
Special depositories (account of sales of government securities)	617,703
National and other bank depositories	50,753
Foreign depositories	2,039
Philippine treasury	1,834

¹ *Daily Statement of the United States Treasury*, February 21, 1936, p. 1.

An act was approved May 7, 1928, which authorized the Secretary of the Treasury to designate as depositories of public moneys, state banks and trust companies which are members of the federal reserve system, and to require such banks to act as fiscal agents of the government. This act placed member state banks and trust companies upon a parity with national banks with respect to all government deposits.¹

Under the terms of the First Liberty Bond Act of 1917 and subsequent legislation, member depository banks were not required to maintain reserves against government deposits, but the Banking Act of 1935 now compels the banks to keep the same percentage reserve against government deposits as against deposits of individuals and corporations.

Beginning January 1, 1913, government depositories, with the exception of the federal reserve banks, were required to pay the government interest on daily balances. This practice was discontinued by the Banking Act of 1933 (section 11b), which provides that, with certain exceptions, no member bank shall pay interest on demand deposits. Since all government deposits maintained with depositories under the supervision of the Treasury are demand deposits, the collection of

¹ See *Annual Report of the Secretary of the Treasury for 1928*, p. 111; also paragraph 14 of section 9 of the Federal Reserve Act.

interest upon such government deposits terminated June 30, 1933, except in the case of certain special deposits.¹

A large number of depositary banks failed during the banking crisis of early 1933 and as of March 16 of that year approximately one-third of the regular depositaries were unlicensed. Thanks largely to the fact that these government deposits were secured by the pledge of collateral in the hands of the government, the Secretary of the Treasury was able to say in his report for the fiscal year 1934: "To date, the United States has not sustained any losses through the failure of depositary banks."

A provision in the appropriation act of May 29, 1920, abolished the sub-treasuries from and after July 1, 1921. Several of them were closed before that date. The law authorized the Secretary of the Treasury to transfer any or all of the duties of the sub-treasuries to the Treasurer of the United States, or to the mints or assay offices, or to utilize the federal reserve banks for the purpose of performing any or all of such duties and functions. Pursuant to regulations of the Secretary of the Treasury under the authority of this act, all the functions and duties, with two exceptions, previously performed by the nine sub-treasuries were transferred to the federal reserve banks. The two

¹ See *Annual Report of the Secretary of the Treasury for 1933*, p. 70, and *ibid.*, 1934, p. 73.

exceptions were the issuance of gold order certificates against gold deposits—a function that was performed by the Treasurer of the United States until the issuance of this type of gold certificates was discontinued in 1933—and the keeping in custody of certain reserve and trust funds which, except for the silver held against silver certificates, are no longer of much importance.

Since under the legislation of 1933¹ and early 1934, the government outlawed the circulation and even the holding of gold coin, gold bullion (except under special license) and gold certificates by the American public under heavy penalty and took over into its own vaults all the country's monetary gold stock, the United States government has been the sole owner of the nation's monetary gold.² The federal reserve banks, in return for the gold they turned over to the Treasury, may receive a new form of gold certificate to be used for reserve purposes. These certificates may be held only by federal reserve banks and the Treasury. In practice they are often held in the Treasury for the federal

¹ See section 11n of the Federal Reserve Act added by the Emergency Banking Act of March 9, 1933.

² The government has complete power, through administrative regulation, to control all the gold of the country, most of which it owns. According to the Gold Reserve Act of 1934 (section 3) "Gold in any form may be acquired, transported, melted or treated, imported, exported, or earmarked or held in custody for foreign or domestic account (except on behalf of the United States) only to the extent permitted by, and subject to the conditions prescribed in, or pursuant to, such regulation" as the Secretary of the Treasury shall issue with the approval of the President.

reserve banks and federal reserve agents. They are redeemable in gold by the government for the federal reserve banks only "at such times and in such amounts as, in the judgment of the Secretary of the Treasury, are necessary to maintain the equal purchasing power of every kind of currency of the United States."¹ At the present time when certificates are redeemed by the Treasury to provide gold for export, they are redeemed at the rate of 13.71 grains of gold to the dollar, which is the gold equivalent of our present dollar and is equal to 59.06 cents of our old gold dollar. The President of the United States, however, has authority until January 30, 1937, under the so-called Thomas amendment of May 12, 1933 and subsequent legislation to fix the weight of gold that shall constitute a dollar at any point he may choose between the equivalent of 50 cents and 60 cents of our former gold dollar and he may change this weight as often as he may desire.

When the government forcibly took over the gold owned by the people and the banks, it paid for it dollar for dollar in inconvertible paper dollars which it has since administratively and, at least, temporarily stabilized at the equivalent of 59.06 cents of our former gold dollar. This gave the government a profit of approximately 69 per cent on each dollar of gold taken over, because the 23.22

¹ Gold Reserve Act of 1934, section 6.

grains of fine gold in the old dollar is the equivalent of \$1.693 of the new bullion dollar of 13.71 grains. In this way the government has obtained a so-called "revalorization profit" of something like \$2,800 million of which \$2,000 million have been converted into a "stabilization fund"¹ and the balance of which has been turned into the general funds of the Treasury.²

Fiscal Agency Services Rendered by Federal Reserve System While Nation Was Engaged in World War

Everyone knows what happened in regard to receipts and expenditures of public moneys during the years 1917-19. The figures jumped to proportions never dreamed of before. The gross interest-bearing public debt in 1916 was approximately \$1,000 million, and in 1919 it was \$25,000 million; internal revenue receipts increased from \$513 million in 1916 to over \$3,800 million in 1919, and to approximately \$5,400 million in 1920; ordinary government disbursements rose from \$724 million in 1916 to over \$15,000 million in 1919. Liberty bond issues and certificate of indebtedness issues combined amounted to over \$65,000 million up to

¹ The stabilization fund is under the exclusive control of the Secretary of the Treasury with the approval of the President, "whose decisions shall be final and not subject to review by any other officer of the United States." The law gives wide discretion as to the purposes for which the fund may be used. Cf. Gold Reserve Act of 1934, section 10b.

² At the end of March 1936, the government owned \$2,399 million of gold in excess of that covered by the gold certificates it had issued.

October 31, 1920. The total amount of money in circulation in the country in 1919 was only between \$5,000 million and \$6,000 million and the federal government was receiving over its own counters in one year five to six times this sum. It could not withhold this money from circulation. Therefore, as fast as the government received the money, steps were taken to put it back into circulation and to avoid withdrawing it from circulation again sooner than necessary. The enormous fiscal operations of the government during this period were very largely handled by the federal reserve banks. During the year 1919 there passed through the federal reserve banks and their branches in round numbers thirty-three million government checks, amounting to \$14,500 million.

Deposits were kept as nearly as possible in the places where the funds were received by the government. The work of handling this fell largely on the twelve federal reserve banks. These banks were asked to select the banks that were to handle the government funds, to allot deposits to the banks in proper amounts, to examine the collateral that such banks offered, to care for this collateral, to withdraw funds from the banks as they were needed by the government and to allot new funds.

Then the government, in trying to avoid money market disturbances, adopted a number of other devices. For example, in order to minimize the

disturbances resulting from the withdrawals of funds representing payments of income taxes and excess profits taxes, arrangements were made in New York whereby the seven collectors of internal revenue in the district deposited their receipts in cash, checks and certificates of indebtedness with the federal reserve bank, and then the federal reserve bank took all the checks which were drawn on any of the depository banks in the district, sorted them out and deposited them right back in the depository bank from which they came. When it received from the collector of internal revenue a bunch of checks, coming, say, from Rochester, it sorted out those checks and sent them back for deposit in the proper banks in Rochester.

Another device, and a most important one, used to prevent disturbances in the money market was that of issuing certificates of indebtedness. These were short-time government loans paying low rates of interest. There were something like forty-one series of them issued up to the middle of 1919, and eighty-four series in all issued up to June 15, 1921. The amounts issued aggregated \$44,000 million up to June 1921. These certificates were issued mostly in anticipation of Liberty loans and in anticipation of receipts from income and excess profits taxes.

Let us take the first. The object of issuing certificates in anticipation of Liberty loans was a

twofold one. In the first place, the government needed the money and needed it promptly. It took time to get money in from Liberty bonds, and so in anticipation of these funds the government borrowed money by the issuance of these short-time certificates with the expectation of paying back the money so borrowed as soon as the Liberty bonds were sold. It thus got money months in advance of its receipts from Liberty bond sales and paid off the certificates when the Liberty bond money came in. In the second place, by this procedure the government could prevent Liberty bond sales from greatly disturbing the money market. If it should have thrown on the market billions of dollars in Liberty bonds and have received payment for them in a short period of time, it would have tied up the money market. Here was a procedure whereby these receipts were spread out over a considerable period of time.

The government received its money when it issued these certificates and then by the time the Liberty bond receipts began to come in the certificates were due. The government had to pay the public on the certificates at the same time the public was to pay the government for the Liberty bonds. Government receipts and disbursements were thus synchronized and we avoided disturbances that would otherwise have arisen from the periodical withdrawing of funds and the periodi-

cal pumping of other funds into circulation. The same principle was applied in connection with the tax certificates. People knowing that they would have taxes due in June would buy these certificates, receiving on them a low rate of interest, months ahead of the time the taxes were due. The purchaser of the certificates could pay his taxes when they fell due by means of the certificates; or, if he held the certificates solely as an investment, the government would pay off the certificates at the time the public was paying its taxes, the one cancelling the other. One of the finest pieces of work that the government did was the synchronizing of these disbursements and receipts during the War so that one tended to cancel the other. These heavy transactions were handled largely by federal reserve banks.

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

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

The figures of Liberty loan transactions went to heights that most people had no idea of. The total volume of bonds exchanged during 1918 by the New York Federal Reserve Bank alone was over \$1,100 million, and the number of pieces handled was over four million received and one million six hundred thousand paid out.

There are a number of other ways in which the federal reserve banks assisted the government as fiscal agents. There was the work of the Capital Issues Committee and of the War Finance Corporation. Federal reserve banks played an important part in rendering fiscal aid to the government in advancing money. More than once a federal reserve bank found that the government's account was short—in the language of the street there was a government overdraft—and the government met that overdraft by a temporary certificate constituting a loan for a day or two. In the New York Federal Reserve Bank alone in one year the total amount of those short-time certificates issued was \$3,000 million. The banks helped the government also in the sale of the war savings stamps and thrift stamps. In the earlier days that work was left to other hands; but in later days it was entrusted to the federal reserve banks.

The Secretary of the Treasury said in his report of 1918: "Much of the great work has been done by the federal reserve banks. The federal reserve system has been of incalculable value during this period of war financing on the most extensive scale ever undertaken by any nation in the history of the world. It would have been impossible to carry through these unprecedented financial operations under our old banking system. Great credit is due to the federal reserve banks for their broad grasp of the situation and their intelligent, comprehensive cooperation."

One shudders when he thinks what might have happened if the War had found us with our former decentralized and antiquated banking system. Think of pouring the crisis of 1914-18 into bottles that broke with the crisis of 1907!

CHAPTER X

THE FEDERAL RESERVE SYSTEM FROM THE END OF THE WAR TO THE BREAK-DOWN OF THE GOLD STANDARD IN ENGLAND

THE forepart of this book dealt with the principal defects of the American banking system as it existed in 1913, and the last four chapters have shown how the federal reserve system has been remedying these defects. For a generation and more prior to 1913 the intelligent American public was aware of the principal deficiencies of our banking system during periods of financial crises like those of 1893-94 and 1907-08—periods in which these deficiencies stood forth glaringly—but in prosperous times little attention was paid to them. Our banking system was often spoken of as a “fair-weather system.” The great holes in its roof were not serious so long as there was no rain. It was the storm of 1907 that finally convinced the American people that the roof must be thoroughly repaired. The financial storm of 1929-36 gave rise to many calls for additional repairs.

The years 1929-36 witnessed one of the severest economic crises which the world has ever seen. From a dizzy height of prosperity in 1929, our own country suddenly dropped to unprecedented depths of economic depression by the summer of 1932. Such a crisis and depression would put a

heavy strain upon any banking system. It is in times like these that financial institutions of all kinds are put to the supreme test. How has the federal reserve system met the strain of this world economic crisis? Our answer to this question will be chronologically divided into two parts. This chapter will cover the period down to the breakdown of the gold standard in Great Britain in 1931; and the following four chapters will deal with the period from 1931 to the present time.

It is not the object of the following pages to discuss controversial questions of federal reserve policy. Whether or not conditions could have been better than they have been since the World War is a question of great importance; but it is not the question that chiefly concerns us here in an attempt to narrate and explain the policies of the Federal Reserve Board and of the several federal reserve banks rather than to evaluate them.

I

Gold and Federal Reserve Credit

Federal reserve credit, broadly speaking, is put to two uses. First, it may be used to increase member bank balances, which constitute the reserves for member bank credit expansion. The granting of federal reserve credit obviously increases these balances just as effectively as does the deposit of gold and other legal money in the federal reserve

GOLD, FEDERAL RESERVE CREDIT AND MEMBER BANK RESERVES (END-OF-MONTH FIGURES)

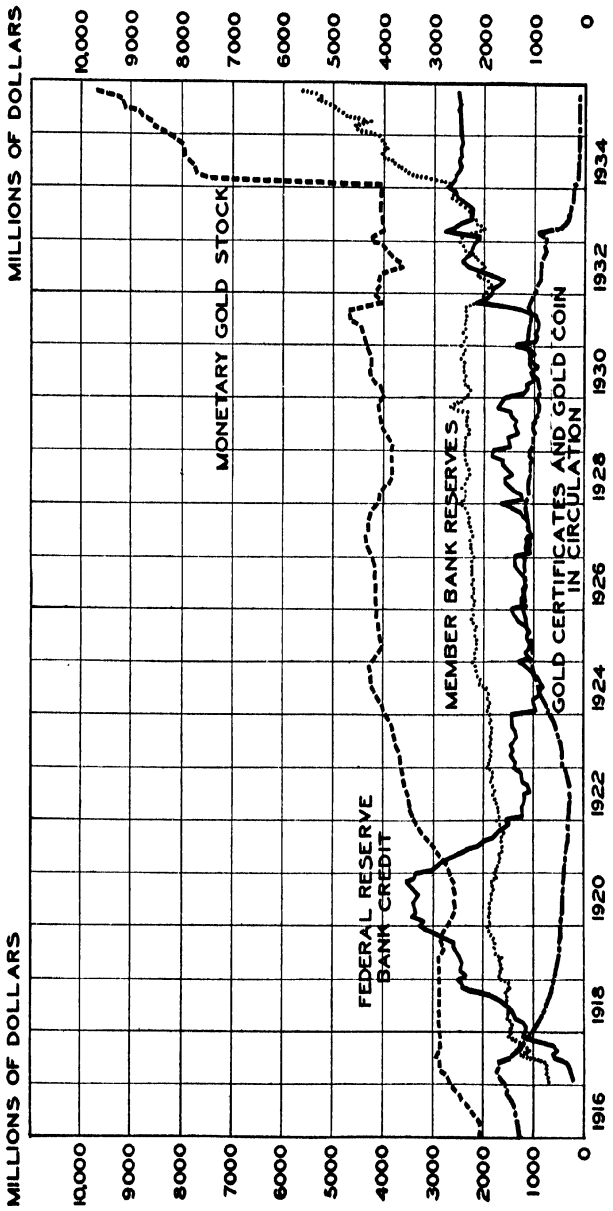


CHART VI

Showing month-to-month fluctuations in the total federal reserve credit outstanding and in the monetary gold stock of the United States, compared with the fluctuations in member bank reserves and gold certificates and gold coin in circulation.

banks to the credit of member banks. In the second place, federal reserve credit may go into circulation in the form of federal reserve notes and federal reserve bank notes and, when this is done, the new credit does not perform the bank reserve function at the same time because these notes in the tills of member banks cannot be counted by them as legal reserves.

The history of the changes in member bank reserve balances, federal reserve credit outstanding, monetary gold stock, and gold and gold certificates in circulation—the items relating to the primary reserve strength of the federal reserve system—may be seen from Chart VI. From it several conclusions can be drawn. In the first place, a well defined seasonal elasticity is apparent in the federal reserve credit outstanding down to 1932. This is particularly evident beginning with 1921—prior to that year it was concealed by the cyclical sweep of the curve. This response to the seasonal demands of business has already been discussed, and is related in the main to seasonal currency requirements.¹

Mobilization of Gold in Reserve Banks

It has been explained in Chapter IX how the federal reserve system helped to meet the huge War

¹ The reader will find suggestive a comparison of the seasonal variations here apparent in federal reserve credit outstanding with the seasonal

financing requirements of the federal government beginning in 1917. Mobilization of the gold reserves of the country in federal reserve banks had been accomplished in part under terms of the original Federal Reserve Act; but this mobilization was made more complete by the amendment of 1917 which required member banks to keep all of their legal reserves on deposit with their respective federal reserve banks.¹ As is evident from the Chart, further mobilization of the gold strength of the country was accomplished at that time by the substantial withdrawal of gold and gold certificates from circulation. In part the rise in federal reserve credit represented a rise in circulation of federal reserve notes substituted for gold certificates.

During the period of the Great War and the two years immediately following the Armistice, the world gave up the gold standard and went over to paper money standards. Gold coin was everywhere withdrawn from circulation and the world's monetary gold was largely piled up in the vaults of a few central banks, where it was not used. Enormous quantities of this gold, coming to the United

variation shown in Canadian bank note circulation and national bank note circulation, *supra*, p. 16; and also with the seasonal variation shown in federal reserve notes in circulation, *supra*, p. 66.

¹ This amendment is discussed in a previous section, *supra*, pp. 41-2. The amendment was recommended by the Federal Reserve Board in order to give more effective control over gold movements. *Annual Report of the Federal Reserve Board for 1916*, pp. 22-9.

States from Europe in the purchase of War supplies and in the transfer of capital fleeing here for safety, accumulated in our federal reserve banks.¹ From June 1914 to June 1920, our stock of monetary gold in the United States increased by 51 per cent. In time of war, when nations are fighting for their existence, they need food, clothing, armament and munitions much more than gold. A gold standard at that time was a luxury that the belligerent countries of Europe felt they could not afford. One result of this situation was that the value of gold throughout the world declined enormously; in other words, prices of commodities when expressed in gold greatly increased. Our American wholesale prices, for example, more than doubled between 1914 and 1920, and the American gold dollar lost about 60 per cent of its pre-War value, or purchasing power.

With the close of the War, however, the world was determined to return to the gold standard as soon as possible after its long and painful experiences with managed currency. This obviously meant a large increase in the demand for gold and, in consequence, a great increase in the value of gold in terms of goods—in other words, a great fall in commodity prices. There would have been nothing like enough gold to go around if the world were

¹ cf. *Annual Report of the Federal Reserve Board for 1915*, pp. 1-4, and *ibid.*, 1916, pp. 1-5.

to return to the gold standard at the high American price level of 1920. In late 1920 and early 1921 the price collapse expected by many economists came, and in one year our American wholesale commodity price level dropped about 44 per cent, representing an increase of approximately 80 per cent in the value of gold.

Gold Movements, Federal Reserve Credit and Money Rates

During the period of our participation in the War (1917-18), the monetary gold stock of the country remained at a relatively stable level, as the Chart shows. This was due chiefly to the gold embargo. The floating of War loans was facilitated by the enormous expansion in federal reserve credit. In part this expansion of federal reserve credit took the form of federal reserve notes, replacing the gold certificates in circulation; and in part it took the form of increased member bank reserve balances which formed the basis for a large increase of member bank credit. From the middle of 1919, when the embargo on the exportation of gold was removed,¹ until late in the spring of 1920, a large outflow of gold occurred. In this period, as the Chart shows, the expansion of federal reserve credit served to "cushion" the effect upon the money market of this gold outflow. Such a substitution

¹ *Annual Report of the Federal Reserve Board for 1919*, p. 50.

of federal reserve credit for gold in the credit base of the country prevented the extraordinary contraction of member bank credit which would otherwise have been caused by such a large gold withdrawal over a relatively short period of time. While the outflow of gold did induce rising money rates, it did not cause a scramble for reserves and particularly for gold by banks throughout the country, as would have been the case before the federal reserve system. As the gold flowed out of the country, member bank reserve balances tended to be reduced by the amount of gold exported. To replenish their reserves the banks had to rediscount with the federal reserve banks, in the absence of open-market purchases by the federal reserve banks on a sufficiently large scale to fill the gap made by the outward gold movement. This tended to tighten the money market and force orderly liquidation rather than the sudden panicky liquidation which might have resulted in the absence of the available resort to federal reserve credit.¹

The test of expansibility of federal reserve credit was clearly met during this period—first at relatively low rates of rediscount, in order to stimulate the marketing of United States government securities to finance the War;² and then later, at high rates, in order to cushion the effect of the large outflow

¹ *Annual Report of the Federal Reserve Board for 1923*, pp. 16-19.

² *ibid.*, 1918, pp. 4-38.

of gold, and at the same time to tighten the money market so as to bring about economic pressure counteractive to the outflow of gold.

A cardinal principle of central bank policy is to induce high money rates at times of excessive gold outflow, and this was the traditional policy in England before the War. Such high money rates tend to bring about the following counteractive tendencies:¹ (1) Foreigners indebted in New York are motivated to borrow elsewhere to pay off their debts; (2) people in this country having funds abroad and debts in New York are induced to bring home their funds; (3) people in this country who have debts in New York and the ability to borrow abroad are motivated to do so, thereby bringing funds to New York; (4) prices of securities in New York tend to fall sharply, making attractive bargains for informed outsiders; (5) people in this country holding foreign securities and having debts in New York are motivated to sell their securities abroad to pay their debts; (6) many foreign capitalists and bankers would be motivated by the high money rates in New York to place short-term funds there; (7) relatively quickly the pressure on import credits in New York would slow down imports,

¹ See Anderson, B. M., Jr., *The Gold Standard and the American Gold Tradition* (*Cbase Economic Bulletin*, November 20, 1931). Bagehot, Walter, *Lombard Street*, pp. 187-207; *Report of Committee on Finance and Industry*, presented to Parliament June 1931 (the "Macmillan Report"), pp. 95-6; and Kemmerer, Edwin W., *Money*, pp. 136-40.

while the credit pressure on producers in this country would force them to reduce prices and other costs, so that outsiders would buy our exports; and, finally, (8) higher discount and interest rates in New York and price declines of highly sensitive securities and commodities in the United States, by making gold increasingly valuable here, would stop its outflow. While it is true that tariffs and other internal as well as external factors impede the smooth operation of these adjusting forces, nevertheless they tend to operate as indicated.

*Relationship between Gold Movements, Fluctuations
in Federal Reserve Credit, and
Money in Circulation*

The federal reserve system, having demonstrated its ability to expand under these two sets of conditions, was now called upon to demonstrate its capacity for contraction during recessions of business activity and liquidation.¹ During 1920 federal reserve credit continued to expand, but, as explained above, at high rates of rediscount. The object was to meet overexpanded debtor conditions in the face of rapid business recession, and of "frozen" credits on large unsold commodity stocks. This credit accommodation served to tide over short-term indebtedness until such time as stocks of goods could be moved at lowered prices. By the

¹ See *Annual Report of the Federal Reserve Board for 1919*, p. 67.

end of 1920 liquidation set in very rapidly, resulting in the quick retirement of federal reserve credit. In part, this retirement of federal reserve credit was made possible by the inflow of gold which began at this time. In other words, member banks were using the imported gold to pay off their indebtedness to the federal reserve banks, rather than to increase their reserve deposits. The decline, however, in federal reserve credit was more rapid than the gold inflow. Thus, with declining business activity, the contractibility of federal reserve credit was established.

As may be seen from Chart VI, the inward movement of gold during the years 1922-25 was in the main equivalent to the increase in gold certificates and gold coin in circulation. In other words, this gold coming into the country went into circulation as money instead of being used as member bank reserve deposits. In the meantime, the volume of federal reserve notes in circulation declined about as much as the circulation of gold certificates and gold coin increased, leaving the total amount of money in circulation approximately as before. The retirement of federal reserve notes is reflected in part by a small decline in total federal reserve credit outstanding from 1922 to 1924; but, for the most part, the federal reserve credit released by the retirement of federal reserve notes went into member bank reserve balances. This explains the

upward movement of member bank reserves from 1922 to 1925 in the face of a declining volume of federal reserve credit outstanding.

Again, from the middle of 1927 until the middle of 1928, there occurred an outflow of gold, caused chiefly by the rapid return of the world to the gold standard. At this particular time gold was being sent for the most part to South American countries. This outflow of gold was made possible without affecting any corresponding decline in member bank reserves, because the member banks were able to substitute federal reserve credit for the gold; for, as a member bank's balances were drawn down because of gold exports, they were again replenished by the member bank either borrowing from the federal reserve bank or selling it government securities. During the latter half of 1927, as will be seen, the member banks were enabled to replace the gold withdrawals by the second method, inasmuch as during that time the federal reserve banks were increasing their open-market purchases of United States government securities. During the remaining part of this period of gold outflow, however, the member banks were forced to replenish their reserves at relatively high cost by rediscounting with their federal reserve banks; for not only were the federal reserve banks not increasing their open-market purchases of

United States government securities, but were rapidly reducing their portfolio of such securities.

The return flow of gold to this country from the end of 1928 to the fall of 1931 did not go to inflate member bank reserve deposits, but was offset in large part by retirement of federal reserve credit; and during 1930 a large amount went into circulation in the form of gold certificates.¹ With the exception of a brief but conspicuous rise in the autumn of 1929, member bank reserve deposits remained at a fairly constant level from the beginning of 1928 until the autumn of 1931, when they dropped off sharply. This point marks the climax of the second great trial of the federal reserve system to meet a major emergency.² When in the fall of 1931, approximately two years after the outbreak of the world economic crisis, about \$727 million net of gold was withdrawn from this country in two months' time, we experienced no disturbance of the gold standard. And, even though this was accompanied by domestic hoarding of paper money on a large scale, bank reserves were adequately replenished by expanding federal reserve credit. A comparable situation before the federal reserve

¹ This gold movement was caused largely by the economic depression in raw material producing countries, like Japan, Brazil, Argentina and other Latin American countries. *Annual Report of the Federal Reserve Board for 1930*, p. 6.

² For a detailed exposition of the complex factors involved, see *The Course and Phases of the World Economic Depression*, revised edition, published by the League of Nations, Geneva, 1931.

system was established would probably have caused a money panic; but, under the federal reserve system, it was possible to replace the outflowing gold and the hoarded currency by the expansion of federal reserve credit. That this occurred is clearly seen from the Chart.

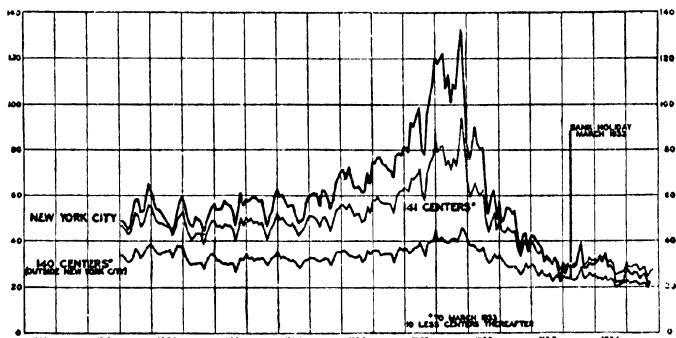
From the point of view of the factors underlying member bank reserves, therefore, the federal reserve system at this critical period operated as a strong stabilizing influence and made possible the maintenance of a free gold market in the United States in the face of unusually disturbed world conditions.

II

Member Bank Credit Expansion and Velocity of Deposits

While relative stability was preserved in the reserve funds of the money market, member bank credit, nevertheless, during the period from 1922 to 1931 showed certain unfortunate tendencies. It experienced periods of great expansion followed by periods of slow and stubborn liquidation, resulting in part from widespread bank failures. How could it happen that the primary reserve funds of the money market remained stable while member bank credits were not? The answer is given by Chart VII. The explanation is partly the great expansion

VELOCITY OF DEMAND DEPOSITS, 1919 to 1935



Data were computed by the Federal Reserve Bank of New York.

MONEY AND MEMBER BANK DEPOSITS (CALL DATE FIGURES)

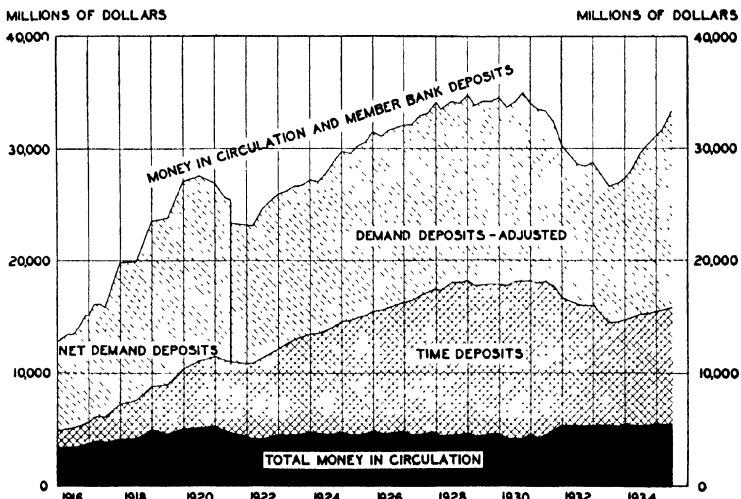


CHART VII

Showing the expansion of member bank credit and the huge rise in deposit turnover during 1928-29.

Demand deposits-adjusted include all member demand deposits other than interbank and United States government deposits, less cash items reported as in process of collection. Prior to December 31, 1935, cash items on hand but not in process of collection were also included. According to the Board of Governors, the volume of demand deposits-adjusted "may be said to represent in a general way the cash resources of the community placed on deposit with banks and readily available for use." The Board has recently calculated the demand deposits-adjusted of member banks for all call dates since June 1921, and these are shown on the Chart. For the years prior to June 1921, the less significant figures for net demand deposits have been used.

which took place in time deposits; but principally the enormous rise in the velocity of deposits.

Member Bank Credit and Time Deposits

Inasmuch as only a 3 per cent reserve was required against time deposits after 1917, as contrasted with 7 to 13 per cent reserves against demand deposits, there was a tendency to transfer to the time-deposit category funds which formerly were, and in most cases probably should have remained, in the demand deposit category. In this way, even though the primary reserve funds of the money market expanded but moderately during the period,¹ and probably no more than sufficient to compensate for the population growth of the country, still there occurred periods of immoderate inflation and deflation in security, real estate, and commodity prices, and member bank credit expanded from approximately \$20 billion in 1922 to over \$30 billion in 1931—an increase of approximately 50 per cent.

As may be seen from Chart VII, the stratum of time deposits was pushing up against demand deposits, constituting an ever-increasing proportion of total deposit liabilities; and thus representing a continuous process of diminishing the reserve

¹ The rapid rise in member bank reserves shown in Chart VI for the years 1917-20 was caused in part by increase in membership and the change in the law made by the amendment of 1917; although part of the increase, particularly in 1919, was due to inflation as already explained.

strength of the member banks. Furthermore, an undermining of the liquidity of member bank credit occurred during this period as the banks became involved more and more in the long-term capital market, through direct security loans, operating in their own bond departments or through affiliated security houses. To an ever-increasing extent bank credit was used to finance the distribution of securities, and the resulting inflation was of much the same character as the war-time inflation which, as we have seen, was based upon the marketing of United States government securities.¹

Velocity of Deposits

In the main, however, the great bank credit expansion of the years 1928 and 1929 is related to the phenomenon of deposit turnover; because this great increase in velocity of deposits represented an increased efficiency in our deposit currency, which circulated through bank checks, and by which something like 90 per cent of our total business in the United States is normally done. Just as the efficiency of a freight car depends not only upon the size of the car but also upon the speed at which it moves, so likewise does the efficiency of money in circulation—namely, the amount of money work

¹ See Kemmerer, Edwin W., *High Prices and Deflation*, pp. 14-30.

that a given quantity of money can do in a given time—depend upon the speed at which the money moves—in other words, the number of times the money turns over or passes from hand to hand in business transactions during the period. The same is true of bank deposits. The average amount of bank deposits subject to check held during the year in the banks of one hundred and forty-one leading cities of the United States is known, also the total volume of checks of individual depositors received by these banks in the course of each year is known. The volume of checks so received represents roughly the amount of transactions performed by check during the year. If we divide the total amount of check business thus performed in the course of a year by the average amount of deposits subject to check held by the banks during the year, we have the so-called “rate of deposit turnover” or deposit circulation. This is also termed velocity of deposits. For the year 1930, for example, the volume of checks so charged to individual bank accounts in the one hundred and forty-one leading cities of the United States was \$662 billion, and the average annual rate of turnover of the deposits for these cities was about 55. In Chart VII the velocity of deposits in New York City is shown separately from that of the other one hundred and forty leading cities. Also, a weighted average of the rate of deposit turnover for New York City and for the

other one hundred and forty leading cities is indicated.

Comparing the fluctuations in member bank deposits with the fluctuations in their annual turnover, it seems apparent that the expansion of the period 1919-20 was related chiefly to the volume of bank credit; while the expansion of the period 1928-29 was related chiefly to changes in deposit turnover. Deposit turnover in the banks of one hundred and forty leading cities increased from an average of 35 times a year in 1927 to an average of nearly 42 times in 1929; but the increase in turnover in New York City was far greater both absolutely and relatively. In New York City the deposit turnover increased from an annual average of 74.9 in 1927 to one of nearly 112 in 1929, and this velocity reached a peak of nearly 133 during October 1929. Here was an increase in the average rate of deposit turnover for New York City of 50 per cent in two years' time. For the most part this great increase in velocity of deposits was caused by speculation in securities, and represented the rapid transfer of funds from party to party through the call-loan market and the securities market. There was an enormous expansion during this period of bank loans on securities, and more particularly of open-market loans on securities in the form of brokers' loans. The open-market practice of making loans to brokers "for the account of others" made it pos-

sible to effect a great expansion of credit without a corresponding increase in bank deposits because the bank acted merely as agent in the making of such loans.¹ This expansion of brokers' loans "for the account of others" constituted an ever-present threat to the reserve position of the New York City banks because, whenever these outside individuals or corporations decided to withdraw their funds from the call-loan market, it became necessary for the New York City banks to "assume" the loans or face a sudden and drastic stock market crash.² A breakdown in the fall of 1929 was prevented only by the fact that the New York City banks did absorb these loans as rapidly as possible, so that call loans were never "frozen" during this period. The New York City banks, in turn, were enabled to do this only by reason of the fact that they could replenish their reserves with the federal reserve bank by rediscounting. The greatest and most drastic stock market liquidation in the history of the money market was thus survived without the credit breakdown which accompanied most panics before the federal reserve system.

III

Discount Rates and Open-market Operations

Although the federal reserve system was eminently successful during this period in maintaining

¹ See *Annual Report of the Federal Reserve Board for 1928*, pp. 2-10.

² *cf. ibid.*, 1929, pp. 9-12; and *Federal Reserve Bulletin*, November 1929, p. 703, and *ibid.*, December 1929, pp. 755-6.

a free gold market and in stabilizing primary reserves, the period cannot be said to have been a happy one. The claim of many of the monetary reformers that the severity of the business cycle would be lessened was not realized. The economic depression of 1920-21 was accompanied by widespread suffering, and the great depression beginning in late 1929 by even greater and more general suffering. It is true that the suffering was not aggravated by money panics, but the downward sweep after the summer of 1929 of the index of industrial production is eloquent as an indicator of the extent to which unemployment and distress pervaded the country. The question may be asked "What *can* central bank policy do in the face of such conditions?" The answer to this question is difficult; but an easier one to answer is "What has federal reserve policy done about it in this country?"

Discount Policy

Before the World War, it was generally assumed that changes in discount rates by central banks constituted the principal method of controlling the money market; and in the London money market in particular, attention had been focused for many years upon the use of the discount rate to maintain stability. It was natural, therefore,

that during the early years of the federal reserve system the discount rate was in the foreground in all discussions of the policies of the federal reserve banks. At the time of the abrupt deflation in 1920-21, it was thought by many that the discount rate was the principal factor in federal reserve control of the market.¹ However that may be, it will be seen from the discussion which follows that during the period since 1922 the federal reserve authorities have placed their chief reliance in open-market operations.

The lower part of Chart VIII compares the fluctuations in (1) the rediscount rate of the Federal Reserve Bank of New York, (2) the open-market rate on 4-6 months commercial paper, and (3) the "customer-bank" rate charged by commercial banks in New York City.²

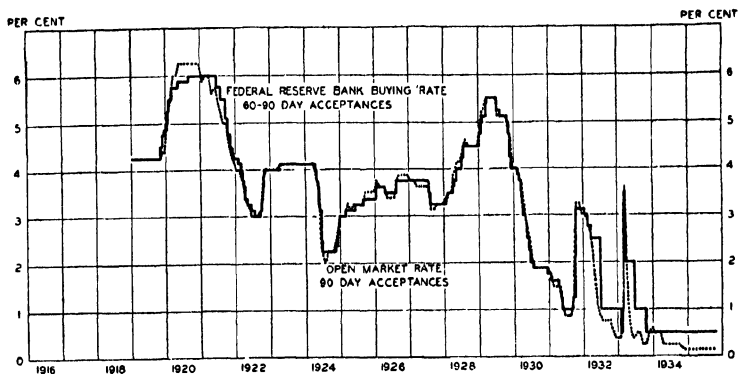
Low discount rates compared with open-market rates on commercial paper, as well as compared

¹ cf. Beckhart, B. H., *Discount Policy of the Federal Reserve System*.

² For a more complete study of the "customer-bank" money market see Riefler, W. W., *Money Rates and Money Markets in the United States*, Chaps. iv and v.

The customer-bank rates are those charged by reporting banks to their own customers as distinguished from the open-market rates (i.e., the 4-6 months commercial paper rates), and as distinguished from the discount rate of the Federal Reserve Bank of New York which is the rate it charges to member banks. The customer-bank rates are averages based on rates reported for three types of customers' loans—commercial loans, and demand, and time loans on securities. The method of computing the averages takes into account (a) the relative importance of each of these three types of loans and (b) the relative importance of each reporting bank, as measured by total loans. cf. *Annual Report of the Federal Reserve Board for 1930*, p. 83.

FEDERAL RESERVE BANK OF NEW YORK ACCEPTANCE RATE AND OPEN MARKET ACCEPTANCE RATE



DISCOUNT RATE OF FEDERAL RESERVE BANK OF NEW YORK AND MARKET RATES

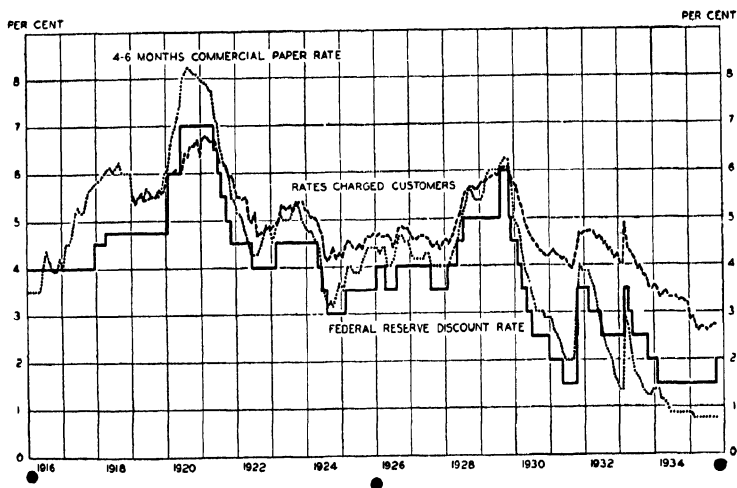


CHART VIII

The data on the discount rate of the Federal Reserve Bank of New York were taken from the *Annual Reports of the Federal Reserve Board, passim*. Data on rates charged customers were taken from Riefler, W. W., *Money Rates and Money Markets in the United States*, p. 232; and *Federal Reserve Bulletin, passim*. The data on 4-6 months commercial paper rates were taken from *The Review of Economic Statistics*, 1919, p. 94; 1921, p. 5; 1923, p. 152; from the *Annual Reports of the Federal Reserve Board, passim*; and from the *Federal Reserve Bulletin, passim*. The data on the buying rate for acceptances of the Federal Reserve Bank of New York were taken from the *Annual Reports of the Federal Reserve Board*, and the *Federal Reserve Bulletin, passim*. The data on open-market acceptance rates were obtained from the *Annual Reports of the Federal Reserve Board*, and from the *Federal Reserve Bulletin, passim*.

with the average rates charged customers of New York City banks, appear to have been a fairly consistent practice not only during the War years, 1917-18; but also during most of the period here under discussion. Although the New York Federal Reserve Bank's discount rate was maintained above the commercial paper rate during the latter half of 1932, there is only one outstanding occasion when its discount rate was clearly used as an instrument of direct control. This was the drastic increase from $4\frac{3}{4}$ per cent early in 1920 to 7 per cent by the middle of the same year—a point considerably higher than the customer-bank rate; although lower than the open-market rates on commercial paper prevailing at that time. Superficially viewed, the sharp rise in the discount rate in the fall of 1929 shown in the Chart appears to indicate its use for control purposes; but as a matter of fact this increase, drastic as it was, merely brought the discount rate into accord with the prevailing market rate. It was thus a belated "following" of the market rate, rather than a positive measure for control of the market. On the rapid decline, however, from the autumn of 1929 to the summer of 1931, the Bank's rate slightly preceded the market rate.

It may be concluded that the discount rate policy of the Federal Reserve Bank of New York for most of this period was passive, with the exception of the

year 1920. The explanation of this situation is given in the following discussion of open-market operations of the federal reserve banks.

Open-market Operations

The fluctuations in the buying rate of the Federal Reserve Bank of New York on 60-90 day acceptances, compared with those in the open-market rate on 90 day acceptances, are shown in the upper part of Chart VIII. Inasmuch as the acceptance market has been dependent upon the reserve banks to purchase a large proportion of the total volume of bills created, market rates on acceptances have not varied greatly from the buying rates established by the federal reserve banks.¹ The supply of open-market funds available during this period for investment in bills at the low rates which prevailed was for the most part insufficient to absorb all the bills offered, and hence the federal reserve banks, through the Federal Reserve Bank of New York, provided at relatively low rates, the funds necessary to absorb these bills. Under such circumstances the open-market rate could not move far above or below the federal reserve bank rate. There is to be noted, nevertheless, at times a lag in the buying rate of the federal reserve banks behind the open-market rate. This seems to indicate a passive policy

¹ A more complete explanation of this relationship is contained in Riefler, W. W., *op. cit.*, pp. 21-3.

on the part of the federal reserve bank authorities—that is, the policy at these times appears to have been to let the federal reserve bank buying rate “follow the market.” The federal reserve banks adjusted their participation in the acceptance market to the conditions of the market by lowering their buying rate whenever it seemed necessary to do so in order to support the acceptance market.¹ When the market was rising, the federal reserve bank buying rate lagged sufficiently to enable the surplus of bills in the market to be absorbed by the federal reserve banks. If the federal reserve bank buying rate on acceptances was being used as an instrument of control, it would have risen in advance of the open-market rate, and vice versa.

The fact that the federal reserve banks during this period stood ready to purchase all eligible acceptances at a given published rate was an important aspect of the open-market operations of the federal reserve banks. Another important aspect was the purchase and sale by the federal reserve banks of United States government securities.

Importance of Open-market Purchases and Sales of United States Government Securities

It should be noted that, in the case of rediscounting as well as in that of the buying of accep-

¹ But see Spahr, Walter E., *The Federal Reserve System and the Control of Credit*, pp. 35-59, for a somewhat different interpretation of the relationship between discount rates and open-market operations.

tances, the function of the federal reserve banks is essentially indirect and passive. In other words, they set a rate at which anyone (banks in the case of rediscounting and either banks or acceptance dealers in the case of acceptance purchases) may go to the federal reserve banks and rediscount or sell. The initiative in both cases lies outside the federal reserve bank. The amount of federal reserve credit in the money market is not increased if federal reserve banks lower their rediscount rate or the acceptance buying rate, unless that reduction in rate is followed by increases in rediscounting by member banks or increases in the amount of acceptances offered to the federal reserve banks.

On the other hand, in the case of federal reserve bank open-market purchases or sales of United States government securities, the action is initiated by the federal reserve banks themselves. The operations of the federal reserve banks in United States government securities are positive, therefore, as they actually buy or sell such securities in the market at current prices. The effect of federal reserve bank policy, as put into practice through purchases or sales of United States government securities, is immediate and positive, resulting in increases or decreases in federal reserve credit outstanding without any necessary initiative on the part of member banks or parties outside the federal reserve banks. For this reason, much reliance was

placed upon the purchases and sales of United States government securities as a means of enforcing federal reserve control over the money market during the years 1922 to 1933, inclusive.

Another reason often advanced in favor of the use of purchases and sales of United States government securities by the federal reserve banks, rather than changes in the discount rates, as a means of controlling the money market, is that the use of the discount rate is more likely to result in sharp and often undesirable psychological reactions. Just as in taxation, indirect taxes produce revenues less painfully than do direct taxes, so in the control of the money market, purchases and sales of United States government securities by the federal reserve banks accomplish their purposes as effectively as would changes in the discount rate and usually more gradually and with less public irritation and criticism.

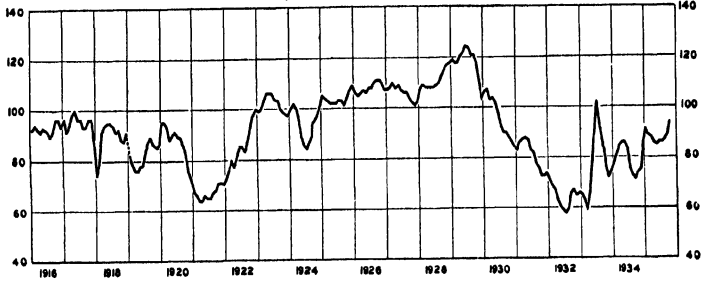
IV

Federal Reserve Policy and Business Activity

About 1922 there began to emerge something like a definite policy on the part of the federal reserve authorities; and, as may be seen from Chart IX, there appears from that time a more or less consistent relationship between the various components of federal reserve credit and business activity as measured by the index of industrial

INDEX OF INDUSTRIAL PRODUCTION

(1923-1925 AVERAGE = 100)



PRINCIPAL ITEMS OF FEDERAL RESERVE CREDIT OUTSTANDING

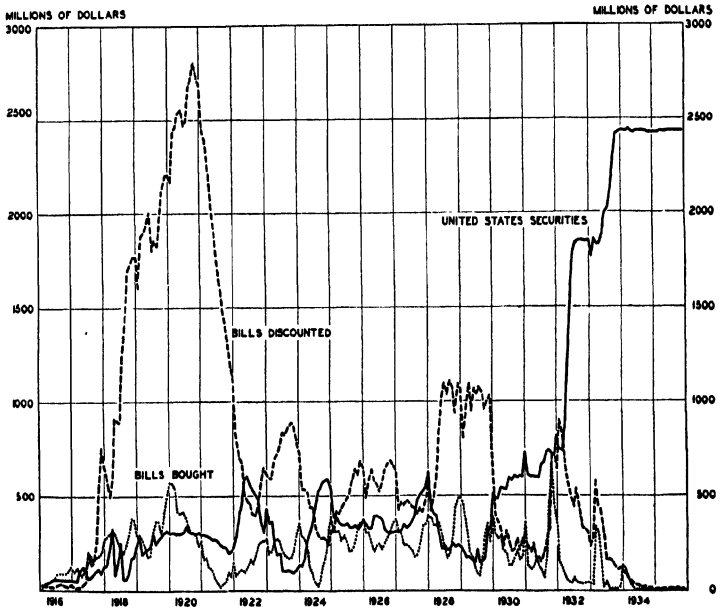


CHART IX

Presenting a comparison of federal reserve policy and business activity.

production. While the interests of foreign countries have at times played an important part in determining federal reserve action, the policies of the federal reserve authorities have been dominated by domestic considerations. In Chart IX the index of industrial production¹ is shown in the upper part. In the lower part are shown the principal items of federal reserve credit outstanding. These are: (1) bills discounted, which includes the member bank collateral loans; (2) bills bought, which means essentially the federal reserve open-market purchases of bankers' acceptances;² and (3) United States government securities bought, which means the portfolio of open-market purchases of United States government securities held by federal reserve banks.³

Since the beginning of 1922, federal reserve policy has centered about open-market operations

¹ Federal Reserve Board, Index of Industrial Production, 1919-35, see *Annual Report of the Federal Reserve Board for 1934*, pp. 186-91 and *Federal Reserve Bulletin*, December 1935, p. 815. The Index of Industrial Production 1916-19 is from *Standard Statistics Bulletin*, January 1932, p. 159.

² See *supra*, pp. 52-4. Also for a more complete discussion of the acceptance market see Beckhart, B. H., and Smith, James G., *The New York Money Market*, Vol. III.

³ The only other form of federal reserve credit of consequence is the so-called industrial advances which may be made directly to industries requiring working capital. These advances made under authority of section 13b incorporated in the Federal Reserve Act, June 19, 1934, began in August 1934. To date the volume of such advances has been small; the month-end average amount outstanding during 1935 was only \$27.6 million.

rather than the discount rate.¹ The money market was controlled mainly through the open-market operations of the federal reserve banks, and particularly through purchases and sales by them of government securities. Then the federal reserve discount rates were forced up or down by the open-market operations. With the exception of the autumns of 1924, 1928 and 1931 and of the early months of 1933 federal reserve bank policy has not been reflected to any substantial extent in open-market purchases of acceptances. Such purchases have been dictated rather by the exigencies of the acceptance market and the desire of the federal reserve authorities to develop this market. For this reason, a brief discussion of the relationship of the heavy line on the Chart, representing the portfolio of the United States government securities held in the federal reserve banks, and business activity, will by and large serve the purpose of describing federal reserve policy during the period 1922 through 1931.

*Relationship between Member Bank Borrowing and
Federal Reserve Bank Security Purchases*

At the beginning of 1922 much of the world, including England, Sweden, Netherlands, Japan, Italy, Germany, Austria and Australia, was in a state of business depression. The United States

¹ See *Annual Report of the Federal Reserve Board for 1924*, pp. 10-12.

had begun to emerge from depression; France, Belgium and one or two other countries were relatively prosperous. Easy credit conditions gave promise of bringing the world out of the depression and this was particularly true of the United States. An easy credit policy was, therefore, followed by the federal reserve authorities, through the increase of federal reserve bank holdings of United States government securities, as shown in the Chart. This policy, along with the gold flowing in during the year, enabled member banks to pay off their indebtedness at the federal reserve banks and, in addition, to increase their reserve balances with federal reserve banks. By the middle of 1922, however, the continued inflow of gold seemed to have been considered a sufficient stimulus to member bank credit expansion. In fact, the extraordinarily rapid rise about that time in the index of industrial production seemed to presage a boom. The federal reserve easy credit policy was reversed to a relatively firm credit policy and United States government securities were heavily sold by the federal reserve banks. As the securities were sold, member bank balances were by that amount depleted and this forced the member banks to rediscount with the federal reserve banks, that is, to borrow from them (see in Chart IX the rise in bills discounted with the decline in United States government security holdings of the federal reserve banks).

Business activity reached its peak late in the spring of 1923, followed by the downward movement culminating in the "minor depression of 1924."

By 1924, all of the more important countries, with the exception of Japan, had emerged from the depression of 1921 and the world was in a relatively prosperous condition—a minor depression taking place in the United States. Even though much of the world was prosperous, it appeared to the federal reserve authorities safe to follow an easy credit policy, in view of the minor depression in this country, and for the purpose of helping England to return to the gold standard. The federal reserve policy, therefore, was to purchase government securities at a fairly rapid rate throughout most of the year 1924.¹ This enabled member banks again to pay off much of their indebtedness to federal reserve banks and to expand credit on a cheaper credit base.

¹ Following is the comment of the Federal Reserve Board concerning its policy during 1924: "At the time when the open-market purchases were made there was a recession in industrial activity, the attitude of the business community was hesitant, and there was no evidence of the growth of speculation. Open-market purchases during this period served to build up a portfolio of securities and to increase the proportion of outstanding reserve bank credit under the direct control of the federal reserve banks. By these purchases the reserve banks placed themselves in a position, through the subsequent sale of securities in case it should become desirable, to cause member banks to discount and to bring a larger part of the outstanding reserve bank credit under the influence of the discount rate." See *Annual Report of the Federal Reserve Board for 1924*, p. 12.

Somewhat alarmed by the spurt in business activity which followed and also by the large amount of speculation in stocks and bonds, the federal reserve authorities early in 1925 sold government securities rather heavily and thereby made credit conditions firmer. This, together with an outflow of gold in the spring of 1925, forced member banks once more to rediscount with their federal reserve banks. From the course of the index of industrial production, this tightening of the money market seemed to have the desired effect of levelling off the boom and, in fact, causing a slight recession. Conditions seemed to have been fairly well stabilized at a high level of prosperity during 1926 and the first part of 1927.¹ During the summer and fall of 1927, some recession appeared in the index of industrial production for the United States. However, many of the important countries of the world were riding on the crest of boom times, including Australia, England, Germany, and Poland. But Italy, Japan, and Norway were depressed.

*Federal Reserve Credit and Security
Speculation*

A striking characteristic of the year 1927 from the point of view of the United States was the huge flotations of foreign and domestic securities which

¹ *Annual Report of the Federal Reserve Board for 1926*, pp. 1-3, and *ibid.*, 1927, pp. 1-3.

assumed record-breaking volume.¹ Still it did not seem that speculative activity was assuming dangerous boom proportions, and considering the slight business recession in this country in 1927, the federal reserve system eased credit conditions by the rapid purchase of government securities, beginning in the forepart of 1927. To some extent this policy was due to the desire to cooperate internationally to help the world maintain the gold standard and particularly to help England complete the deflation necessary to enable her to clinch her recently re-established gold standard.² At any rate, this easy credit policy was continued by the federal reserve banks throughout the remainder of the year 1927. Instead of member banks using this credit, however, as they had on other similar occasions, to reduce their indebtedness to the federal reserve banks, they used it as a basis for the expansion of security loans.³

Inflation in the securities market, thus stimulated, was an object of great concern to federal reserve authorities and early in 1928 federal reserve policy was reversed and the federal reserve banks began to sell rapidly their holdings of United States government securities. This, accompanied by an outflow of gold (see Chart VI), had the effect of

¹ *ibid.*, 1927, pp. 5-8, and 1928, pp. 1-3.

² *ibid.*, 1927, p. 10.

³ *ibid.*, pp. 5-6 and 10-11.

tightening the money market and forcing member banks to rediscount with their federal reserve banks. The boom seemed to have been levelled off by late spring and early summer of 1928, as the index of industrial production shows. There also had been a significant pause in stock market speculation, in the rise of security prices and in loans on securities. At this time, the late summer and fall of 1928, federal reserve policy changed. A halt was called in the sale of United States government securities; and not only that, but unusually large purchases of bank acceptances were made—more than enough to take care of the seasonal requirements—and this so eased the credit situation that member banks were able to reduce their indebtedness at federal reserve banks in the late summer and fall of 1928.¹ This was accompanied by the resumption of the business boom, as indicated by the extraordinary rise in the index of industrial production, as well as by a resumption of the stock market boom.

Experiment with "Moral Suasion"

About the beginning of 1929, the federal reserve authorities resumed their tight-money policy, but by this time the country was in the midst of a "runaway market." The boom collapsed of its own weight in the fall of 1929. This tight-credit policy, from the end of 1928 to the late summer of 1929,

¹ cf. *Annual Report of the Federal Reserve Board for 1928*, pp. 6-7.

was carried out by a much larger reduction in federal reserve bank holdings of acceptances than the normal seasonal reduction, and also by some sales of United States government securities.

In addition to the above-mentioned measures, some of the federal reserve banks wanted to raise their rediscount rates. For the reason that the system's portfolio of government securities was greatly depleted by the sales made in the first half of the year 1928, these federal reserve banks felt that "the main reliance in a further firming of money conditions must have been further marking up of federal reserve discount rates."¹ However, the Federal Reserve Board was "not disposed to regard favorably further increases of the discount rate as the appropriate method of dealing with the situation"; but preferred to exercise "direct pressure" or "moral suasion" upon the member banks to restrict the wild expansion of speculative credit. Accordingly, the Board addressed letters to the federal reserve banks, under date of February 2, 1929, calling attention to the fact that security speculation was assuming dangerous proportions, which made it "incumbent upon the federal reserve banks to give constant and close attention to the situation in order that no influence adverse to the trade and industry of the country shall be exercised by

¹ cf. *Annual Report of the Federal Reserve Board for 1929*, p. 2.

the trend of money conditions, beyond what may develop as inevitable.

“The extraordinary absorption of funds in speculative security loans which has characterized the credit movement during the past year or more, in the judgment of the Federal Reserve Board, deserves particular attention lest it become a decisive factor working toward a still further firming of money rates to the prejudice of the country’s commercial interests. . . . A member bank is not within its reasonable claims for rediscount facilities at its federal reserve bank when it borrows either for the purpose of making speculative loans or for the purpose of maintaining speculative loans.

“The Board has no disposition to assume authority to interfere with the loan practices of member banks so long as they do not involve the federal reserve banks. It has, however, a grave responsibility whenever there is evidence that member banks are maintaining speculative security loans with the aid of federal reserve credit.”¹

Federal Reserve Credit and the Depression

After the collapse in the early fall of 1929, credit stringency and perhaps something worse was prevented by the federal reserve banks, through their rapid purchase of United States government securities, which enabled member banks to assume

¹ *Annual Report of the Federal Reserve Board for 1929*, p. 3.

temporarily the heavy indebtedness in the brokers' loan market shifted to them, as interior banks, corporations, and individuals withdrew their funds from the market. Later in the year, the member banks were enabled to reduce their borrowings from the federal reserve banks. As liquidation progressed and the depression came to be of increasing severity, the easy credit policy was continued until by the end of 1930 federal reserve bank holdings of United States government securities were of record-breaking volume up to that time and member bank borrowings were at very low figures.

By the year 1930, practically every important country in the world was suffering from the depression, with the exception of France, and by 1931, France also was definitely among the sufferers. The world financial panic resulted in the huge withdrawals of gold from the United States in the fall of 1931 already noted, and it was the federal reserve policy to permit this gap to be filled, in part by member bank borrowing, in part by purchases of acceptances much greater than seasonal requirements, and in part by increasing its holdings of United States government securities. Meantime the federal reserve system made possible extremely easy credit conditions by holding its large portfolio of United States government securities and by maintaining low discount rates. Although money rates and rediscount rates advanced somewhat in

the autumn of 1931, these higher rates did not assume the proportions of penalty rates such as would normally be associated with a heavy outward movement of gold. On December 1, 1931, the discount rates of the federal reserve banks were lower than central bank rates in all the important countries with the exception of France and Belgium.¹

In summary, it may be pointed out that, with the exception of the rapid easing of the money market in the fall of 1927 because of only a minor recession in business activity and in the face of security flotations of record volume; and, with the exception, also, of the wavering policy in the fall of the year 1928, the policy of the federal reserve banks during this period was fairly consistent with the generally accepted principles of central bank practice.

¹ *Federal Reserve Bulletin*, December 1931, p. 682.

CHAPTER XI

THE REORGANIZATION OF THE FEDERAL RESERVE SYSTEM DURING THE EARLY YEARS OF THE WORLD ECONOMIC DEPRESSION

THROUGHOUT the financial world confidence received a rude shock when Great Britain departed from the gold standard on September 21, 1931. Almost at once the United States was subjected to an enormous loss of gold, its basic money. Within the short space of six weeks, our gold exports totaled about \$727 million. Only the existence of the federal reserve system prevented this huge outward flow of gold from causing a panic and severe contraction of bank credit.

The extent to which federal reserve credit was substituted for the gold that left the country, thus compensating the forces making for deflation, is indicated by the figures on the following page covering the amount of federal reserve credit outstanding on two dates six weeks apart.

That the increase in total federal reserve credit outstanding was somewhat greater than the decline in our monetary gold stock may be attributed to domestic banking difficulties, which were increased by the general uncertainty and distrust of the period.

	Sept. 16, 1931	Oct. 28, 1931	Change During Period
	(In millions of dollars)		
Bills discounted	\$263	\$717	+\$454
Bills bought	218	725	+ 507
U. S. government securities	742	727	- 15
Other reserve bank credit	56	42	- 14
Total federal reserve credit outstanding	\$1,279	\$2,211	+\$932

After the United States had successfully met the crisis, gold again began to flow into this country and during November and December 1931, about \$170 million was added to our total gold stock. As a result of these imports and others of considerable amount which had taken place early in 1931, the net decline in the course of the year was reduced to approximately \$135 million.

The Glass-Steagall Act

The unusually heavy gold exports in September and October 1931, and the increasing volume of federal reserve notes in circulation were among the principal reasons for the enactment of the Glass-Steagall Act of February 27, 1932, amending the federal reserve law.¹ This legislation consisted of

¹ For a detailed discussion of the provisions of this Act, see pp. 67-9 and pp. 76-8.

two parts, the more important of which authorized the use of United States government obligations as collateral security for federal reserve notes. The enactment of this emergency provision allayed public fears that the country might be driven off the gold standard while still holding an almost unprecedented monetary gold stock.

The other part of the Glass-Steagall Act added two new paragraphs to the Federal Reserve Act.¹ It was the purpose of these additional sections to allow member banks, in unusual and exigent circumstances, when they did not possess eligible paper, to obtain credit from the federal reserve banks by the pledge of other assets that were satisfactory to the reserve banks concerned. This type of loan, however, could not be used by a federal reserve bank as collateral for federal reserve notes.

As soon as the Glass-Steagall Act became law, the federal reserve banks were enabled to increase their purchases of government securities very substantially. The effect of such purchases was to put additional federal reserve notes and deposits at the disposal of the member banks.

Total holdings of government securities had been about \$800 million at the end of 1931 and were little changed until the passage of the Glass-Steagall Act. From that time on, they were increased at a rapid rate, sometimes to the extent of \$100 million

¹ Sections 10a and 10b.

per week, until they totaled approximately \$1,800 million at the end of June 1932.¹ The effect of these purchases upon the volume of federal reserve credit outstanding was as follows:

	Feb. 24, 1932	June 29, 1932	Change During Period
	(In millions of dollars)		
Bills discounted	\$835	\$470	-\$365
Bills bought	133	64	- 69
U. S. government securities	741	1,801	+1,060
Other reserve bank credit	25	11	- 14
Total federal reserve credit outstanding	\$1,734	\$2,346	+\$612

These open-market operations represented an attempt to put an end to the deflation of bank credit that had been proceeding at a rapid rate since 1929. It was the belief of those charged with the determination of federal reserve policy that the large balances put into the hands of the member banks by such operations would be used by them as the basis for new loans to their customers or for purchases of bond investments. Either use, it was reasoned, would tend to end the spiral of deflation that was carrying prices of goods, commodities, and securities continually downward.

¹ *cf.* Chart IX, p. 143.

This experiment failed in its primary purpose. Its chief effects were to allow the member banks to reduce their indebtedness to the reserve banks and to cushion the credit structure when large exports of gold began again early in 1932. The monetary gold stock of the United States was approximately \$4,354 million on February 29, 1932 and fell to \$3,919 million by June 30, a decline of \$435 million within the relatively short period of four months. A large part of this loss of gold was probably due to the open-market operations already described and to agitation in Congress in favor of inflationary measures, including that for the immediate cash payment of the soldiers' bonus. Of course, once the gold movement had set in, it would have resulted in a contraction of member bank credit if it had not been offset by a policy of credit expansion on the part of the federal reserve banks.

*Extension of the Circulation Privilege of
National Bank Notes*

As a temporary measure, the Federal Home Loan Bank Act of July 22, 1932 (section 29), granted the circulation privilege, for a period of three years, to all United States government bonds bearing an interest rate of not more than 3 3/8 per cent.¹ This meant that any national bank could

¹ For the provisions of this Act relating to the issue of national bank notes and a discussion thereof, see *Federal Reserve Bulletin*, August 1932, pp. 478-80 and 527.

deposit the specified bonds with the Treasurer of the United States, pay the necessary tax, and issue national bank notes against the deposited bonds to an amount that would bring its total issue up to the amount of its paid-up capital. This made it possible to expand the existing national bank note circulation (of about \$670 million) by about \$900 million. For many years, the circulation privilege had been enjoyed by only limited pre-War issues of 2 per cent bonds. The importance of the extension of the privilege at this particular time was that it enabled national banks which held the securities affected by the legislation to issue additional national bank notes, instead of borrowing at the reserve banks to obtain federal reserve notes. In practice, however, very limited use was made of the additional circulation privilege, for the member banks had a substantial and increasing volume of idle funds in the form of excess reserve balances. Between June 30 and December 31, 1932, the circulation of national bank notes increased to the extent of only \$119 million. During the same period, total money in circulation declined by \$20 million, indicating that the increased volume of national bank notes was more than offset by decreases in other kinds of money outstanding, notably federal reserve notes. To the extent that this tendency continued, it allowed member banks

to reduce their indebtedness to the federal reserve system.¹

Loans to Individuals, Partnerships, and Corporations

From the beginning the federal reserve banks had been known as "bankers' banks." Excepting only their open-market operations, their dealings were almost exclusively with the government and with the member banks,² never with the general public. The first departure from this tradition came as a result of the demand for increased credit accommodation at the bottom of the depression. (As part of the Emergency Relief and Construction Act of July 21, 1932, Congress passed an amendment to section 13 of the Federal Reserve Act permitting the reserve banks to make direct loans to individuals, partnerships, and corporations. The reserve banks were authorized, after obtaining the approval of not less than five members of the Federal Reserve Board, to discount short-term notes, drafts, and bills of exchange for any individual, partnership, or corporation unable to obtain the accommodation from other banking institutions.) The first loan under this provision of the law was made on August 4, 1932. By the end of the year 23 such advances had been made in a total amount of about \$859,000.

¹ For details regarding the subsequent retirement of all national bank notes, see pp. 223-5.

² Including, for clearing purposes, some so-called clearing member banks.

Additional legislation to give the public direct access to the reserve banks was included as part of the Emergency Banking Act of March 9, 1933. This Act, among its various provisions, further amended section 13 of the Federal Reserve Act to allow the reserve banks to make advances, for periods not exceeding 90 days, to individuals, partnerships, or corporations on their promissory notes when secured by the direct obligations of the United States government.)

(Although some criticism has developed with reference to these provisions for direct loans, particularly from member banks which are loathe to be compelled to compete for customers' business with the central banking system, the reserve banks have made few such advances, and direct loans have been unimportant up to the present time.) The highest total of such loans outstanding since the legislation authorizing them was first enacted in 1932 came to less than \$2 million.

Capital Loans to Industries or Commercial Businesses

(Since many small industrial and commercial enterprises had suffered severe shrinkages in their working capital during the depression, Congress passed an act on June 19, 1934, allowing such units to obtain capital loans directly from the federal reserve banks when other sources of credit are

closed to them. This legislation added section 13b to the Federal Reserve Act. Under the authority here granted, the reserve banks may make loans to, or purchase the obligations of, established industrial or commercial enterprises which are unable to receive financial assistance through regular banking channels. Such loans or credits cannot have a maturity exceeding five years.)

The federal reserve banks are also authorized by this legislation to participate with member banks or other financial institutions in making working capital loans to industry. Finally, it is provided that the federal reserve banks may obligate themselves to take over working capital loans made by member banks or non-member banks and to assume an agreed proportion of any resulting loss, but in no case more than 80 per cent of the amount of the original loans.

The legislation provided for the establishment in each federal reserve district of an industrial committee to assist in making such advances and commitments. This committee must have not less than three nor more than five members, all of whom are actively engaged in some industrial undertaking. All applications for industrial advances require the approval of the local committee before transmittal to the federal reserve bank for action. Notwithstanding the favorable terms upon which such credit accommodations can be obtained,

relatively few enterprises have taken advantage of the opportunity. The total amount of industrial advances by the reserve banks outstanding on December 31, 1935 was only \$32,493,000.

In order to enable the federal reserve banks to make such working capital loans to industrial and commercial enterprises, Congress authorized the Secretary of the Treasury to return to each reserve bank its pro rata share of the \$139,299,557 subscription to the stock of the Federal Deposit Insurance Corporation made by the federal reserve banks.¹ Such payments were to be added to the surplus account of the individual reserve banks, since funds for the stock subscription had originally been taken from surplus. The funds needed by the Treasury to fulfil the intent of this provision of the law were appropriated out of the gold increment or "profit" accruing to the government as a result of the legal devaluation of the dollar on January 31, 1934. Up to June 30, 1935 total payments to the reserve banks under this authorization amounted to \$20,931,857.

The Banking Panic of 1933

(Even during the prosperous years of the 1920's large numbers of banks failed year after year. The total number of failures during the years 1921-29 inclusive came to 5,714 banks, which held deposits

¹ *Infra*, p. 227.

of \$1,626 million. In only two years of these nine were there less than 500 bank failures, and in no year were the deposits of banks that failed less than

RECORD OF BANK FAILURES BY CALENDAR YEARS, 1921 to 1932

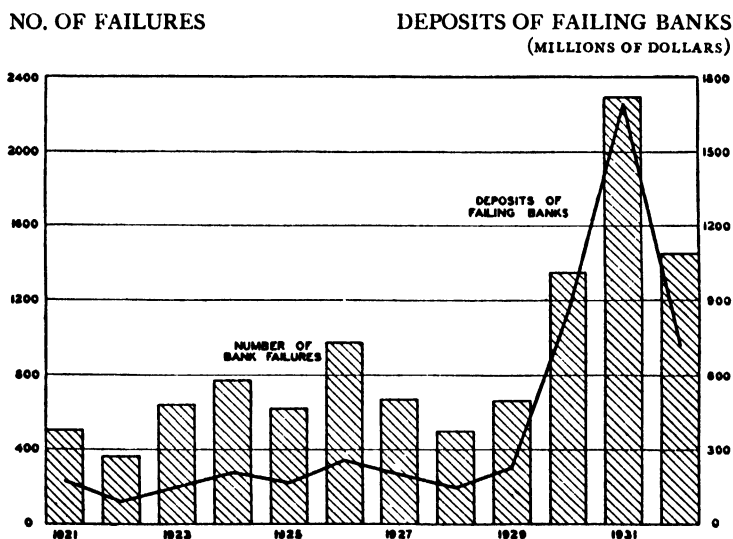


CHART X

\$110 million.) This disgraceful record was unequalled in any other country where modern banking had developed and the bank check had come into general use. The failures not only inflicted great hardship and undeserved loss on many thousands of innocent depositors, but also greatly

¹ For detailed figures see *Annual Report of the Federal Reserve Board for 1934*, p. 167.

impeded the orderly functioning of the nation's economic life. This was particularly true in a country like the United States where bank deposits circulating through checks constitute the exchange media for over 90 per cent of the nation's business.

(The reasons for the failures were many and varied. Some of the most important were the unwise extension of mortgage credits on farm land during the War and post-War boom,¹ the unhealthy competition between the national and state banking systems leading to a leveling down of their respective banking standards, the small amount of capital required to start state banks in many sections of the country, the growth of excessive banking facilities, and, finally the incompetence of large numbers of those in charge of our banking institutions.)

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

¹ During the period of the World War and for a short time immediately following, when prices of agricultural products reached spectacular heights under the pressure of European war demands and of inflation, the prices of agricultural lands in many parts of the United States were boosted to extravagant figures by large purchases of land on the part of farmers, who bought it largely on mortgage credit—in other words, “on a margin.” Between 1910 and 1920 the farm mortgage debts of the United States increased from \$3,320,470,000 to \$7,857,700,000, an increase of 137 per cent, most of which took place in the latter years of the period. cf. Wickens, David L., “Farm Mortgage Credit,” U. S. Department of Agriculture, *Technical Bulletin no. 288*, February 1932, p. 4.

as the basis for a large part of the outstanding bank credit. To a banking system already in a weakened condition this deflation of prices proved disastrous. In 1930, 1,345 banks with deposits of \$865 million were unable to meet the demands upon them and were compelled to close their doors. In 1931, the number of failing banks rose to 2,298 and the deposits thereby immobilized or permanently lost totaled \$1,692 million. The number of failures increased greatly in the fall of the year when confidence everywhere was shattered by England's departure from the gold standard.

The government attempted to alleviate the situation in October 1931, by the formation of the National Credit Corporation. This institution was financed by the banks themselves and was designed to extend credit on sound assets which were, nevertheless, ineligible for rediscount at the federal reserve banks. When this assistance proved insufficient and the emergency became even more acute, the Reconstruction Finance Corporation was established by act of Congress and began to operate in February 1932. It was a primary function of this Corporation to make sound loans to banks, insurance companies and railroads in order to bolster up some of the weakest places in the credit structure of the country. Within the single year 1932 the Reconstruction Finance Corporation extended loans of \$850 million to approximately

5,600 banks and trust companies that needed such assistance. Of this total amount, \$600 million was outstanding at the end of the year. Largely because of the assistance of the Reconstruction Finance Corporation the number of bank failures was sharply reduced in 1932 as contrasted with the unprecedented total of the previous year. The record of bank failures and deposits of failing banks by calendar years from 1921 to 1932 is shown in Chart X.

Late in 1932 the number of bank failures began to increase once more, however, and this trend continued through the first weeks of 1933. In certain places where banking difficulties were especially acute, moratoria on bank payments were introduced under the name of "bank holidays." The first of these was put into effect in Nevada in October 1932, but escaped general notice in the eastern section of the country. A few weeks later local moratoria were declared in various cities in Illinois and Iowa, and on January 20, 1933, the legislature of Iowa declared a virtual moratorium by authorizing the State Superintendent of Banking to operate any bank that could not meet its obligations in full, without forcing it to go into receivership.

As public knowledge of these banking difficulties became general, there was a substantial increase in the hoarding of currency. This was reflected in a

sub-normal return of currency to the banks after the Christmas holidays. A temporary banking holiday in Louisiana on February 4, added new fuel to the flames of public distrust and led to substantial withdrawals of currency from the banks in other sections of the country. The condition of many banks already seriously impaired was further weakened by the rapid shifting of funds on the part of large business concerns from one part of the country to another in response to vague rumors and fears concerning banking conditions in various cities.

On February 14, 1933, the governor of Michigan declared a state-wide bank holiday because of the financial situation in Detroit, where some of the leading banks had a large proportion of their assets tied up in real estate loans. The effects of this moratorium in an important industrial state were national in scope, for funds were withdrawn from numerous banks elsewhere to be sent to Michigan or to be used in meeting payments that would normally have been made out of balances in the Michigan banks. A few days later, on February 25, a bank holiday was declared in Maryland because of financial difficulties in the city of Baltimore. Also, restrictions were placed on the withdrawal of bank deposits in Indiana, Arkansas, and Ohio. Several states passed laws to safeguard bank depositors or to readjust the liabilities of state

banks without compelling them to go into receivership. These special powers given to the state banking authorities were at variance with those possessed by the Comptroller of the Currency in respect of national banks. Where state banks were authorized to close or operate on a restricted basis, unusual demands were made on the national banks remaining open. Congress, therefore, passed a joint resolution on February 25 authorizing the Comptroller to exercise the same powers in respect of national banks that state officials had with reference to state banks.¹

Such temporary expedients, naturally, did not greatly affect the basic cause of the panic—the general distrust of the banking system on the part of the public. Altogether 17 more states declared bank holidays between March 1 and 3, and the moratorium became practically complete when the governor of New York early in the morning of March 4, which was Saturday, proclaimed that day and the following Monday bank holidays. Similar action was taken at about the same time in Massachusetts, Illinois, New Jersey, Pennsylvania, and other important industrial and financial states. Thus, by March 4 practically every bank and trust company in the United States, including the federal reserve banks, had been closed or severely restricted in its operation.

¹ *Annual Report of the Federal Reserve Board for 1933*, p. 10.

*Why the Federal Reserve System Could Not Prevent
the Panic*

Why was the federal reserve system unable to prevent such a general break-down of our banking system? The answer to this question lies in the purposes for which the reserve system was established and the basic weaknesses in the country's banking structure. As we have already seen,¹ one of the principal reasons for creating the federal reserve system was to mobilize the bank reserves of the country and make them available to the member banks at those times when unusual demands were made upon them. To obtain funds when needed, the member banks could rediscount their eligible paper with the reserve banks, sell their acceptances, or borrow on their 15-day notes secured by United States government obligations. As long as a member bank possessed an adequate supply of these kinds of paper, it had access to the reserve bank in its district and could obtain federal reserve notes to meet the demands of its depositors.

What the founders of the reserve system had not provided for, and what the reserve banks were powerless to remedy, was a general loss of confidence in the banks of the United States and such a demand for repayment of deposits that many thousands of banks no longer possessed adequate assets

¹ *Supra*, pp. 3-7, and pp. 41-7.

that could be used to obtain federal reserve loans.) When, in addition, the Reconstruction Finance Corporation had extended all the assistance it could to a bank, whether or not a member of the reserve system, on its "sound" but ineligible assets, there was no further source of help. In the event that the bank's depositors continued to demand the repayment of their funds, the closing of the bank became inevitable. The continuation of this process during three years of depression took a toll of over 5,000 banks and resulted in the final culmination of the national bank holiday of March 1933. That holiday was in large part the direct consequence of an inadequate and faulty banking system, over which the reserve banks had only limited control.

(Throughout the crisis the federal reserve system carried on with commendable courage and efficiency. The success of its efforts was reflected in the continued confidence in the nation's most important kind of currency—the federal reserve note—until the last weeks of the crisis, when there developed a substantial demand for gold. This was to be attributed not to any failure to maintain the value of the federal reserve notes, which were always redeemable in gold on demand, but to fears that the incoming Administration intended to reduce the gold value of the dollar.)

The extent to which the reserve banks went to the aid of the member banks and the money market during the weeks when the crisis was most acute is set forth in the following table showing changes in federal reserve credit outstanding between February 15 and March 8:

	Feb. 15, 1933 (In millions of dollars)	March 8, 1933	Change During Period
Bills discounted	\$ 286	\$1,414	+\$1,128
Bills bought	31	417	+ 386
U. S. government securities	1,809	1,881	+ 72
Other reserve bank credit	10	- 68	- 78
Total federal reserve credit outstanding	————— \$2,136	————— \$3,644	————— +\$1,508

Thus, between February 15 and March 8 the twelve federal reserve banks advanced a total of \$1,128 million to member banks by rediscounting eligible paper for them. Furthermore, the reserve banks increased their holdings of purchased bills by \$386 million and of United States government securities by \$72 million, making a grand total for these three items of \$1,586 million. During the same period, money in circulation increased by \$1,684 million, of which \$1,324 million was federal reserve notes and more than \$300 million was gold

and gold certificates. Approximately two-thirds of these demands were concentrated in the week ending March 4.

Since this marked increase in the total of federal reserve notes in circulation coincided with the decline in the gold holdings of the system, the reserve ratio had fallen to 45.3 per cent on March 3. This was substantially above the legal minimum (of 35 per cent gold and lawful money against deposits and 40 per cent gold against notes), but the Federal Reserve Board on that date, acting under the powers given it in section 11c of the Federal Reserve Act, suspended the reserve requirements for 30 days and provided for the imposition of the penalty tax on the amounts by which reserves should become deficient. This action was taken to make the position of the reserve banks impregnable and to give them freedom of action in meeting the crisis. It proved to be unnecessary, however, and the reserve banks made little use of this suspension of reserve requirements. Following the bank holiday, federal reserve notes and gold were returned to the reserve banks in large volume and there was a substantial improvement in the general banking situation. The suspension of the reserve requirements was therefore not renewed at the expiration of the original 30-day period for which it had been in effect.

Emergency Banking Legislation

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

to give the authorities an opportunity to survey the situation and adopt comprehensive remedial measures.

On the same day that the proclamation calling for a national bank holiday was issued, the President summoned a special session of Congress to meet on March 9. To that session he sent a message asking for the immediate passage of legislation "giving to the executive branch of the Government control over banks for the protection of depositors; authority forthwith to open such banks as have already been ascertained to be in sound condition and other such banks as rapidly as possible; and authority to reorganize and reopen such banks as may be found to require reorganization to put them on a sound basis."¹

Congress responded with alacrity and on the same day passed the Emergency Banking Act of March 9, 1933.² This legislation contained the following salient provisions:

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

2. The President was empowered, during time of war or any other national emergency, to control

¹ *Annual Report of the Federal Reserve Board for 1933*, pp. 12-13.

² For the text of this Act, cf. *ibid.*, pp. 261-5.

foreign exchange transactions, gold and currency movements, and banking transactions.

3. The Federal Reserve Act was amended by the addition of section 11n. This provided that whenever the Secretary of the Treasury deems it necessary to protect the currency, he may require all holders of gold coin and bullion and gold certificates to deposit their holdings with the Treasurer of the United States and receive in exchange therefor an equivalent amount of any other form of money issued under the laws of the United States.

4. During the period of the emergency no federal reserve member bank was to engage in any kind of banking activity, except as permitted by the Secretary of the Treasury with the approval of the President.

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

6. National banks were given permission to issue preferred stock in order to obtain new capital, and the Reconstruction Finance Corporation was au-

thorized to purchase such preferred shares, which were not to be subject to the double liability provision.

7. To meet the widespread demands for currency, the reserve banks were authorized to issue federal reserve bank notes of a character somewhat different from those previously issued and at this time constituting only a negligible part of our currency.¹ These notes were to be obtained by depositing with the Treasurer of the United States the direct obligations of the government or any notes, drafts, bills of exchange, or bankers' acceptances acquired by the reserve banks in the course of their operations.² The federal reserve bank notes were thus a simple asset currency and only a 5 per cent redemption fund in lawful money was held against them. The chief limitations on their issue were a tax of $\frac{1}{2}$ of one per cent per annum (corresponding to that required on the national bank notes secured by 2 per cent government bonds) and the provision that no more federal reserve bank notes could be issued, unless secured by deposits of government bonds bearing the circulation privilege, after the President proclaimed the termination of the emergency.

¹ *Supra*, pp. 59-60; cf. Kemmerer, Edwin W., *Kemmerer on Money*, 2nd. edition, pp. 25-7.

² These federal reserve bank notes could be issued up to 100 per cent of the par value of the United States government obligations pledged as security, and up to 90 per cent of the estimated value of the notes, drafts, bills of exchange, and bankers' acceptances used as collateral.

The circulation of federal reserve bank notes reached a peak of \$208 million at the end of December 1933. Since that time these notes have gradually been retired so that only about \$61 million were in circulation at the end of February 1936. In March 1935, the federal reserve banks deposited funds with the Treasurer of the United States for the retirement of all federal reserve bank notes then in circulation. They were thus enabled to eliminate the liability for such notes from their balance sheets.

8. Section 10b of the Federal Reserve Act, which was to remain in effect until March 3, 1934, and was subsequently extended for an additional year, was amended to allow the federal reserve banks to extend loans at a penalty rate of interest on the time or demand notes of member banks, lacking eligible paper, without the advance approval of five members of the Federal Reserve Board. Also, the provision that such loans could be made only to banks with a capital of less than \$5 million was eliminated.

9. Finally, the reserve banks were authorized to make direct advances, for periods not exceeding 90 days, to individuals, partnerships, and corporations on their promissory notes, when secured by the direct obligations of the United States government.¹

¹ This represented an amplification of the provisions for direct loans first contained in the Emergency Relief and Construction Act of July 21, 1932.

An amendment to the Emergency Banking Act was enacted on March 24, 1933, to allow non-member state banks to borrow from the federal reserve banks during the period of the emergency. While thus indebted, the non-member banks were required to comply in all respects with the provisions of the Federal Reserve Act applicable to state member banks and the regulations of the Federal Reserve Board issued thereunder. The most important of these provisions was that requiring maintenance of the legal reserve with the federal reserve banks. Non-member banks were not required, however, to purchase stock in the reserve banks.

The general purposes of this legislation are clear. First of all, it was designed to satisfy the panic demand for currency by a practically unlimited issue, if necessary, of federal reserve bank notes. Secondly, the President and the Secretary of the Treasury were given complete control over banking, foreign exchange transactions, and gold movements, as well as the right to withdraw all gold from circulation. Thirdly, the lending powers of the federal reserve banks were increased so that they could render much greater assistance to member and non-member banks. And, finally, the way was cleared to reopen all sound banks, while conserving the assets of those banks that were not in a position to engage in unrestricted operation.

Reopening the Banks

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

This program for reopening the banks was put into effect almost immediately. On Saturday, March 11, the Treasury authorized the reserve banks to reopen on the following Monday and to resume all normal banking operations, except that gold payments were prohibited. Also, a schedule was made public whereby sound banks in the twelve federal reserve bank cities were also to be reopened on Monday, March 13, and banks in the 250 cities with established clearing houses on

March 14, and banks in all other places on March 15.

These measures proved notably successful in restoring confidence in the banks, which were opened according to schedule. Within three weeks about 12,800 of the 17,500 banks still in operation before the bank holiday had been reopened on an unrestricted basis.¹ The public almost immediately stopped demanding repayment of their deposits and soon began to return large amounts of currency to the banks. From the end of the bank holiday to April 1, the total of money in circulation declined by approximately \$1,250 million after reaching a peak of \$7,538 million on March 8. An additional \$750 million was retired from circulation in the course of the ensuing five months. Reserves of the federal reserve banks increased from \$2,857 million on March 8 to \$3,598 million on April 5. This increase raised the reserve ratio from 43.5 on March 8 to 56.1 on April 5.

¹ The number of banks licensed to resume operations had increased to 15,370 by December 31, 1934. Deposits of licensed banks on that date totaled \$39,910 million. The number of banks that were licensed to re-open and then subsequently failed was surprisingly small. Only 179 licensed banks, with deposits of \$146 million, suspended payment in 1933. The number of such suspensions fell to 57, with deposits of \$37 million, in 1934. Between March 16, 1933, and December 31, 1934, 2,048 banks, with deposits of \$2,493 million, were liquidated or went into receivership. The number of banks operating in the United States on December 31, 1935—the latest date for which figures are available—was 15,836.

Suspension of Gold Payments

Strictly speaking the United States abandoned the gold standard on the morning of March 6 when the President issued his proclamation declaring the bank holiday,¹ although its formal legal abandonment was not effected until April 20, 1933, when the President issued an executive order placing an almost complete embargo on the export of gold coin, gold bullion, and gold certificates, and on the earmarking of gold for foreign account. At the time this latter step was taken the monetary gold stock of the United States totaled about \$4,312 million. Of this amount the Treasury and the federal reserve banks had in their possession almost \$4,000 million or approximately one-half of the total gold holdings of all other governments and central banks in the world. Abandonment of the gold standard was not a matter of necessity, but an act of deliberate choice.

¹ The gold standard is a monetary system in which the unit of value, be it the dollar, the franc, the pound, or some other unit in which prices and wages are customarily expressed and in which debts are usually contracted, consists of the value of a fixed quantity of gold in a free gold market.

In this definition several things that are popularly associated with the gold standard are conspicuous by their absence. There is no mention of gold coins, of legal tender, of free coinage, or even of redemption of paper money in gold. These things are all customary accompaniments of the gold standard. They are useful devices for maintaining it. The gold standard, however, could exist without any or all of them. Furthermore, a currency might have all these attributes and still not be a true gold standard.

For a more detailed discussion of this subject, see Kemmerer, Edwin W., *Kemmerer on Money*, 2nd edition, pp. 1-13, and *Money*, Chap. v.

The proclamation of March 6, in effect, ended redemption of federal reserve notes in gold and reduced them to the status of an inconvertible currency. Then on April 5 the President issued an executive order forbidding the hoarding of gold and requiring all persons to deliver their holdings of gold, except for a personal exemption of \$100 and what was customarily needed in industry and the arts, to the federal reserve banks before May 1, 1933. Penalty for violation of the order was imprisonment for as much as ten years, or a fine running to a maximum of \$10,000. The executive order of April 20, 1933, placed an almost complete embargo on gold exports. Thereafter it was no longer possible to support the exchange value of the dollar against other currencies by gold shipments when necessary. Finally, on June 5, 1933, Congress passed a joint resolution abrogating the "gold clause" in all contracts, including government bonds, by declaring that every obligation requiring payment in gold dollars of a specified weight and fineness could be discharged by payment in any coin or currency that is legal tender for public and private debts,¹ which meant in any kind of United States currency whatsoever. The legality of this action, about which there was considerable doubt,

¹ In this joint resolution Congress gave the legal tender quality to all coins and currencies of the United States, including federal reserve notes, circulating notes of federal reserve banks, and national bank notes, previously or subsequently coined or issued.

was upheld in five to four decisions by the United States Supreme Court in the "gold cases" on February 18, 1935.

The Thomas Inflation Amendment

Agitation for inflation had started soon after the beginning of the depression in 1929. As the debt burden became progressively greater with the sharp fall in prices, political pressure in favor of currency manipulation increased at a rapid rate. By 1933 the theory that most of the economic troubles of the country could be remedied by a depreciation of the dollar was widely held. The aim of the Administration, expressly declared on numerous occasions, early came to be the restoration of the pre-depression commodity price level, which was generally assumed to be that prevailing in 1926.

Abandonment of the gold standard was one major step taken to achieve this purpose. Another that might have proved to be even more important was the passage of the so-called Thomas inflation amendment as Title III of the Agricultural Adjustment Act of May 12, 1933.¹ This inflation measure gave extraordinary powers to the President to expand the currency and increase the total volume of bank deposits. The chief provisions of the legislation, which had a direct connection with the federal reserve system, were the following:

¹ For the text of this legislation see the *Annual Report of the Federal Reserve Board for 1933*, pp. 267-8.

1. The President was authorized, at his discretion, to instruct the Secretary of the Treasury to make agreements with the federal reserve banks to purchase, either in the open market or directly from the Treasury, United States obligations up to a total amount of \$3,000 million in addition to those already held in their portfolios.¹ If the conduct of these operations made it necessary to suspend the federal reserve bank reserve requirements, no graduated tax was to be paid on the amount by which the reserves were deficient.² Similarly, the automatic increases in reserve bank interest and discount rates in effect whenever reserves become deficient were to be suspended.³

2. If the Secretary of the Treasury was unable to obtain the assent of the federal reserve authorities to engage in these open-market operations, or if the purchases of government securities were inadequate to meet the purposes of the Act (i.e., to bring about a rise in prices), the President was authorized to direct the Secretary of the Treasury

¹ Total holdings of United States government securities by the reserve banks on May 10, 1933, just prior to passage of this legislation, amounted to \$1,837 million.

² This provision set aside section 11c of the Federal Reserve Act, which establishes a scale of graduated taxes on the amounts by which the reserve falls below the legal minimum.

³ Section 11c of the Federal Reserve Act also provides that the rate of the tax on deficient reserves shall be added to the interest and discount rates charged by the federal reserve bank. The purpose of this provision is to tighten the money market and place progressive restraint on borrowing from a reserve bank whose reserves are deficient.

to issue up to \$3,000 million in United States notes (greenbacks). Such notes were to be used to meet maturing federal obligations, to repay sums borrowed by the United States, and to purchase United States government interest-bearing obligations. Four per cent of this issue of greenbacks was to be retired from circulation annually.

3. The President was further authorized to fix the weight, in grains, of the gold dollar, and the weight of the silver dollar at a definite ratio to that of the gold dollar, at such an amount as he might determine to be necessary "to stabilize domestic prices or to protect the foreign commerce against the adverse effect of depreciated foreign currencies," and to provide for the unlimited coinage of gold and silver at the ratio fixed.¹ The only limitation on this sweeping grant of authority was the provision that the content of the gold dollar (23.22 grains of fine gold) could not be reduced by more than 50 per cent.

4. The President was empowered, for a period of six months, to accept silver at 50 cents an ounce in war debt payments made by foreign countries to the United States, and silver certificates were to be

¹ By this single section of an inflationary rider to a farm-aid bill, the President was given power to establish bimetallism in the United States, either national or international, at any ratio that he might decide upon. There was remarkably little public recognition of the fact, yet this was the same issue on which at least one Presidential campaign and numerous Congressional battles had been fought. See Kemmerer, Edwin W., *Money*, Chap. xv.

issued against such receipts. The total amount of silver that could be so accepted was \$200 million. Since the market price was substantially below 50 cents per ounce, this was an over-valuation of silver and represented discrimination in favor of that metal.

5. Finally, the Federal Reserve Board, upon affirmative vote of five of its members and with the approval of the President, was authorized to increase or decrease the reserve balances that member banks were required to maintain with their federal reserve banks, when it was declared that an emergency existed because of credit expansion. The Board was thus entrusted with an exceedingly powerful instrument to effect changes in the total amount of bank credit in the country. With a single stroke of the pen it would be possible to accomplish, through alterations in reserve requirements, the same results that open-market operations were designed to achieve much more slowly.

If the President had used to any large extent the inflationary powers granted to him by these various provisions of the Thomas amendment, the result would have been a catastrophic rise in prices. Under the terms of this legislation, it was possible to double the country's monetary gold stock, raising it at a moment's notice from \$4,313 million to \$8,626 million, if the maximum devaluation of the dollar was effected; greenbacks up to an aggregate amount of \$3,000 million could be issued; the re-

serve balances of the nation's banks could be increased \$3,000 million by federal reserve purchases of government securities, which in turn might be used as the basis for an issue of \$3,000 million of federal reserve bank notes; and, finally, the country's money could be placed on a bi-metallic basis by providing for the free coinage of silver at some ratio substantially below the current market ratio, which averaged 73 to 1 for 1932 and 59 to 1 for 1933. To these far-reaching powers should also be added the authorization contained in the Emergency Banking Act of March 9 allowing member banks to borrow from the federal reserve system on paper that was ordinarily ineligible for such purposes and the fact that federal reserve credit was made available for a temporary period to non-member banks and trust companies.

Fortunately, those charged with responsibility were disposed to use the powers given them by the Thomas amendment with caution. One direct result of the legislation was an increase of \$583 million in federal reserve holdings of United States government securities between the middle of May 1933, and November 1. Aside from the subsequent devaluation of the dollar, most of the other inflationary powers have never been utilized. The possibility, however, that they might be used arbitrarily at any time has been up to the present a great depressant to public confidence in our currency both in the United States and abroad.

CHAPTER XII

FURTHER DRASTIC BANKING AND CURRENCY LEGISLATION

The Banking Act of 1933

IN 1933, just twenty years after the passage of the original Federal Reserve Act, Congress enacted new banking legislation that represented the most important changes in the organic law that had been made up to that time. This new legislation, officially called the "Banking Act of 1933," was popularly known as the "Glass-Steagall Act."¹ Its declared objects were "to provide for the safer and more effective use of the assets of banks, to regulate interbank control, to prevent the undue diversion of funds into speculative operations, and for other purposes."

The impelling force behind its enactment at this particular time was the great popular demand for a reformation of the banking system of a character that would prevent a repetition of the speculative excesses in securities, real estate, and commodities that characterized the boom of 1927-29, with its aftermath of wholesale bank failures and the severe depression following the collapse of 1929. The Glass banking bill, which was the original measure look-

¹ For the text of the Act, see the *Annual Report of the Federal Reserve Board for 1933*, pp. 272-95.

ing to banking reform, had been introduced in the Senate on January 21, 1932. It represented the result of an intensive study carried on for more than a year by a subcommittee of the Senate Committee on Banking and Currency under the chairmanship of Senator Carter Glass. The first Glass bill was subsequently withdrawn and introduced again in a revised form on April 18, 1932. It obtained the approval of the Senate in February 1933, but did not come to a vote in the House. A few days later the 72nd Congress adjourned and the country found itself face to face with a major banking panic.

The new President called a special session of Congress for March 9 to deal with the emergency, and the Glass bill was introduced once more on the opening day of the session. It was immediately sidetracked, however, for emergency legislation to meet the nation-wide bank holiday. Not to be deterred, Senator Glass introduced another revised draft of the bill on May 1, in which provision was made for the establishment of a Federal Deposit Insurance Corporation. All proposals for the guaranty of bank deposits had previously been opposed as unsound by Senator Glass and his acceptance of the scheme at this juncture undoubtedly represented a compromise with political necessity. The Senate finally passed the Glass bill on May 25. The House had meanwhile enacted a banking bill proposed by Representative Steagall

in which the guaranty of bank deposits was a prominent feature. Differences between the two bills were in time ironed out in conference and the final draft of the legislation was passed by Congress on June 13 and was approved by the President three days later. Since the Banking Act of 1933 effected a number of major changes in the federal reserve system, it will be desirable to review briefly its chief provisions. These included the following:

1. *Restrictions upon the use of federal reserve credit for speculative purposes.* The Federal Reserve Board and the reserve banks were given definite control over the purposes to which federal reserve credit is devoted in order to prevent its excessive use in security, commodity, or real estate speculation. This meant that the reserve system was to be able to control the *quality* of credit outstanding as well as the *quantity*. Previously, any member bank presenting eligible paper enjoyed the right to have it rediscounted by the reserve bank in its district, regardless of the borrower's general credit policy or the use that was to be made of the proceeds of the specific loan. Hereafter, the rediscounting of eligible paper was made a privilege that could be withdrawn from a member bank. Each federal reserve bank was instructed to keep itself informed as to the loans and investments of the member banks in its district—

“with a view to ascertaining whether undue use is being made of bank credit for the speculative carrying of or trading in securities, real estate, or commodities, or for any other purpose inconsistent with the maintenance of sound credit conditions. . . .”

The Federal Reserve Board is to be informed whenever a member bank is devoting an “undue” amount of credit to such speculative uses and the Board may, in its discretion, deny the offending member bank access to the credit facilities of the federal reserve system. While giving the reserve authorities far greater powers of credit control than those previously held, these provisions are likely to have the effect of placing responsibility for any future speculative booms and collapses that may occur directly upon the federal reserve system.

2. *The separation of investment and commercial banking.* The law required the complete separation of the distinctive functions of investment and commercial banking by June 16, 1934, one year after the date of its enactment. Member banks were compelled to sever connection with their security affiliates. No member bank was allowed to underwrite or sell investment securities. No bank engaged in the issue, underwriting, or sale of securities was allowed to receive deposits subject to check or to repayment upon presentation of a passbook or certificate. Beginning January 1, 1934, inter-

locking directorates between member banks and securities organizations were unlawful, except where special permission was obtained from the Federal Reserve Board. Through these measures it was hoped to correct many of the abuses that had developed in the commercial banking system, notably the betrayal by some banks of their fiduciary obligations to their depositors and the immobilization of demand deposits in long-term capital loans which often proved unsound.

3. *The insurance of bank deposits.* The unprecedented number of bank failures between 1921 and 1933, culminating in the bank holiday of early March, led to a strong popular demand for some kind of insurance of bank deposits. This was reflected in the Banking Act of 1933, which provided for both a temporary and a permanent insurance plan. The temporary plan was to cover individual deposits up to \$2,500 in amount and was to remain in effect from January 1, 1934 to July 1, 1934, when it was to be supplanted by the permanent plan.¹

4. *Payment of interest on deposits.* Member banks were prohibited from paying interest on demand deposits and the Federal Reserve Board was empowered to regulate the interest that might be paid by member banks on time deposits. The purpose of these provisions was to prevent a recurrence of the

¹ For a more detailed discussion of this and subsequent plans of deposit insurance, cf. pp. 226-34.

destructive competition in interest payments that had existed among many banks seeking to attract deposits. These high rates of interest allowed to their customers had all too frequently led banks into dangerous ventures in the hope of large returns.

The savings accruing to the banks from this discontinuance of interest payments were expected to be applied to the writing off of doubtful assets and the restoration of impaired capital. It was also a consideration that funds would become available in this way to meet the assessments levied by the Federal Deposit Insurance Corporation. Figures prepared by the Comptroller of the Currency indicated that interest paid on demand deposits from 1928 to 1933 by member banks averaged \$246 million per annum. This, however, should not be accepted as an accurate estimate of the savings accruing to the banks as the result of the prohibition of such payments in the future, for interest rates had been falling during the period and have descended even further since that time.

5. *Provisions for branch banking and capital requirements.* To overcome the high rate of mortality among small unit banks during the preceding years, national banks were authorized, with the approval of the Comptroller of the Currency, to engage in branch banking in the various states on the same terms enjoyed by local state banks. A minimum capital of \$100,000 is required in states

with less than 500,000 population and no city of more than 50,000 persons, and \$250,000 in states with populations ranging between 500,000 and 1,000,000 but without cities of more than 100,000. In all other cases the minimum capital required is \$500,000.

Also, the capital requirements for newly-established national banks, regardless of whether or not they are to engage in branch banking, were increased. In towns of less than 6,000 population, the new minimum capital requirement is \$50,000, whereas it was formerly possible for a national bank to be organized, with the approval of the Secretary of the Treasury, with a capital of \$25,000 in towns having a population of not more than 3,000. In cities with a population between 6,000 and 50,000 the minimum is now \$100,000; and in all cities with population in excess of 50,000, the minimum capital required is \$200,000.

6. *Admission of mutual savings banks to the federal reserve system.* Mutual savings banks were granted the privilege of joining the federal reserve system on the same terms as those enjoyed by state banks and trust companies, except that they were to subscribe to the capital stock of the reserve bank in their district in an amount equal to six-tenths of 1 per cent of their total deposit liabilities. If prohibited by law from purchasing such stock, a savings bank was permitted for a limited period to

deposit with the federal reserve bank an amount equal to the sum it would otherwise be required to pay in on account of a subscription to capital stock. The reserve required of mutual savings banks is 3 per cent of their deposits.

Also, Morris Plan banks and "other incorporated banking institutions engaged in similar business" were allowed to become members of the federal reserve system.

7. *Discontinuance of franchise tax payments.* Net earnings of the federal reserve banks, after payment of dividends, are no longer to accrue to the government as a franchise tax, but are to be added to surplus. This is to compensate the reserve banks for the contribution of one-half of their surplus that they were required to subscribe to the Federal Deposit Insurance Corporation. The reserve system began to pay the franchise tax in 1917. From that time until 1933 the total paid to the government was \$149,138,000. The bulk of this amount, or about \$120 million accrued in 1920 and 1921, when the volume of federal reserve earning assets was at a high level and substantial interest and discount rates prevailed. After that time the amount of annual franchise tax payments was not large.

8. *Open-market operations and the Federal Open Market Committee.* The federal reserve banks were prohibited from engaging in open-market operations except in accordance with regulations adopted by

the Federal Reserve Board. If a federal reserve bank decided not to engage in the operations recommended and approved by the Board, it was to file written notice of its decision within thirty days. To coordinate such operations for the system as a whole, a Federal Open Market Committee was established, which was to be composed of one representative from each of the twelve federal reserve banks. Meetings of the Committee were to be held in Washington at least four times a year and might be attended by members of the Federal Reserve Board.

Legal standing was thus given to one of the most important policy-determining groups in the federal reserve system. The evolution of the Federal Open Market Committee is an interesting example of the development of the system itself within recent years, as well as of the increasing importance of open-market operations as an instrument of credit policy. Prior to 1922 each federal reserve bank bought and sold government securities and bankers' acceptances as its own position and purposes dictated. There was no semblance of a coordinated open-market policy for all twelve banks. The result was that the reserve banks often found themselves bidding up the market against each other.

Early in 1922, therefore, the governors of the federal reserve banks appointed a special committee consisting of the governors of the Boston, New

York, Philadelphia, and Chicago banks to execute purchases and sales of securities at the request of the various reserve banks.¹ The purpose of this committee was not to decide upon an open-market policy for the system as a whole, but only to coordinate the execution of orders in the open market.

The first venture into the field of open-market policy was taken in October 1922, when this same committee, by agreement among the governors of the reserve banks, was requested to make recommendations from time to time to the individual reserve banks with reference to their purchases and sales of government securities. Some months later, in the spring of 1923, the Federal Reserve Board took official cognizance of the growing importance of open-market operations by appointing an open-market investment committee consisting of the same members who had been appointed originally by the reserve bank governors themselves.

The following considerations were advanced by the Board as of primary importance in the formulation of open-market policy:

“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

¹ The governor of the Federal Reserve Bank of Cleveland was subsequently made a member of this committee.

such purchases or sales on the general credit situation.

“That in making the selection of open-market purchases, careful regard be always given to the bearing of purchases of United States Government securities, especially the short-dated issues, upon the market for such securities, and that open-market purchases be primarily commercial investments, except that Treasury certificates be dealt in, as at present, under so-called ‘repurchase’ agreement.”¹

In the autumn of 1923, an open-market investment account was established for the system at large, with the approval of the Federal Reserve Board and the boards of directors of the twelve reserve banks. This step was taken to coordinate the open-market operations of the reserve banks and to give continuity to their policy. Thereafter, government securities were bought or sold by the open-market investment committee for this account and not for individual reserve banks. The securities held in the account were prorated among the twelve federal reserve banks on the basis of their size and general portfolio position.

After it had been in operation for several years, this general method of handling open-market operations came to be the subject of severe criticism in

¹ Stabilization Hearings before the Committee on Banking and Currency, House of Representatives, 69th Congress, 1st Session, p. 311.

1929 and 1930. It was charged that an extra-legal body not provided for by the Federal Reserve Act had usurped the most important powers of credit control possessed by the system. The criticism was also advanced that the open-market investment committee, composed as it was of the governors of the eastern and mid-western reserve banks, was not truly representative. These charges reflected general dissatisfaction with the credit policy of the federal reserve system and its failure to put an end to the speculative boom before it got out of hand in 1928.

In 1930, therefore, the open-market investment committee was succeeded by the open-market policy conference composed of all twelve governors of the reserve banks. This conference was given legal standing by the sections of the Banking Act of 1933 dealing with open-market operations. Its name was changed to the Federal Open Market Committee, however, and the law provided that the board of directors of each federal reserve bank should annually select one representative to serve on the Committee. In practice, this representative was almost invariably the governor of the reserve bank. The Banking Act of 1933 also amended the Federal Reserve Act by incorporating the provision that all open-market operations were to be carried on "with a view to accommodating commerce and business and with regard to their bearing upon the general credit situation of the country."

Thus, legal authority was given to the general policy in respect of open-market operations first set forth by the Federal Reserve Board in 1923.¹

*The Gold Purchase Plan*²

When the first efforts to raise prices through the threats of inflation contained in the Thomas amendment proved only partially successful, it was determined to embark on a gold-buying program expected to depreciate the exchange value of the dollar and stimulate a domestic price increase. The first step in this direction was taken with the issuance of an executive order on August 29, 1933, authorizing the Secretary of the Treasury to receive domestically-mined gold on consignment for sale abroad at the best price available in the world market. The result of this order was to give domestic gold producers the benefit of the depreciated exchange value of the dollar that developed after our departure from the gold standard. Domestic commodity prices in the United States were affected hardly at all.

The second step in the pursuance of the gold-buying policy was explained by the President in the course of a radio address on October 22. On this occasion he said:

¹ *Supra*, pp. 199-200.

² The author's judgment concerning this plan is given in some detail in *Kemmerer on Money*, second edition, Chap. III.

“Our dollar is now altogether too greatly influenced by the accidents of international trade, by the internal policies of other nations, and by political disturbances in other continents. Therefore the United States must take firmly in its own hands the control of the gold value of our dollar. This is necessary in order to prevent dollar disturbances from swinging us away from our ultimate goal, namely, the continued recovery of our commodity prices.

“As a further effective means to this end, I am going to establish a Government market for gold in the United States. Therefore, under the clearly defined authority of existing law, I am authorizing the Reconstruction Finance Corporation to buy gold newly mined in the United States at prices to be determined from time to time after consultation with the Secretary of the Treasury and the President. Whenever necessary to the end in view, we shall also buy or sell gold in the world market.”¹

This program was put into effect almost immediately, for the Reconstruction Finance Corporation on October 25 began to purchase domestic gold at the rate of \$31.36 a fine ounce, as compared with the former mint price of \$20.67, which had been in effect since 1837. The gold purchases were

¹ *New York Times*, October 23, 1933.

not to be confined to the United States, however, and on November 1 the Federal Reserve Bank of New York was named to act as the agent of the Reconstruction Finance Corporation in buying gold in foreign markets. Beginning January 16, 1934, the Federal Reserve Bank of New York superseded the Reconstruction Finance Corporation as the agent of the government in the purchase of domestic gold also. These arrangements continued in force until January 31, 1934, when new regulations as provided for in the Gold Reserve Act of 1934, approved on the preceding day, were issued.

During the first fifteen days when the gold purchases were being made here and abroad, the price offered for gold was raised almost daily by the Reconstruction Finance Corporation. Thereafter, the increases became less frequent. By January 16, 1934, the price per ounce had reached \$34.45, where it remained until the President's proclamation of January 31 fixing the fine gold content of the dollar for the time being at 13.71 grains of gold, which was the equivalent of a price of \$35 per ounce.

It would take us too far afield to consider in detail why the government adopted the gold-purchase program and the reasons for its failure. Let it suffice to say that the Administration appears to have been led to believe that a direct and proxi-

mate relationship existed between the price of gold and the wholesale price level. It therefore apparently expected that by raising the price of an ounce of gold, it would be able to bring about promptly a substantial rise in the level of wholesale commodity prices. What those advocating this policy did not explain was just how the higher price of gold would substantially increase the country's supply of money and bank deposits and thereby result in the desired rise in commodity prices.

Rising Dollar Exchange Rates

While the embargo of April 20 and the gold-purchase program had a relatively limited effect in raising the domestic price level, they did bring about a substantial rise in the exchange rate of the dollar against gold-standard currencies like the French franc and the Netherlands florin. The extent of this rise is indicated in the following table:

Cost of One Gold Franc and One Gold Florin in
U. S. Currency¹

1933	Franc	Florin
February	3.92¢	40.27¢
March	3.94	40.36
April	4.10	41.95
May	4.59	46.95
June	4.80	49.01

¹ Data are from the *Federal Reserve Bulletin*, March 1934, p. 177, and represent the monthly averages of the daily quotations based on the noon buying rates for cable transfers in New York.

July	5.46	56.18
August	5.37	55.38
September	5.77	59.88
October	5.82	59.96
November	6.27	64.56
December	6.12	62.85
1934		
January	6.21	63.62
February	6.46	66.04

In so far as this movement in exchange rates was not compensated for by a rise in the domestic price level in the United States, it meant that the dollar was undervalued in terms of foreign currencies. This undervaluation, which became even more marked after quasi-stabilization was effected under the terms of the Gold Reserve Act of 1934, has been one of the most unsettling factors in international finance during the past three years. In large measure, it has been responsible for the huge inflow of gold, which has been an important factor in the increase of reserve balances and in turn has augmented the difficulties of credit control by the federal reserve system.¹

The Gold Reserve Act of 1934

In order to put an end to the general uncertainty surrounding the government's monetary policy as

¹ For a more detailed discussion of gold imports, excess reserve balances, and problems of credit control, *cf.* pp. 249-57.

well as to meet a widespread demand for stabilization of the dollar, the Gold Reserve Act of 1934 was hurriedly passed by Congress and was approved by the President on January 30, 1934.¹ The importance of this Act, which ranks with the Resumption Act of 1875 and the Gold Standard Act of 1900, gives it a primary place in the monetary history of the country. Its principal provisions include the following:

1. Legal title to all gold held by the federal reserve system was transferred to the United States government and, in payment for the gold, the reserve system was to receive dollar credits in the Treasury. These credits were payable in "gold certificates" issued in such form and such denominations as the Secretary of the Treasury might determine.² These gold certificates do not circulate as money and are redeemable in gold only at the option of the government, at rates determined by the government within specified limits, and to the extent considered necessary by the Secretary of the Treasury for maintaining the "equal purchasing

¹ For the text of this Act, see the *Report of the Secretary of the Treasury for 1934*, pp. 189-94.

² The "gold certificates" with which the government was to pay the federal reserve banks for their gold, although carrying the same name as the old "yellowbacks," are of a very different character, and to call them "gold certificates" is misleading. Since 1863 the original gold certificates had been virtual warehouse receipts for gold and until March 1933, were payable in gold on demand.

power of every kind of currency of the United States.”

2. Federal reserve notes, which had formerly been redeemable in gold on demand, were made redeemable only in lawful money. Furthermore, no currency of the United States was to be redeemed in gold, except to the extent permitted in regulations issued by the Secretary of the Treasury with the approval of the President.

3. No gold was thereafter to be coined, and no gold already coined was to be paid out or delivered by the United States government. All United States gold coin was to be withdrawn from circulation and converted into bars.

4. Since gold was no longer to be available for domestic payments, and the old gold certificates were withdrawn from circulation, the legal reserve requirements imposed by law on the federal reserve banks were accordingly altered. The 35 per cent reserve in gold or lawful money formerly required to be held against deposits of the reserve banks was changed to a reserve of corresponding amount in the new gold certificates or lawful money. Also, the 40 per cent reserve against outstanding federal reserve notes, which formerly was maintained in gold, was hereafter to be held in the form of the new gold certificates. The gold redemption fund of 5 per cent maintained in the United States Treasury against federal reserve notes was changed to a new

gold-certificate redemption fund. As formerly, the balances in the fund could be counted as part of the 40 per cent gold-certificate reserve against federal reserve notes.

The reserve for United States notes and for Treasury notes of 1890 and the security for the new gold certificates were to be maintained in gold bullion equal to the dollar amounts required by law.

5. The Secretary of the Treasury, with the approval of the President, was required to prescribe conditions under which gold might be acquired, held, and transported (a) for industrial, professional, and artistic use; (b) by the federal reserve banks for the purpose of settling international balances; and (c) for such other purposes as in the Secretary's judgment are not inconsistent with the purposes of the Act.

6. The power given to the President by the Act of May 12, 1933, to reduce the gold content of the dollar by as much as 50 per cent was limited by the provision that in no event should the gold content of the dollar be more than 60 per cent of its previous statutory weight. This meant that the President could fix the weight of the dollar at a point anywhere between 50 and 60 per cent of its former weight, which was 23.22 grains of fine gold. He also was given authority to alter the gold content of the dollar within these limits, even after pro-

visional stabilization had been effected. The period during which the President might devalue the gold dollar and fix the weight of the silver dollar at some definite ratio to the gold dollar was to end January 30, 1936, but might be extended for an additional period of one year by proclamation of the President. Such a proclamation was issued on January 10, 1936.

7. The increase in the dollar value of all gold held by the United States that would result from a reduction in the weight of the gold dollar was to be covered into the Treasury as a miscellaneous receipt. If the dollar should be subsequently increased in weight, there would be a corresponding loss in terms of dollars on all gold holdings of the government and an appropriation was accordingly made out of the general fund of the Treasury to cover such loss, if it should occur.

8. Out of the gold increment or "profit" resulting from the devaluation of the dollar, a stabilization fund of \$2,000 million was established to be administered under the exclusive control of the Secretary of the Treasury, with the approval of the President. This fund was to be used to stabilize the exchange value of the dollar, and in administering the fund the Secretary of the Treasury was authorized to deal in gold and foreign exchange, as well as in such other credit instruments as he might deem necessary to the purpose in view. Such

parts of the fund as were not needed to stabilize the exchange value of the dollar could be invested in the direct obligations of the United States government. The stabilization fund was to remain in operation for two years after enactment of the legislation, i.e., until January 30, 1936, but might be extended for an additional year by proclamation of the President. Such a proclamation was issued on January 10, 1936, and according to present law the fund will be liquidated on January 30, 1937.

9. The Secretary of the Treasury, with the approval of the President, was authorized to purchase gold in any amounts, at home or abroad, at such rates and upon such terms as he might deem most advantageous to the public interest. He was similarly authorized to sell gold, with the single restriction that gold maintained as a reserve or as security for currency issued by the United States could be sold only to the extent necessary to maintain such currency at a parity with the gold dollar.

10. The power of the President to fix the weight of the silver dollar at any ratio to the gold dollar that he might choose, and to provide for the unlimited coinage of silver at the new ratio, was limited to the two-year period ending January 30, 1936, unless extended for an additional year by proclamation of the President. Since such a proclamation was issued, the present expiration date is January 30, 1937.

The President was given authority without definite limit as to time to reduce the silver content of the standard silver dollar by the same percentage that he should reduce the weight of the gold dollar. This provision of law would permit a reduction in the fine silver content of the standard silver dollar from 371.25 to a minimum of 185.62 grains. The President was further empowered to issue silver certificates against any silver bullion or standard silver dollars in the Treasury not then held for redemption of outstanding silver certificates, and also to coin silver dollars or subsidiary currency for the redemption of such new issues of silver certificates.¹

Acting under the powers given him in the Gold Reserve Act and in the Thomas amendment, the President issued a proclamation on January 31, 1934, devaluating the dollar by 40.94 per cent and fixing its gold content at 15.24 grains, nine-tenths fine, which is the equivalent of 13.71 grains of pure gold. Notice was also given that the President reserved the right to alter or modify the amount of the devaluation "as the interest of the United States may seem to require." On the same day the Treasury issued regulations to carry into effect the purposes of the Gold Reserve Act, providing

¹ For a discussion of the Silver Purchase Act of June 19, 1934 see pp. 215-20. On the subject of recent American silver legislation and policies, see Kemmerer, Edwin W., *Kemmerer on Money*, second edition, Chaps. VII and VIII; and Westerfield, Ray B., *Our Silver Debacle*.

among other things that the government would buy all gold offered to it, except that held in violation of law, at \$35 per ounce, less certain minor mint and handling charges. Similarly, gold was to be sold for use in industry, the professions, or the arts at \$35 per ounce plus one-quarter of one per cent.

Under these regulations, the gold certificates that would be held by the federal reserve banks were to be redeemable in gold bullion to such an extent as the Secretary of the Treasury should consider necessary "to settle international balances or to maintain the equal purchasing power of every kind of currency of the United States." Such gold bullion could be held, earmarked for foreign account, or exported.

The Gold Reserve Act of 1934 and the President's proclamation issued in conjunction with it thus gave the United States a new monetary unit and a new currency system that were both substantially different from any ever known before throughout the world's widely varied monetary history. The standard created by this legislation is difficult to define because it is unprecedented. Legally, it is probably best classified as a qualified commodity standard, for the monetary unit fixed by law may have a range in gold value anywhere from 50 to 60 per cent of the value of our former gold dollar; and the law contemplates the possi-

bility of varying the gold value of the dollar up or down within this range, according to the ups and downs of the commodity price level. In practice, the currency has been managed in such a fashion that we have had a *de facto* gold bullion standard with the unit of value a dollar of 15.24 grains of gold, nine-tenths fine. So long as the government buys and sells gold on demand at approximately \$35 per ounce, varying this price only to the extent necessary to cover reasonable administrative expenses, and so long as it maintains a free market for gold in foreign trade, the value of the paper dollar will be maintained at practical parity with the value of a fixed quantity of gold in a free market, and this is the "constituting quality" of the gold standard. To the extent, however, that the government interferes with this free market for gold or exercises its legal authority to vary the gold content of the dollar by altering the buying or selling price of gold beyond the limits of the so-called "gold points," the value of the dollar will tend to depart from the value of a fixed quantity of gold in a free market and the gold standard will cease to exist. The country would then, actually as well as legally, be on a commodity standard if the bullion content of the dollar were raised and lowered to compensate for advances or declines in the commodity price level, and it would be on a fiduciary paper money standard if there were no

definite tie-up of the dollar with the commodity price level.

The Silver Purchase Act of 1934

In any comprehensive discussion of the federal reserve system, even though it be elementary like the present one, it is impossible to ignore the Silver Purchase Act which received the approval of the President on June 19, 1934. This legislation declared it to be the policy of the United States to increase the proportion of silver to gold in its monetary stocks in order to achieve the ultimate objective of holding one dollar in silver for every three dollars of gold. Accordingly, the Secretary of the Treasury was authorized and directed to purchase silver, at home or abroad, at such rates and upon such terms as he considered reasonable and most advantageous to the public interest. The only limitations on this sweeping grant of authority were, first, that not more than the nominal monetary value of silver (approximately \$1.293 per fine ounce¹) could be paid for such purchases and, second, that no silver situated in the continental United States on May 1, 1934, could be purchased at a price in excess of 50 cents a fine ounce. In the event that the market price rose above the nominal monetary value of silver, and whenever the mone-

¹ This nominal monetary value of an ounce of silver is derived from the fact that the standard silver dollar contains 371.25 grains, or .773 of an ounce, of fine silver.

tary value of the Treasury's stocks of silver exceeded 25 per cent of the value of its combined stocks of gold and silver, the Secretary of the Treasury was to sell any of the silver acquired under the authority of the Silver Purchase Act.

Further, the Secretary of the Treasury was authorized and directed to issue silver certificates to an amount at least equal in value to the cost of all silver purchased in pursuance of the terms of the Act. Standard silver dollars and silver bullion of a monetary value equal to the face amount of the outstanding silver certificates were to be held in the Treasury as a redemption fund, regardless of the fact that any appreciable demand for redemption of the certificates in silver would be highly improbable unless the market price of the metal should exceed \$1.293 per fine ounce. All silver certificates issued under the provisions of the Act, as well as those already in circulation, were declared to be legal tender for public and private debts.

Finally, it was provided that the President could nationalize all silver held in the United States if he believed such action necessary to carry out the policy expressed in the Silver Purchase Act. In return for the silver thus surrendered to the government, the holders thereof were to be paid its "fair value" as determined by the market price over a reasonable period of time.

The President promptly complied with the terms of this legislation and on August 9 issued an order requiring that practically all silver situated in the United States on that date be delivered to the mints within 90 days. The only exemptions included silver coins, fabricated silver, silver held under license or owned by foreign governments or central banks, and certain minor holdings. Payment at the rate of 50.01 cents an ounce was made to all those surrendering their silver.

On August 10, 1934, a total of \$80 million in silver certificates was issued against \$46,900,000 (cost value) of unused silver which had been in the possession of the Treasury prior to the enactment of the Silver Purchase Act. Subsequently, the Treasury announced that under the terms of existing law it was compelled to value at \$1.293 an ounce all silver serving as the reserve basis for the issuance of silver certificates, but that for the present such certificates would be put into circulation only in an amount equal to the cost price of the silver bullion purchased.¹

On June 30, 1934, shortly after the passage of the Silver Purchase Act, total Treasury holdings of gold amounted to approximately \$7,856 million as compared with \$838 million (or 720,000,000 ounces) of silver. It was estimated, therefore, that

¹ *Annual Report of the Secretary of the Treasury for 1935*, p. 262.

the purchase of approximately 1,380,000,000 ounces of silver would be necessary to meet the terms of the Act. By February 11, 1936, the Treasury had already purchased about 922,000,000 ounces of silver, increasing its total holdings to 1,642,000,000 ounces.¹ Yet, notwithstanding these unprecedented acquisitions, relatively little progress had been achieved towards the ultimate objective of maintaining 25 per cent of our total metallic money stock in the form of silver, for our gold holdings, chiefly as a result of recent large imports, had during approximately the same period increased by \$2,326 million. This increase in the nation's monetary gold stock makes it necessary to purchase an additional quantity of about 600,000,000 ounces of silver, over and above what was originally contemplated, if we are to hold one dollar in silver for every three dollars of gold. The Treasury is still confronted, therefore, with the necessity of purchasing about 1,000,000,000 ounces of silver in addition to all that it has obtained to date.

For our purposes it is not necessary to go into the economics of the Silver Purchase Act, but merely to indicate its bearing on the federal reserve system.

As we have seen, the Secretary of the Treasury is to issue silver certificates against the silver acquired under the terms of the Act. Between June

¹ National Industrial Conference Board, *Conference Board Business Survey*, February 20, 1936, p. 4.

30, 1934 and January 31, 1936, the total of silver certificates outstanding was in this way increased from \$495 million to \$1,027 million, a gain of \$532 million. These silver certificates added to our circulation have taken the place of what would otherwise have been an approximately equivalent amount of additional federal reserve notes in circulation. This substitution of silver certificates, whose volume in circulation is controlled by the United States Treasury, for federal reserve notes, has greatly impaired the power of the federal reserve authorities to regulate the nation's monetary supply. How can the federal reserve authorities be held responsible for providing the country with a sound and elastic currency, responsive to the changing demands of business, if the Treasury of the United States takes upon itself the direct control of such a large volume of our currency? This silver purchase program represents a distinct step backward from the goal that we set ourselves when the Federal Reserve Act was passed in 1913. Whereas it was the general purpose at that time to make the federal reserve system the sole authority having the right of note issue, we have now given large additional note-issuing powers to the Treasury.¹

¹ Under the terms of the Thomas amendment of May 12, 1933, the Secretary of the Treasury is also authorized to increase the volume of greenbacks outstanding up to a maximum of \$3,000 million. At this time (February 29, 1936) the amount outside the Treasury is \$344 million.

The result is divided responsibility and an impairment of federal reserve control over the currency.

Control of Credit Used for Speculative Purposes

As previously noted,¹ the federal reserve authorities were given extensive powers by the Banking Act of 1933 to control the use of member bank credit and to prevent an excessive amount of credit from going into speculative channels. The control thus given took several forms. First, the opportunity of a member bank to rediscount paper at the federal reserve banks was transformed from a right into a privilege which could be withdrawn from an offending member bank by the Federal Reserve Board.² Secondly, upon affirmative vote of not less than six of its members, the Board was empowered to fix the percentage of individual bank capital and surplus which might be represented by loans secured by stock or bond collateral.³ The percentage so fixed may vary as between different federal reserve districts and is subject to change from time to time on 10 days' notice. Thirdly, the Board has the authority to order any member bank to refrain for a period up to one year from increasing its loans collateralized by securities, under a penalty of a withdrawal of its rediscount privilege.⁴ Finally,

¹ *Supra*, pp. 192-3.

² Federal Reserve Act, section 4.

³ *ibid.*, section 11m.

⁴ *loc. cit.*

immediate repayment of a member bank's borrowings from its federal reserve bank can be demanded if the member bank, in defiance of an official warning, increases its outstanding loans secured by stock or bond collateral, or its loans to those engaged in the securities business for the purpose of purchasing and carrying stocks and bonds.¹ Such a member bank also becomes ineligible to borrow again from the reserve bank in its district for whatever period the Board may determine.²

A considerable extension of these powers to control the use of credit, as well as its amount, was entrusted to the Board by the Securities Exchange Act of June 6, 1934, which brought the stock exchanges of the country under federal regulation. Among other things, this legislation provided that the Federal Reserve Board, in order to prevent the excessive use of credit for the purchase or carrying of securities, shall regulate the amount of credit that may be extended and maintained on any security (other than an exempted security) registered on a national securities exchange. As part of the technique of giving the Federal Reserve Board control of all credit extended on listed stocks and bonds, the Act provided that brokers and dealers subject to its terms may borrow on registered securities (other than exempted securities) only from members of the federal reserve system, or

¹ Federal Reserve Act, section 13.

² *loc. cit.*

from non-member banks which have filed an agreement with the Federal Reserve Board to comply with all provisions of law relating to the use of credit to finance transactions in securities. By December 31, 1934, 121 non-member banks had signed such agreements.

Regulation of borrowing on registered securities was to become effective October 1, 1934. As an initial standard, the Act suggested that the maximum amount of credit that could be extended on a registered security was the greater of either (a) 55 per cent of the current market price of the security, or (b) 100 per cent of the lowest market price of the security during the preceding thirty-six calendar months, but not more than 75 per cent of the current market price. Until July 1, 1936, the law provided that the lowest price at which a security had sold since July 1, 1933, was to be considered as the lowest price during the preceding three-year period.

Acting under the authority thus given it, the Board has issued regulations limiting the amount of credit that can be advanced on registered securities by brokers and dealers who transact a business in securities, and also the loans by banks for the purpose of purchasing or carrying stocks registered on a national securities exchange.¹

¹ Regulation T, which applied to members of a national securities exchange, brokers, and dealers, was issued on September 27, 1934, and

The original regulations, which became effective October 1, 1934, applied to brokers and dealers and provided for the same percentage scale of loans as that indicated above and contained in the law itself. After almost a year of constantly rising prices in the securities markets, the reserve authorities acted on January 24, 1936 to reduce the amount that could be borrowed on a registered security from 55 to 45 per cent of the current market price. This restriction went into effect on February 1, 1936.

Further regulations limiting loans on registered securities were issued on March 25, 1936. As a result, loans by banks for the purpose of purchasing or carrying stocks registered on a national securities exchange were limited to 45 per cent of the current market value of the stock offered as collateral, effective May 1, 1936. Also, the calculation of margin requirements was simplified by eliminating the previous provision in the regulations for brokers and dealers (and originally contained in the law) that credit could be extended up to 100 per cent of the lowest market price at which a registered security had sold during the preceding three-year period.

Retirement of All National Bank Notes

An important step in the direction of a simplified currency system was taken when the Treasury re-

became effective October 1, 1934. Regulation U, applying to banks, was issued March 25, 1936, and went into effect May 1, 1936.

deemed the outstanding 2 per cent consols of 1930 on July 1, 1935, and also the 2 per cent Panama Canal loans of 1916-36 and of 1918-38 a month later. These issues of government bonds were the only ones carrying the permanent circulation privilege. They were outstanding in amounts of about \$600 million and \$75 million respectively. Altogether \$521,112,330 of the three issues were on deposit with the Treasurer of the United States to secure the circulation of national bank notes issued against them. In addition, a total of \$136,824,750 of various issues of government bonds given the circulation privilege for a three-year period by the Federal Home Loan Bank Act of July 22, 1932, were similarly deposited with the Treasurer, and national bank notes were issued against them.¹ Since this temporary privilege expired on July 22, 1935, all national banks which had issued notes against such bonds were required to deposit lawful money by that date to retire the notes. With the redemption of the consols and of the Panama Canal bonds, no United States government bonds bearing the circulation privilege remained outstanding and the national bank notes still in circulation were covered dollar for dollar by lawful money deposited with the Treasurer of the United States for their retirement. The notes are being withdrawn from

¹ *Supra*, pp. 159-61.

circulation and retired as rapidly as they are presented to the Treasury.

The funds that the Treasury used to redeem the 2 per cent government bonds outstanding and, indirectly, to retire the national bank notes issued against them, represented a part of the "profit" of \$2,812 million that resulted from the devaluation of the dollar.¹

The retirement of the national bank notes, first issued in 1863, is rapidly removing one of the diverse elements in our confused currency system. Such a step was contemplated at the time of the passage of the Federal Reserve Act in 1913, but was postponed. Other kinds of currency that are being retired as rapidly as possible include the "old" gold certificates, Treasury notes of 1890, and the federal reserve bank notes. When the removal of these various kinds of currency from circulation has been completed, the paper money in circulation will consist entirely of federal reserve notes, silver certificates, and United States notes or greenbacks. It would be sound monetary policy to retire from circulation also the silver certificates and the greenbacks, making the notes of our central banking institutions the only kind of paper money in circulation, as is the policy of most other advanced countries.

¹ *Supra*, p. 210.

Federal Insurance of Bank Deposits

The Banking Act of 1933, as previously noted,¹ provided for the so-called insurance of bank deposits in all federal reserve member banks, as well as in such non-member state banks as wished to participate in the plan and were able to present evidence establishing their solvency. The widespread popular demand for such an insurance, or guaranty, arrangement was the natural outgrowth of the long period of heavy bank failures beginning in 1921, with their resulting large losses to many thousands of depositors who were relatively helpless to protect themselves.

According to the provisions of the Banking Act of 1933, a temporary deposit insurance plan was to be in effect from January 1, 1934, to July 1, 1934. On the latter date it would be succeeded by a permanent plan administered by the Federal Deposit Insurance Corporation, which was created for the purpose. The participants in the temporary plan were to include all member banks licensed before January 1, 1934 by the Secretary of the Treasury and all non-member banks which obtained the approval of state authorities as to their solvency. Deposits in the participating banks were fully guaranteed up to \$2,500 in amount for each depositor. The guaranty fund was to be accumulated by assess-

¹ *Supra*, p. 194.

ments on all participating banks to the extent of one-half of one per cent of their insured deposits. Members of the temporary plan were liable to an additional levy of equal amount and no more. It was estimated that the guaranty of \$2,500 for any one depositor gave full protection to about 96.5 per cent, by number, of the deposits in all insured banks.

The permanent plan of deposit insurance provided for the establishment of the Federal Deposit Insurance Corporation which would insure the deposits of all participating banks and would purchase, hold, and liquidate the assets of closed national banks. Management of the Corporation was vested in a board of three directors consisting of the Comptroller of the Currency and two others to be appointed by the President. The Corporation was to have a subscribed capital of between \$450 million and \$500 million, of which approximately one-third would be paid in and the remainder would be subject to call at any time. The capital was to come from the following sources:

1. A subscription of \$150 million from the United States Treasury.

2. A subscription of approximately \$139 million by the federal reserve banks, which were to contribute one-half of their surplus as of January 1, 1933.

3. Subscriptions by all banks participating in the insurance plan to the extent of one-half of one per cent of their total deposits. It was expected that these subscriptions would total \$200 million if all banks, including mutual savings banks, joined the Corporation.

All national banks and state member banks were required to participate in the insurance fund. Non-member state banks, of which there were 8,500 in operation with deposits of \$5,000 million, were allowed to enjoy the advantages of participation until July 1, 1936 by subscribing to the stock of the Federal Deposit Insurance Corporation and meeting the requirements imposed on all banks. By the end of this two-year period, the non-member state banks were compelled to qualify for membership in the reserve system or withdraw from the deposit guaranty fund. This provision looked toward the ultimate termination of our dual banking system, and the forcing of all commercial banking under the control of the federal government.

The Federal Deposit Insurance Corporation was to guarantee repayment in full of all deposits up to \$10,000 in amount and a minimum of \$10,000 in larger deposits. In addition, 75 per cent of the amount of a deposit in excess of \$10,000, but not in excess of \$50,000, was guaranteed, as was 50 per cent of the balance of any deposit over \$50,000 in amount. If the assets of the Corporation were not

adequate to meet all demands made upon it in fulfilling these guaranties, participating banks could be required to pay an unlimited number of additional assessments of one-fourth of one per cent of their total deposits.

The temporary insurance plan was put into effect as scheduled on January 1, 1934. There was fairly general agreement that, under the circumstances, the protection it offered to bank depositors represented a laudable attempt to stabilize the banking situation, while the banks did not find the limited assessment of one-half of one per cent of their insurable deposits overly burdensome. The opposition, however, to the permanent plan which was to go into effect on July 1, was strong. Consequently, the life of the temporary plan was extended for an additional year by an amendment to the Federal Reserve Act approved June 16, 1934. This legislation also increased the amount to be insured for any one depositor from \$2,500 to \$5,000, except in the case of mutual savings banks, and provided a separate fund for these institutions.

A year later the future of the permanent deposit insurance plan was still uncertain. An omnibus banking bill dealing, in part, with deposit insurance had been before Congress since February without definite action. On June 28, 1935, therefore, just prior to its expiration date, the temporary plan was

extended for an additional period of two months, i.e., until August 31.

The Banking Act of 1935 was approved by the President on August 23 and became effective immediately. Title I of this legislation was concerned exclusively with deposit insurance¹ and introduced important changes in the existing law. First, it provided that the temporary insurance funds should be consolidated at once into a Permanent Insurance Fund and that the Federal Deposit Insurance Corporation should begin, as of August 23, the permanent insurance of bank deposits. Second, it provided that the insured banks, instead of subscribing to the stock of the Federal Deposit Insurance Corporation and of being liable to unlimited future levies, should pay an annual assessment of $1/12$ of one per cent of their total deposits. Third, the maximum amount of the insured deposit of any depositor was reduced to \$5,000, as contrasted with a minimum of \$10,000 and certain percentages of deposits above that figure provided for in the Banking Act of 1933. Fourth, the former provision that all banks participating in the insurance plan must become members of the federal reserve system by July 1, 1937 was greatly relaxed.² Membership in the system was now to be required

¹ The other provisions of this Act are explained in Chap. XIII.

² The Banking Act of 1933 set this date as July 1, 1936, but a subsequent amendment passed in 1934 extended the time limit for an additional year, i.e., until July 1, 1937.

only of the participating banks with average deposits of \$1 million or more in 1941 or any succeeding calendar year. Fifth, the Secretary of the Treasury was authorized to purchase any obligations of the Federal Deposit Insurance Corporation and for this purpose was permitted to use the proceeds of the sale of securities thereafter issued under the Second Liberty Bond Act as amended.

Pros and Cons of Deposit Insurance

Federal insurance of bank deposits has received widespread support within recent years as a result of the disastrous record of bank failures already discussed. Depositors in failing banks have been to a great extent helpless and unable to protect themselves. In many communities there has been only one bank, and in many others where more than one bank existed, there has been little to choose among them, because the stress of competition among an excessive number of banks established under our dual system of national and state banks has often, in our smaller communities, kept all the banks weak. Even when there has been a great difference in the strength of different banks in a community, the average depositor has not been in a position to make an intelligent choice among them.

There is the further important consideration that in a depression like that following the stock market

crash of 1929, when the prices of goods and securities fade away at a rapid rate, many banks which were conservatively managed according to the generally accepted standards of the time came to disaster through little or no fault of their own. It was to remedy these conditions that many persons turned to the insurance of bank deposits on a nation-wide scale under the auspices of the federal government. They held that the mere knowledge that deposits up to a certain amount would be paid in full was likely to serve as a deterrent to the panicky conditions that so often induced bank failures by compelling a forced liquidation of assets. It was also their contention that a national plan of insurance would have the advantage of sectional diversification and be free from many of the weaknesses and shortcomings that had previously characterized the state guaranty plans, and led to their failure.

On the other hand, it may be pointed out that there are certain obvious disadvantages in any federal insurance program, and especially the one now in operation. In the first place, many banks that were actually insolvent were allowed to re-open after the bank holiday in March 1933, and there was tremendous pressure upon the authorities to admit these banks to the temporary and permanent insurance funds. Only 140 banks that were operating on an unrestricted basis were not allowed

to have their deposits insured on January 1, 1934.

In the second place, an insurance¹ plan like that now in operation penalizes the strong banks by requiring of them the same contributions as of the weak banks. If the deposits of most depositors are as safe in one bank as in another, by reason of the government guaranty, a continually increasing proportion of bank customers are going to keep their deposits and do their banking business at those banks that are most "liberal" in their loan policies. For it is to be remembered that the weak banks get the same insurance as the strong ones, and, unlike the situation in other kinds of insurance, the bad risk pays no more for its insurance than the good one. This means competition among banks in slackness in the granting of loans. The bank with the loose credit policy gets the business and the bank with the careful, cautious credit policy loses it. The slack banker dances and the conservative banker pays the fiddler. If the conservative banker protests, the slack one invites him to go to a warmer climate. In turn all may be dancing and the fiddler,

¹ The term "insurance" is really a misnomer, for the law requires that the assessments on all participating banks shall be at the same rate. The essential characteristic of the insurance principle, on the other hand, is that the premium charged the insured bears a definite actuarial relation to the risk involved. The federal plan now in effect should more properly be termed the guaranty of deposits than the insurance of deposits. *cf.* Association of Reserve City Bankers, *The Guaranty of Bank Deposits*, pp. 1, 27-8.

if paid at all, may have to collect from the depositors or from the taxpayers.

As an alternative to such guaranties it is suggested that the more advisable course, as a permanent policy, would be to replace our weak banks by strong banks with numerous branches under a unified national banking system. When such a banking system is an accomplished fact, as it is in most advanced countries, the public will not be interested in a government guaranty of deposits.

CHAPTER XIII

THE BANKING ACT OF 1935 AND THE PROBLEM OF EXCESS RESERVES

THE Banking Act of 1935, approved by the President on August 23, was the sixth major revision of the Federal Reserve Act since it became law in 1913. The original draft of the new Act, introduced in the House of Representatives on February 5, 1935, represented an attempt to re-formulate the legal basis of the federal reserve system in the light of recent experience, as well as to write into the permanent law as much of the temporary banking legislation growing out of the crisis of 1933 as seemed desirable. On February 6 a companion bill was introduced in the Senate. After several weeks of hearings, the House bill was withdrawn and a substitute measure introduced in its place on April 19. This bill was subsequently passed by the House on May 9 with comparatively little debate. It consisted of three parts. Title I dealt exclusively with the guaranty of bank deposits and made extensive changes in the legislation of 1933 providing for the permanent plan of deposit insurance. Title II consisted of amendments to the Federal Reserve Act which were intended to centralize powers of credit control in Washington, under governmental influence, and to effect other fundamental changes

quite at variance with the previous history of the federal reserve system. Title III consisted of minor amendments to the national banking laws recommended by the Comptroller of the Currency.

While there was some disagreement as to certain provisions in Titles I and III, these parts of the bill in the main met with general approval. Widespread objection rapidly developed, however, to many of the far-reaching changes included in Title II, which gave expression to the view that monetary management can be used successfully to stabilize the price level and to restrict the cyclical fluctuations of business activity. These purposes were to be accomplished by doing away with the semi-autonomous character of the reserve banks and by centralizing control over them in the hands of the Federal Reserve Board in Washington. The Board, in turn, was to have almost complete control of the open-market operations of the system and unrestricted power to alter member bank reserve requirements. Its virtual domination of the federal reserve banks was to be achieved by providing that the board of directors of each bank should elect a governor and vice-governor annually, subject to the approval of the Board. This meant that the Federal Reserve Board might practically dictate the election of its own candidates as executive officers of the twelve reserve banks by disapproving other appointments.

Other provisions in the bill eliminated practically all specifications as to the quality of the assets back of federal reserve notes and the requirement that specific assets be pledged as security for these notes. As a result, while a 40 per cent gold-certificate reserve would continue to be maintained, the federal reserve notes were to become a simple asset currency secured by a paramount lien on all the assets of the federal reserve banks. Finally, authorization was to be given to the federal reserve banks to make advances to member banks on their promissory notes secured by any sound asset. The sky was thus made the limit as to the types of securities that could serve as the basis for federal reserve bank loans and the federal reserve authorities, without any statutory restrictions whatsoever, were to be the sole judge of what constituted a "sound asset." Thus, practically all of the carefully prepared restrictions of section 13 of the Federal Reserve Act and of the regulations that had been built upon them, limiting federal reserve advances largely to certain high types of liquid paper, were to be swept away.

Following extended hearings by a subcommittee of the Senate Banking and Currency Committee, a banking bill markedly different from the House measure was passed by the Senate on July 26. Thereupon a Conference Committee was appointed to reconcile the divergent features of the two bills.

This it did by adopting the provisions of the Senate bill in almost all respects where important differences existed. On August 19 the Conference bill was passed by the Senate and the House; four days later it received the approval of the President and, except for a few provisions, became effective immediately. The main provisions of the Banking Act of 1935 were the following:

Title I—Federal Deposit Insurance. Sweeping changes were made in the plan of permanent deposit insurance enacted in 1933. It was provided that the temporary insurance funds should be consolidated immediately into the Permanent Insurance Fund and that the Federal Deposit Insurance Corporation should begin, as of August 23, 1935, the permanent insurance of bank deposits.¹

Title II—Amendments to the Federal Reserve Act.

1. The name of the Federal Reserve Board was changed to the Board of Governors of the Federal Reserve System. The ranking officer of the Board was henceforth to be known as the chairman and was to be designated by the President for a term of four years. The number of members on the Board was reduced from eight to seven, and the Secretary of the Treasury and the Comptroller of the Currency were eliminated as ex-officio members. Members were to be appointed for a term of 14 years, as

¹ For a more detailed discussion of the provisions of the Act with reference to deposit insurance, see pp. 226-34.

contrasted with 12 years previously, by the President with the advice and consent of the Senate. Not more than one member could come from any one federal reserve district, and in appointing the members, the President must have due regard to fair representation of the financial, agricultural, industrial, and commercial interests, and of the different geographical divisions of the country. No member who has served his full term of 14 years shall be eligible for reappointment to the Board. The new Board of Governors was to assume office February 1, 1936.

Similarly, important changes were made in the organization of the federal reserve banks. The executive officer in each bank, effective March 1, 1936, was to be known as the president rather than the governor. He was to be appointed by the board of directors of the bank, with the approval of the Board of Governors of the Federal Reserve System, for a term of five years. All other officers and employees of the bank were made responsible to the president.

2. Greatly increased powers of credit control were lodged in the hands of a newly-created Federal Open Market Committee consisting of the seven members of the Board of Governors and of five representatives of the federal reserve banks. One representative on this Committee was to be elected annually by the Boston and New York banks, one

by the Philadelphia and Cleveland banks, one by the Chicago and St. Louis banks, one by the Richmond, Atlanta, and Dallas banks, and one by the Minneapolis, Kansas City, and San Francisco banks. A compromise was thus reached between those advocating complete centralization of control in Washington and the group in favor of the determination of policy by the representatives of the twelve federal reserve banks without interference by the Board.

The Federal Open Market Committee must meet in Washington at least four times a year upon the call of the chairman of the Board of Governors or at the request of any three members of the Committee. Its function is to consider, adopt, and transmit to the several federal reserve banks regulations relating to the open-market operations of those banks. Such regulations are fully binding on all federal reserve banks, which are now prohibited from engaging in, or refusing to engage in, open-market operations except in accordance with the direction of and the regulations adopted by the Committee. The provision written into the Federal Reserve Act in 1933 that all open-market operations are to be governed "with a view to accommodating commerce and business and with regard to their bearing upon the general credit situation of the country" was continued in effect. It was further stipulated that purchases or sales of gov-

ernment securities could be made only in the open market. This clause evidently repealed that part of the Thomas amendment authorizing the President to direct the Secretary of the Treasury to enter into agreement with the federal reserve banks to purchase \$3,000 million in United States obligations directly from the Treasury.

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

The character of the Federal Open Market Committee and its functions were thus greatly altered, as compared with the provisions of the Banking Act of 1933.¹ This earlier legislation established the Committee, composed of one representative from each federal reserve bank, as an advisory body which would make recommendations to the Federal Reserve Board in respect of open-market operations. Individual reserve banks were allowed to refrain from participating in the recommended operations by filing written notice of their decision

¹ *Supra*, pp. 197-8.

with the chairman of the Committee within thirty days. Compelling authority to carry into effect a specific credit policy was therefore lacking until the 1935 Act was passed.

3. The Board of Governors was authorized to alter member bank reserve requirements against time and demand deposits in order to prevent injurious credit expansion or contraction. Two limitations not included in the original bill passed by the House were nevertheless placed on this sweeping grant of power. These were: first, that required reserves could not be reduced below the legal level at which they stood when the Act was passed and, second, that they could not be raised by more than 100 per cent above that level. It was doubtless expected that this authority would give the Board an instrument which it could easily and effectively use to eliminate a large part of the \$3,000 million of excess reserves now in existence.

These provisions of the Banking Act of 1935 represented an extension, as well as a refinement, of the power to alter reserve requirements incorporated in the Thomas amendment. Under the earlier legislation it was possible for the Federal Reserve Board, upon affirmative vote of five of its members and with the approval of the President, to declare that an emergency existed by reason of credit expansion and to raise or lower member bank

reserve requirements without limit during the period of the emergency.

Even in its present form this control of reserve requirements is the most powerful instrument of credit policy in the hands of the Board. No one doubts its potency, but there is some question whether it is advisable to introduce such an element of uncertainty into the credit structure. It is argued that sharp or sudden increases in reserve requirements could easily provoke a credit panic and result in extremely extensive liquidation of bank credit. Further, the reserve position of no two banks is the same and an increase in reserve requirements would affect different banks very unevenly. For banks with no more than the legally required reserve balances before the new requirements went into effect the consequences might be serious.

An alternative to control over reserve requirements by the Board of Governors is the plan recommended by the Committee on Bank Reserves of the Federal Reserve Board in 1931.¹ This Committee, after detailed study of the problem, proposed that the distinction between demand and time deposits be abolished and that all deposits be treated alike for reserve purposes. The required reserve to be maintained with the federal reserve banks was then to be (a) 5 per cent of the bank's

¹ *Report of the Committee on Bank Reserves of the Federal Reserve System*, Washington, D.C., 1931.

total net deposits plus (b) 50 per cent of the average daily withdrawals actually made from all its deposit accounts. The virtue of this requirement was that every bank knew the formula determining the size of its reserve, while an increasing total of bank credit and higher velocity of deposit turnover would be offset by mounting reserve requirements. A counteracting force to credit inflation would thus be set at work automatically.¹ These proposals were tentatively considered in connection with several recent banking bills but were abandoned in favor of the discretionary power put into the hands of the Board of Governors.

4. Basic changes were introduced in the Federal Reserve Act allowing the reserve banks, under rules and regulations prescribed by the Board of Governors, to make advances to member banks on their time and demand notes secured to the satisfaction of the federal reserve bank. Such loans must have a maturity of not more than four months and are to bear a rate of interest at least one-half of one per cent higher than the highest prevailing discount rate of the reserve bank extending the accommodation. This amendment was in some respects a continuation of one of the emergency provisions of the Glass-Steagall Act of 1932 which had lapsed March

¹ For a criticism of this plan see Anderson, B. M., Jr., *Proposed Banking Legislation. The Glass Bill and the Federal Reserve Proposal to Base Member Bank Reserves upon "Velocity" of Deposits.* (Cbase Economic Bulletin, April 1932.)

3, 1935, but the important requirement in the earlier Act that member banks must have exhausted their supply of eligible paper before obtaining such loans was omitted in the 1935 law, and the penalty rate of discount was reduced from one per cent to one-half of one per cent.

It should be pointed out that the sweeping powers given the reserve banks by the Banking Act of 1935 to make advances secured by ineligible paper are at variance with the purposes and intentions of those who framed the original Federal Reserve Act. The definition of what was eligible paper for rediscount purposes was then rigidly circumscribed to include only "notes, drafts, and bills of exchange issued or drawn for agricultural, industrial, or commercial purposes." Paper used to facilitate carrying or trading in stocks or bonds, except those of the United States government, was specifically eliminated from this category, even in the liberalizing amendments adopted in 1916.

With these previous restrictions removed, it will now be possible for the reserve banks to make advances, indirectly, on stocks, bonds, and real estate. While a case can be made for granting such wide latitude in the matter of loan policies during an emergency, the possibility of unwise lending and consequent abuse must also be considered. The criterion of individual judgment on each federal reserve bank loan has now been substituted for the

older, impersonal rules of action. Whether this marked change will prove desirable must depend in large measure on the personnel in charge of the federal reserve system and the freedom with which they are allowed to operate.

5. The Board of Governors was given increased control over the discount rates of the federal reserve banks by adding to the law the requirement that such rates must be established every fourteen days, or oftener if deemed necessary by the Board. Since the power of review and determination of discount rates continues to be held by the Board, it is now possible for the central authority to have a much more direct influence in establishing a rate because of the frequent opportunities to pass judgment on it.

6. In order to facilitate the admission of banks required to become members of the federal reserve system on or after July 1, 1942 if they are to continue their participation in the Federal Deposit Insurance Corporation, the Board of Governors was authorized to waive in whole or in part the requirements relating to the admission of such banks to membership. The only limitation was that if such a bank gains admission to the federal reserve system with a capital less than that required for the organization of a national bank in the same place, and its capital and surplus are not adequate as compared with its liabilities, the Board of Gov-

ernors may require the bank in question to increase its capital and surplus to such amount as the Board may deem necessary, but not to an amount in excess of that required for the organization of a national bank in the same place.

7. The restrictions on real estate loans were relaxed in certain particulars so that it is now possible for national banks to make such loans secured by first liens upon improved real estate, including improved farm land and business and residential properties, regardless of their location. The amount of any such loan made after August 23, 1935, may not exceed 50 per cent of the appraised value of the real estate offered as security, and the loan cannot have a maturity of more than five years. It is provided, however, that the amount of the loan may be increased to 60 per cent of the appraised value of the property and its maturity increased to ten years if the loan is secured by an amortized mortgage or deed of trust under the terms of which the installment payments are sufficient to amortize at least 40 per cent of the principal of the loan within ten years. The real estate loans made by a national bank must not exceed, in total amount, its combined capital and surplus, or 60 per cent of its time and savings deposits combined, whichever is greater.

These provisions represent a substantial relaxing of the former restrictions, which were sufficiently

lax to result in numerous difficulties for national banks that took full advantage of them. The wisdom of encouraging additional real estate loans on the part of commercial banks with a large part of their liabilities in the form of demand deposits is open to serious question. If attempts are made to borrow on such loans at the federal reserve banks under the new provisions of the Banking Act of 1935, there is danger that the assets of the reserve banks will become to a considerable extent immobilized in long-term, illiquid commitments.

8. Finally, it should be pointed out that the sections in the House bill making federal reserve notes a simple asset currency met with such general opposition that they were eliminated in the final draft of the bill which became law. No change, therefore, was made in the character of the notes, which must still be secured by a pledge of 100 per cent eligible collateral, as well as by a minimum gold certificate reserve of 40 per cent, which may be counted as part of the collateral required. Until March 3, 1937, however, by Presidential proclamation the provision of the Glass-Steagall Act allowing United States government obligations to be used as collateral security for federal reserve notes as an emergency measure will be continued in effect.

Title III—Technical Amendments to the Banking Laws. The other parts of the Act consisted of minor amendments to the national banking laws, which

were incorporated in Title III. There was general agreement as to the advisability of most of these amendments.

The Problem of Excess Reserves

The most serious problem confronting the federal reserve authorities today is what to do about the huge volume of excess reserves deposited with the federal reserve banks by the member banks. The

RESERVE BALANCES OF MEMBER BANKS

(AVERAGES OF DAILY FIGURES)

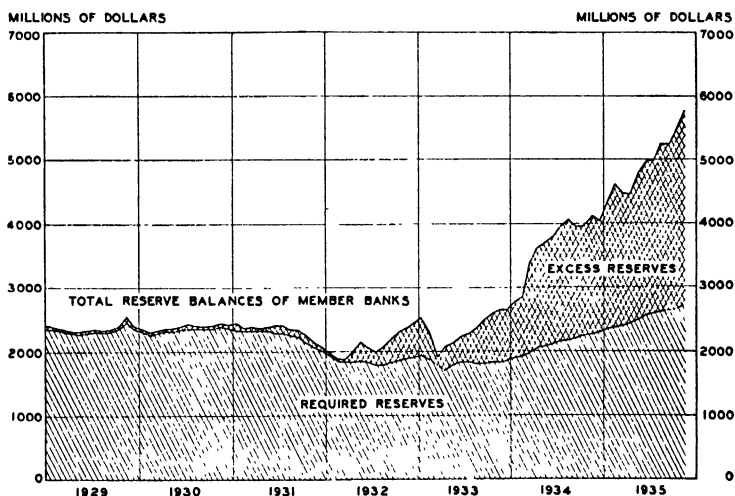


CHART XI

rapid rate at which these reserves have accumulated since 1932 is indicated in Chart XI. Two causes have been largely responsible for this unprecedented growth. Of these, mention should first be made of

the open-market operations of the federal reserve banks effected with the purpose of expanding the basis of bank credit—operations which substantially increased federal reserve bank holdings of government securities during the depression. These holdings of government securities increased, with occasional interruptions, from about \$511 million at the end of 1929 to \$741 million in February 1932. The passage of the Glass-Steagall Act at that time allowed the federal reserve banks to increase their purchases of government securities very greatly. Accordingly, purchases of over \$1,000 million were made during the remainder of 1932 in an endeavor to stem the tide of liquidation and another \$600 million were added to the system's portfolio in 1933. Since that time virtually no change has been made in federal reserve holdings, which have remained at \$2,430 million. The net increase in such holdings between 1929 and 1934 thus came to nearly \$2,000 million. The funds paid for these government securities found their way into the hands of the member banks, which used the first proceeds to pay their indebtedness to the federal reserve banks and then allowed the remainder to accumulate to their account in the form of excess reserve balances when it was impossible to make safe loans and investments against such reserves.

In the second place, the reduction in the gold content of the dollar in January 1934, increased the country's monetary gold stock by 69 per cent and started an unprecedented gold flow to the United States. Between February 1, 1934 and December 31, 1935, our monetary gold stock increased by about \$3,089 million largely as a result of gold imports. This sharp increase is indicated in Chart VI. Such gold coming to this country was almost entirely for private account. Individuals or groups of individuals would ship gold to a bank in the United States and receive a deposit credit for the dollar value of the shipment. The gold, in turn, would be handed over to the Treasury, and the member bank would receive a check on its federal reserve bank for the monetary value of the gold so handed over. Thus, the gold imports of the last two years, coming at a time when the member banks were almost entirely out of debt to the reserve banks, had the effect of swelling ever higher the total excess reserves of the member banks. By the end of 1935, therefore, total member bank reserve balances held with the federal reserve banks amounted to \$5,587 million while the reserves legally required of such member banks, on the basis of their demand and time deposits, came to only \$2,743 million. In other words, the amount of excess reserves was \$2,844 million or 104 per cent of the total of required reserves. Such a situation

is indeed unprecedented and as recently as five years ago would have been considered impossible.

Why does this \$2,844 million of excess reserves loom so large in any discussion of the federal reserve system at the present time? The answer to this question lies in the great powers of credit expansion that are inherent in the system. It should be recalled that the Federal Reserve Act establishes the following reserve requirements for member banks and provides that such reserves must be held on deposit with the federal reserve banks in the respective districts:

Banks	Reserve Against Demand Deposits	Reserve Against Time Deposits
Central reserve city banks	13 %	3 %
Reserve city banks	10 %	3 %
Country banks	7 %	3 %

When account is taken of the number and size of the member banks in central reserve and reserve cities, and of country banks, the average reserve required against demand deposits in the United States today is approximately 10 per cent. This means that for the country as a whole demand deposits can legally be expanded by the member banks

to the extent of ten times the amount of their reserves held with the federal reserve banks. Therefore, if various more or less minor qualifications are omitted for the sake of the clarity of the argument, the member banks of the United States today are legally in a position to increase their demand deposits by approximately \$28,000 million on the basis of the excess reserves now available. The magnitude of this possible increase and of its potential inflationary effect on prices can be indicated by pointing out that although total demand deposits-adjusted of member banks at the end of 1935 totaled but \$18,801 million they were at that time \$2,154 million greater than at the end of 1929. Furthermore, as Dr. B. M. Anderson, Jr., has pointed out, the great inflation of security and real estate prices during the '20's resulted from an increase of only about \$13,500 million in the time and demand deposits of our banks.¹

In the face of these serious dangers of inflation, various proposals have been made to eliminate at least a part of the excess reserves. One of the most frequent suggestions is that the Board of Governors should use the powers given it by the Banking Act of 1935 to raise member bank reserve requirements substantially above current levels. Those advocating this course of action hold that

¹ Anderson, B. M., Jr., *The Gold Standard and the Administration's General Economic Program*, p. 5. (*Chase Economic Bulletin*, May 6, 1933).

such an increase would reduce excess reserves and lessen the dangers we have discussed.

On the other hand, objections have been advanced to this proposal. It has been pointed out by Mr. S. Parker Gilbert, former Under Secretary of the Treasury, that a large part of the excess reserves is the result of gold sent to the United States for safety in the face of the troubled European situation.¹ Any move to incorporate the proceeds of such gold shipments as an integral part of our reserve base would consequently be unwise, it is held, since a revival of confidence in Europe would result in a huge repatriation of funds and would thereby necessitate a large measure of deflation in the United States.

Also, frequent changes in reserve requirements, it is argued, must be avoided in the interests of banking stability, for otherwise there is a new element of uncertainty in the credit situation that may result in periods of sharp liquidation and deflation from time to time if unexpected increases in requirements are made. Finally, although the banks of the country as a whole have reserves 104 per cent in excess of what they need at the present time, these reserves are unevenly divided among individual banks, and many banks have scarcely any excess reserves. A general increase in reserve

¹ Letter to the *New York Times*, December 18, 1935.

requirements would thus affect a large number of banks adversely.

Another method of handling the problem that has enlisted widespread support is to have the federal reserve banks sell a considerable part of their present holdings of \$2,430 million of United States government securities.¹ Such securities would presumably be purchased by the commercial banks of the country, which would pay for them with part of their excess balances with the federal reserve banks. It should be noted, however, that considerable opposition has developed to this policy also. The fear is that such open-market operations would result in declining prices for government securities and a higher interest rate on the federal debt—both long- and short-term—as well as a reversal of the easy money policy that is held by some to be primarily responsible for the degree of recovery already achieved. Finally, it is claimed that sales of government securities should not be undertaken at the present juncture while the government is incurring a huge deficit year after year and is confronted with the need of financing these deficits by new issues of treasury bills, notes, and, occasionally, long-term bonds.

¹ See on this subject the recommendations of the Federal Advisory Council to the Board of Governors of the Federal Reserve System, November 21, 1935, *Federal Reserve Bulletin*, January, 1936, pp. 5-6; also Riddle, J. H., *The Problem of Excess Reserves*, p. 6. (Bulletin No. 5 of the Association of Reserve City Bankers).

Still a third method for handling the problem of excess reserves is available and has already been used to some extent. Beginning in December 1935, the Treasury has been building up its balances with the federal reserve banks by keeping on deposit with them the proceeds of income tax payments and subscriptions for government securities and drawing on the commercial banks for funds needed to meet the current expenses of government. In so far as the Treasury maintains its funds with the federal reserve banks and does not allow them to return to the commercial banks of the country, it is thereby reducing the total of the country's excess reserves. While this procedure has accomplished a useful purpose to date, it is a reflection on the independence of the federal reserve system and is another example of the way in which the Treasury has come to occupy the rôle of a central bank.

In summary, it may be pointed out that the present volume of excess reserves, together with the government's continuing deficits, offers the background for an unprecedented expansion of deposit currency and a marked inflationary rise in prices. Such an expansion is retarded at the moment by a low state of business confidence with a small resulting demand for credit on the part of sound borrowers and a virtual stagnation of the capital market so far as new issues of industrial, railroad, and public utility securities are concerned. There is

still time, consequently, to avoid the extravagant possibilities inherent in our present banking and financial situation, but every passing day will make the necessary restrictive measures more difficult to invoke and less likely to be applied.

CHAPTER XIV

THE PRESENT STATUS OF THE FEDERAL RESERVE SYSTEM

THE far-reaching effects of the Glass-Steagall Act, the Gold Reserve Act, the Silver Purchase Act, the Banking Act of 1935 and the other recent legislation on the federal reserve system cannot yet be foretold with any substantial degree of accuracy. It is certain, however, that the effectiveness of the system's control over the credit structure of the nation has been seriously impaired. This is evident when we consider the principal functions of a central bank, or a group of federated central banks like our federal reserve system, and observe the respects in which these functions have been affected.

The five principal functions of a central bank are briefly as follows: (1) To provide the country with a sound and elastic bank-note currency, one that will expand as trade demands increase and contract as they decrease. (2) To provide the commercial banks of the country with funds if and as needed to meet emergency demands for currency and credit and the regularly recurring seasonal demands. (3) To hold the country's gold reserves. (4) To regulate and maintain the orderly functioning of the nation's money market, at one time pre-

venting dangerous credit expansion, and at another time preventing undue contraction, and at all times exerting a regulating influence on the importation and exportation of gold. For thus protecting and regulating the nation's money and its money market, a central bank usually has as its principal instruments the exclusive right of note issue, the right to raise or lower official discount rates, and the right to buy and sell certain types of commercial paper and securities in the open market. Through these instrumentalities the central bank is able to control the supply of money in circulation and to regulate the reserve balances of the member banks and thus control the supply of deposit currency. (5) To act as the depositary and fiscal agent of the government.

The monetary legislation of the past four years has so weakened the powers of the federal reserve system in the fields in which a central bank usually operates, except in its rôle as fiscal agent of the government, that it has been prevented from functioning in a normal and effective way. Its proper powers have been extensively taken over by the government, and it is no longer fair to hold the system responsible for performing the usual functions of a central bank.

The federal reserve system is hindered in providing the country with an elastic currency, for it is not the sole issuing authority and must share this

function to an increasing extent with the government itself which is purchasing large amounts of silver in accordance with the terms of the Silver Purchase Act of 1934 and issuing silver certificates against such purchases. If the full intent of this Act is followed out, one dollar of silver must be owned for every three dollars of gold in the government's vaults. The silver certificates issued against these tremendously wasteful silver purchases will add to the excess reserves of member banks and diminish the reserve banks' control over the currency. Also, the authorization of the Thomas amendment for the Treasury to increase the circulation of greenbacks up to a maximum of \$3,000 million still remains in effect and may be used at any time.

The ownership and control of the nation's gold have been transferred to the government. The federal reserve banks no longer hold any actual gold serving as the primary reserve for the outstanding money and deposit currency of the country. They cannot control the export or import of gold, or obtain the redemption of a single dollar of the \$7,939 million in gold certificates they now hold, except at the option of the Secretary of the Treasury, and at such rates as the President may decide between the equivalent of 50 cents and 60 cents of our former gold dollar. While it is true that the Treasury has allowed gold exports on those rare

occasions when the dollar has fallen to a discount against other gold currencies, there is a general fear that gold might not be allowed to leave the country in volume if a strong inflationary movement developed and there was a "flight from the dollar." Possessing no gold holdings of their own, the reserve banks would be in a difficult position to meet such a situation effectively.

The power of the federal reserve system to control and protect the money market through changes in the discount rate and through open-market operations, for the present at least, is nearly gone. The market is so flooded with funds that member bank borrowing is an extreme rarity, and the operations of the reserve banks are being increasingly dictated by the fiscal needs of the government. For example, out of total bills and securities of \$2,469,947,000 owned by all twelve federal reserve banks on May 6, 1936, the amount of bills discounted came to only \$4,584,000, while bills bought in the open market amounted to only \$4,676,000. On the same date, however, total holdings of government securities were about \$2,430 million.

The member banks also have been investing increasing amounts of their assets in the direct and indirect obligations of the government. The strong tendency in this direction is shown in Chart XII. Whereas total holdings of United States obligations by the federal reserve banks and the member banks

U. S. GOVERNMENT SECURITIES HELD BY FEDERAL RESERVE AND MEMBER BANKS, 1928 to 1935

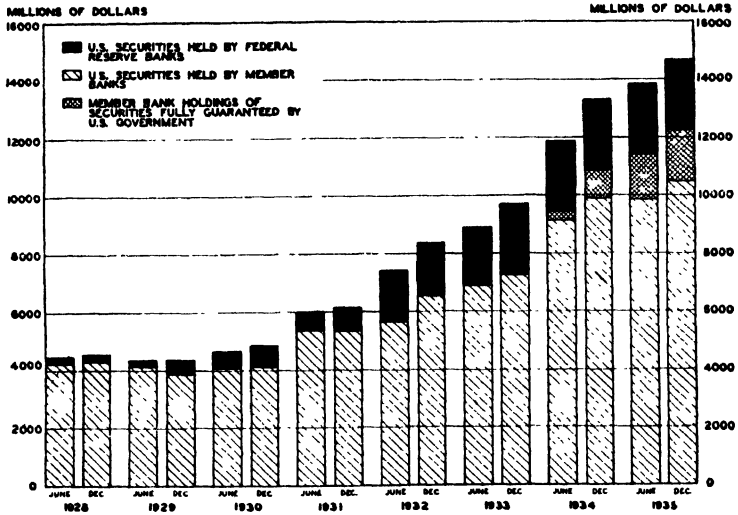


CHART XII

Data for member banks are for June and December call dates; those for federal reserve banks are for the end of the months nearest the same call dates.

amounted to only \$4,437 million in June 1928, this total had increased to the unprecedented figure of \$14,700 million including the fully guaranteed obligations of the government, by December 31, 1935.

It is today difficult to reduce in any considerable measure the huge volume of excess reserves, now in the neighborhood of \$3,000 million, for fear of injuring the market for government bonds and of

interfering with the deficit financing of the Treasury. Consequently, if currency and credit redundancy should threaten to bring on a dangerous speculative market, the federal reserve banks might find it almost impossible to carry through effectively a restrictive policy by raising discount rates and selling government securities in the open market.

Furthermore, the extent of federal reserve control is extremely limited in the face of the operations of the Treasury Department. This was strikingly brought out by Dr. A. C. Miller, who was formerly a member of the Federal Reserve Board, in his testimony with reference to the Banking Bill of 1935 before the Senate subcommittee. Dr. Miller on that occasion said in part:

“There is one further thing I want to call your attention to that I have not mentioned so far, and that is the new position that the United States Treasury has in recent years come to assume as a factor in the money market, and that is something beyond anything in extent that we have ever had before. I have just looked up to see what the powers of the Treasury are to increase or decrease member-bank reserves and deposits. . . . In the matter of increasing reserves it has the power now to issue \$3,000,000,000 of greenbacks. And it has

about \$1,800,000,000 of stabilization funds with reserve banks which it can use. . . .

“There would be two vast sources of inflation; and when you realize that things are moving in their ordinary way a dollar of reserve money multiplies itself to \$10, and you can see what the Treasury could do there, that the Board would be helpless to counteract unless it is given some authority; and I confess that I view the future in that respect with at least perplexity. And it can issue more silver certificates. That again has the same effect as an open-market operation. It could also further devalue the dollar and spend the profits. That again would be an open-market operation. In other words, they have the power to go into the open market to an extent that makes federal reserve banks seem like a toy pistol alongside the modern revolving six-shooter.

“The Treasury has the power, on the other hand, to decrease member banks’ reserves. It can draw down its own balances at commercial banks and transfer the proceeds to reserve banks. . . .

“So that you really have two colossal sources of banking power in the United States, one be-

ing the federal reserve system, and the other being the Treasury.”¹

These statements accurately describe the present situation with reference to federal reserve control of the money market and the credit structure of the country. On the one hand, the powers of the Board of Governors have been substantially increased as a result of recent legislation. The Board now enjoys virtual control over the twelve federal reserve banks. It determines the open-market policy of the system through the instrumentality of the new Open Market Committee. Even more important, it possesses the unrestricted authority to raise member bank reserve requirements by as much as 100 per cent above present levels. Discount policy, finally, is more definitely entrusted to the Board than ever before.

On the other hand, the powers of the Board of Governors have been substantially limited by the growing importance of the central banking functions of the Treasury. Mention need only be made of the Treasury's \$2,000 million gold-certificate stabilization fund, which can be used for a variety of purposes, including the purchase and sale of government securities; the President's authority, under the Thomas amendment, to establish na-

¹ Hearings on the Banking Act of 1935 before a Subcommittee of the Committee on Banking and Currency, United States Senate, 74th Congress, 1st session, pp. 774-5.

tional or international bimetallism at any gold-silver ratio he may choose; the very large powers of silver-certificate issue exercised under the Silver Purchase Act of 1934; the right to issue up to \$3,000 million of greenbacks under the Thomas amendment; and the control of the nation's monetary gold stock, including the right to withhold licenses for gold exports at will. Further, the President retains authority to alter the gold value of the dollar at least until January 30, 1937. Finally, the continuing deficits of the federal government are having a pronounced inflationary effect on the economic life of the country and render virtually useless any determined efforts in the direction of credit control.

The future value and usefulness of the federal reserve system will depend in large measure upon the freedom with which it is allowed to operate and the restraint with which the Treasury uses the very great monetary powers now lodged in its hands. If the Treasury gradually withdraws from the field of direct currency and credit control, the federal reserve system may well continue its evolutionary development and render even more valuable service to the nation in the future than it has in the past. If the Treasury continues to eclipse the federal reserve system, however, and uses its powers in behalf of unduly low interest rates and of currency and credit expansion, the reserve authorities will be relatively helpless witnesses of the result.

APPENDIX A

*Combined Balance Sheet of the Twelve Federal Reserve Banks
as of May 27, 1936, and Brief Explanations of the Various
Items.*

(In Thousands of Dollars)

ASSETS	
Gold certificates on hand and due from U.S.	
Treasury ¹	\$ 7,824,035
Redemption fund—F. R. notes ²	13,062
Other cash ³	310,451
<i>Total reserves.</i>	\$ 8,147,548
Bills discounted: ⁴	
Secured by U.S. government obligations direct and/or fully guaranteed	\$ 2,646
Other bills discounted	2,182
<i>Total bills discounted</i>	\$ 4,828
Bills bought in open market ⁵	\$ 4,299
Industrial advances ⁶	30,462
U.S. government securities: ⁷	
Bonds	265,699
Treasury notes	1,545,908
Treasury bills	618,648
<i>Total U.S. government securities</i>	\$ 2,430,255
Other securities ⁸	\$ 181
<i>Total bills and securities</i>	\$ 2,470,025
Due from foreign banks ⁹	\$ 237
F. R. notes of other banks ¹⁰	19,002
Uncollected items ¹¹	518,009
Bank premises ¹²	48,051
All other assets ¹³	41,126
TOTAL ASSETS	\$11,243,998

LIABILITIES	
F. R. notes in actual circulation ¹⁴	\$ 3,758,973
Deposits:	
Member bank—reserve account ¹⁵	5,747,228
U.S. Treasurer—general account ¹⁶	544,183
Foreign bank ¹⁷	54,493
Other deposits ¹⁸	271,122
	<hr/>
<i>Total deposits</i>	\$ 6,617,026
Deferred availability items ¹⁹	\$ 522,081
Capital paid in ²⁰	130,795
Surplus (Section 7) ²¹	145,501
Surplus (Section 13b) ²²	26,513
Reserve for contingencies ²³	34,111
All other liabilities ²⁴	8,998
	<hr/>
TOTAL LIABILITIES	\$11,243,998
Ratio of total reserves to deposit and F. R. note liabilities combined ²⁵	
	78.5%
Commitments to make industrial advances ²⁶	\$ 25,095

¹ These are the new gold certificates given to the federal reserve banks in payment for their gold, which now belongs to the United States Treasury. These gold certificates are reserves of the federal reserve banks.

² This redemption fund consists of gold certificates deposited with the United States Treasury by the federal reserve banks for the redemption of their outstanding federal reserve notes. The amount of the fund cannot be less than 5 per cent of the federal reserve notes issued less the gold certificates held as collateral security against them.

³ This consists of all money except gold certificates and federal reserve notes held by the federal reserve banks. See item 10.

⁴ This item represents advances made by federal reserve banks to member banks. It consists of short-term notes, drafts, bills of exchange, and bankers' acceptances which have been rediscounted for member banks, and collateral loans made to member banks against their notes secured by eligible paper or by the direct obligations of the United States government, or by its fully-guaranteed obligations, or by the debentures or other obligations issued by a federal intermediate credit bank. The *Federal Reserve Bulletin* each month presents an analysis of the kinds and maturities of the paper held. A summary of the eligibility requirements for

paper to be rediscounted at the federal reserve banks was published in the *Federal Reserve Bulletin* for July, 1930, pp. 401-6.

⁵ This item represents the bankers' acceptances which have been purchased by the federal reserve banks.

⁶ These industrial advances consist of intermediate-term loans made by the federal reserve banks to provide working capital for established commercial and industrial enterprises. (See note 26 below.)

⁷ This represents total federal reserve bank holdings of the direct and fully guaranteed obligations of the United States government. The open-market operations of the reserve banks consist largely of purchases and sales of these obligations.

⁸ The item "other securities" includes all securities except those of the United States government held by the federal reserve banks. Included in this category are bills, notes, revenue bonds, and warrants with a maturity from date of purchase of not more than 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.

⁹ This represents balances due from foreign banks, chiefly central banks, as a result of banking transactions performed for them.

¹⁰ Every federal reserve bank receives notes of other federal reserve banks which it cannot put into circulation again and must return to the bank which originally issued them.

¹¹ These are items in process of collection, chiefly under the federal reserve clearing and collection system.

¹² The federal reserve banks and their branches are now housed in buildings owned by the banks, except for the branches in Cincinnati, Charlotte, Portland, Seattle, and Spokane.

¹³ The chief assets included in this item are reimbursable expenses, deferred charges, interest accrued, and the premium on securities held.

¹⁴ Federal reserve notes in circulation represent the difference between the total of notes issued by the federal reserve agents to the reserve banks and the volume of notes held by the reserve banks.

¹⁵ Member banks are required by law to keep their entire legal reserves on deposit in the federal reserve bank in their district. At the present time the volume of such member bank reserve balances amounts to far more than the legally required minimum. The amount by which actual reserves exceed required reserves is known as "excess reserves" and is a limiting factor with reference to the extent to which member bank credit can be expanded at any particular time.

¹⁶ The law authorizes the Secretary of the Treasury to use the federal reserve banks as depositories of public funds, except in the case of certain specified trust funds. The Secretary began depositing public funds in federal reserve banks as early as September 4, 1915, and since that time

has continually and extensively employed federal reserve banks as depositories.

¹⁷ Many foreign banks, in most cases central banks, maintain working balances with the federal reserve banks. A considerable part of these funds is held on deposit with the Federal Reserve Bank of New York.

¹⁸ This item covers deposit credits of certain clearing non-member banks in the United States, federal reserve bank officers' checks outstanding, and federal reserve exchange and transfer drafts.

¹⁹ These are liabilities of federal reserve banks to member banks and clearing non-member banks arising out of the federal reserve clearing and collection system. They represent items in process of collection, the proceeds of which are not yet available to be drawn upon by the creditor banks.

²⁰ The law requires every member bank to subscribe to stock in the federal reserve bank of its district to the amount of 6 per cent of the member bank's paid-in capital and surplus. One-half of this subscription has already been called and paid, and the other half is subject to the call of the Board of Governors. This item in the balance sheet accordingly represents 3 per cent of the combined paid-in capital and surplus of all member banks.

²¹ This is an earned surplus built up over a period of years by the federal reserve banks in accordance with the terms of the original Federal Reserve Act and the amendment thereto, of March 3, 1919, which provided that after payment of a cumulative 6 per cent dividend on their stock the reserve banks should credit all their earnings to surplus until the surplus equalled 100 per cent of the subscribed capital. Thereafter, 10 per cent of such earnings after dividends was to accrue to surplus and the balance was to be paid to the government as a franchise tax.

The Banking Act of 1933 provided that the federal reserve banks should each subscribe one-half of their surplus as of January 1, 1933, to the stock of the Federal Deposit Insurance Corporation. The total amount thus paid was \$139,299,557. To make up for this very large decline in surplus, the reserve banks were thereafter allowed by law to credit all earnings in excess of dividend requirements to surplus account.

²² This item represents a special capital surplus which the reserve banks have been building up in accordance with the provisions of the amendment of June 19, 1934, to the Federal Reserve Act. This legislation authorized the federal reserve banks to make intermediate-term working capital loans to established industrial and commercial enterprises. So that such loans could be made with safety and without danger to the capital and surplus of the banks, the Secretary of the Treasury was permitted to pay to each of the reserve banks a sum equal in total amount to its subscription to the stock of the Federal Deposit Insurance Corporation. Funds for these payments, which the balance sheet indicates had already reached \$26,513,000 on May 27, 1936, were appropriated out of

the miscellaneous receipts accruing to the Treasury from the gold increment that resulted from the devaluation of the dollar.

²³ This is a reserve that has been built up over a period of years to take care of losses and unexpected charges of all kinds.

²⁴ This represents several liabilities, the most important of which are accrued taxes, unearned discount, and net earnings.

²⁵ The reserve ratio is computed by dividing total reserves consisting of gold certificates on hand and due from the United States Treasury, the gold certificates in the redemption fund, and all other cash by a sum consisting of all federal reserve note and deposit liabilities.

²⁶ These are commitments which the federal reserve banks have assumed under the terms of the amendment of June 19, 1934, to the Federal Reserve Act. The reserve banks may make industrial advances themselves, participate with member or non-member banks in making them, or agree in advance to take over an industrial loan at the request of the lending bank, or banks, and assume up to 80 per cent of any ensuing loss.

INDEX

A

- Acceptances, trade acceptances and bank acceptances may be purchased by federal reserve banks in the open-market, 52-55; may be discounted by federal reserve banks, 52; promote inter-district mobility and uniform discount rates, 55-56; drawn for agricultural purposes and eligible for rediscount by federal reserve banks, 73; acceptances outstanding, chart, 96; buying rate on acceptances, Federal Reserve Bank of New York, 1919-1935, chart, 137; acceptance purchases of federal reserve banks in relation to federal reserve policy, 139-142; in portfolios of federal reserve banks, chart, 1916-1935, 143; acceptance purchases of federal reserve banks in the depression, 153; *see also* bank acceptances *and* trade acceptances.
- Advisory Council, how constituted, 40.
- Agricultural Paper, eligible for rediscount at federal reserve banks, 73.
- Anderson, B. M., Jr., cited, 123, 244, 253.
- Association of Reserve City Bankers, cited, 233.

B

- Bagehot, Walter, cited, 123.
- Bank Acceptances, advantages of, 54; rediscountable by federal reserve banks and nature of, 54-55; use of, in connection with foreign trade, 92-93, 96; *see also* acceptances.
- Bank Credit, extent to which used as a medium of exchange, 8-10; lack of elasticity under old banking system, 11-19; elasticity of, under federal reserve system, 69-70; "frozen" credits, 127; inflation of, 128-134; chart of member bank deposits, 1916-1935, 129; time deposits, 130-131; velocity of deposits, 131-134; *see also* member bank credit.
- Bank Failures, number and amount of deposits involved, 164-167; chart, showing record of, by calendar years, 165; reasons for, 166.
- Bank Notes, inelasticity under old banking system, 11-17; chart showing seasonal variation in, 1904-1914, 16; bond-secured, under federal reserve law, 58-60; federal reserve bank note, 59-60; chart, showing seasonal variation in federal reserve notes, 66; *see also* federal reserve notes.
- Bank Suspensions, number and liabilities, 77.
- Banking, separation of investment and commercial banks in Banking Act of 1933, 193-194.
- Banking Act of 1933, 29n; interest on demand deposits, 104-105; object of, 190; origins of, 190-192; enactment and provisions of, 192-198; temporary federal deposit insurance, 226.

- Banking Act of 1935, 37-38; provision for legal reserve requirements, 71; reserves against government deposits, 104; deposit insurance, 230-231; origins and enactment of, 235-238; federal deposit insurance, 238; amendments to Federal Reserve Act, 238-248.
- Banking Holiday, banking statistics, 77n; proclaimed by President, 175-176; program for ending, 181-182.
- Banking Panic of 1933, 168-170; reasons why federal reserve system could not prevent panic, 171-174.
- Banks, number of commercial, in 1912 in the United States, 3; statistics on reopening of, after holiday of 1933, 182.
- Beckhart, B. H., cited, 136, 144.
- Bills Discounted, *see* discounts.
- Board of Governors, how constituted, 38-39; powers, 39-41, 39n, 40n, 41n; power to require rediscounting by one federal reserve bank for another, 47; must impose a deficiency tax on issues of federal reserve notes when reserve falls below 40%, 62-63; emergency powers under Glass-Steagall amendment of 1932, 67-69; powers for fixing reserve requirements, 70-71; emergency powers under 1932 amendment, 76-78; regulates collection and exchange charges, 82-83; custodian for interdistrict settlement fund, 89-90; supervisory powers over banks organized under the "Edge Amendment," 94; given increased control over discount rates, 246; powers increased over federal reserve system, 265.
- Bonds, bearing circulation privilege, 12n; *see also* United States government.
- Branch Banking, provisions for in Banking Act of 1933, 195-196.
- Branches, of federal reserve banks, 34; of national banks in foreign countries, 93.
- Brokers' Loans, for account of "others," evils of, 133-134.
- Burgess, W. Randolph, cited, 9.
- Business Activity, *see* federal reserve policy *and* open-market operations.
- Buying Rate on Acceptances, *see* acceptances *and* federal reserve policy.

C

- Canadian Bank Notes, elasticity of compared with that of United States national bank notes, 15; chart, 16.
- Capital, of federal reserve banks, minimum amount of, 28; of federal reserve banks, how subscribed, 32; of federal reserve banks, amount paid in, 33; of banks organized for foreign trade, minimum required, 93-94.
- Central Bank, functions of, 258-259.
- Central Reserve City Banks, reserve requirements, 44.
- Centralization, of control of federal reserve system in Board of Governors, 38-41; of bank reserves in respective federal reserve districts, 41-45.
- Circulation, *see* money in circulation.

- Circulation Privilege, granted by Federal Home Loan Bank Act of 1932, 159-160.
- Class A Directors of Federal Reserve Banks, *see* federal reserve banks.
- Clearing House, *see* brokers' loans.
- Clearing-member Banks, defined, 84.
- Clearings and Collections, clearing out-of-town checks under the old banking system, 20-23, 80; clearing out-of-town checks under federal reserve system, 80-91; clearing services rendered by the federal reserve system, 84-89; member banks included on par list, 85; federal clearing system extended to cover promissory notes, trade bills, time drafts and similar items, 88; cost of, under federal reserve system, how met, 89-91.
- Collateral Loans, character of, which may be made by federal reserve banks, 74-75; extensive use of by member banks during the War, 75-76; emergency legislation of 1932 regarding, 76-78.
- Commercial Failures, number and liabilities, 77.
- Commercial Paper, creation of a broader discount market for, 52-57; kinds of, eligible for rediscount by federal reserve banks, 74; rates in the open market on 4-6 months commercial paper, 1916-1935, chart, 137.
- Committee on Bank Reserves, of the Federal Reserve Board, plan, 243-244.
- Commodity Standard, qualified, put into effect by Gold Reserve Act, 213-214.
- Contractility of Circulating Credit, under federal reserve system, 78-79.
- Country Banks, reserve requirements, 44.
- Credit, control of lodged with Federal Open Market Committee, 239-242; expansion inherent in federal reserve system, 252-253; *see* bank credit.
- Currency Shipments, heavy under old banking system and evil results of, 23; largely reduced in volume under the federal reserve system, due to interdistrict settlement fund, 89-91; may be made by member banks, at expense of federal reserve banks, to settle adverse balances arising out of clearing and collection system, 87.

D

- Decentralization, of American banking prior to federal reserve system, 3-7; most serious phases of, 6-7.
- Defects, of old banking system summarized, 2, 26-27.
- Demand Deposits, chart, showing amount of, 129; *see* deposits.
- Democracy, in plan of organization of federal reserve system, 35-38.
- Deposit Credit, inelasticity of, 17-18.
- Depositaries, government, apportionment of funds among, under old banking system, 25-27; use of federal reserve banks as, 99-105; use of individual banks as, during War and since, 102-105; of United States government, 103; amendment of Federal Reserve Act concerning, 104; *see also* United States government.

- Deposits, turnover of, 8-9; of member bank reserves in federal reserve banks, 41-45; elasticity of deposit currency under federal reserve system, 69-79; chart of member bank deposits, 1916-1935, 129; time deposits and inflation, 130-131; velocity of deposits, 131-134; member bank reserve deposits, fluctuations in, due to gold movements and federal reserve policy, 145-148; insurance of bank deposits, 194; payment of interest on, 194-195; *see* bank credit *and* member bank credit; *see also* federal deposit insurance *and* United States government.
- Depression, of 1931-1932, emergency legislation for, 67-69; of 1931-1933, compared to others in the matter of bank failures, 76-77; federal reserve credit, 152-154; *see also* federal reserve policy.
- Directors of Federal Reserve Banks, Class A directors of federal reserve banks, who and how elected, 36-37; Class B directors of federal reserve banks, who and how elected, 37; Class C directors of federal reserve banks, who and how elected, 37; duties, 37-38.
- Discount Market, a broader one being created by federal reserve system, 52-56; developed by federal reserve system, 92-93; *see also* open-market operations.
- Discount Policy, of federal reserve system, 135-139; *see also* federal reserve policy.
- Discount Rates, chart, 137.
- Discounts, rates charged by federal reserve banks, how made effective, 49; equilibrium of discount rates throughout country, 55; bills discounted and other items of federal reserve bank credit, 134-142; chart, showing discounts of federal reserve banks, 1916-1935, 143; rate of, controlled by Board of Governors, 246; *see also* federal reserve policy.
- Districts, *see* federal reserve districts.
- Dollar, grains of gold in present dollar, 107; gold content to be fixed by President, 209-210; silver dollar content of to be fixed by President, 211-212.
- Dollar Exchange, *see* acceptances; *see also* clearings and collections *and* exchange.

E

- Earnings of Federal Reserve Banks, *see* federal reserve banks.
- Edge Amendment, 93-95.
- Elasticity, lack of credit elasticity under old banking system, 8-19; Canadian bank note seasonal elasticity, chart of, 16; chart, showing lack of seasonal elasticity in national bank notes, 1904-1914, 16; extent under federal reserve system, 58-79; of federal reserve notes, 62-65; emergency elasticity introduced by the Glass-Steagall amendment, 67-69; of deposit currency under federal reserve system, 69-79; *see also* deposits *and* federal reserve notes.
- Eligible Paper, *see* acceptances *and* federal reserve banks.

- Emergency Relief and Construction Act of 1932, enactment of and provisions, 161.
- Emergency Banking Act of 1933, enactment of and provisions, 162; provisions of, 176-180; purposes of, 180.
- Exchange, defective exchange and transfer system prior to federal reserve system, 20-23; development of exchange and transfer system under federal reserve system, 80-97; *see also* foreign exchange and clearings and collections.
- Exchange Charges, discontinued by federal reserve banks, 88; made by member banks, reasonableness of, to be determined by Board of Governors, 88; effect of gold embargo and gold purchase on, 205-206.

F

- Federal Deposit Insurance, legislation for insurance, 34; in revised Glass Bill of 1933, 191; of bank deposits, 226-231; of bank deposits, pros and cons, 231-234.
- Federal Deposit Insurance Corporation, regulations for state banks obtaining benefits of, 32; return of pro rata shares, 164; provision in Banking Act of 1933, 194-195; functions and organization of, 226-227; capital, 227-228; permanent insurance, 230-231.
- Federal Home Loan Act of 1932, enactment of and provisions, 159-160.
- Federal Intermediate Credit Bank, 99.
- Federal Open Market Committee, establishment and evolution of, 198-202; organization and duties, 239-242.
- Federal Reserve Agent, position, and how appointed, 37; functions of, in connection with federal reserve note circulation, 60-61.
- Federal Reserve Banks, doors opened, 27; subscriptions to capital stock of, required of member banks, 32; capital stock of, 32-33; earnings of, 34; provisions for establishment and number of branches, 34; plan of organization, 35-38; directors of Class A, Class B and Class C, and how elected, 36-37; officers how appointed, 37-38; sole depositaries of member banks' legal reserves, 42-43; additional powers for emergencies under the Glass-Steagall amendment of 1932, 67-69; eligible paper for rediscount by, 74; powers granted to, by the Glass-Steagall amendment of 1932, 76-78; currency shipments at expense of, under certain conditions, 87; exchange charges by, discontinued, 88; as government depositaries, 98-99; fiscal agents for government, 108-114; open-market operations, 139-141; purchases of United States government securities, 140-142; security purchases in relation to member bank reserves, 145-148; departure from "bankers' bank," 161-164; direct advances to individuals, partnerships, and corporations, 179; permitted to loan to non-member state banks, 180; changes in organization, 239; advances to member banks on time and demand notes, 244-246; chart, showing amount of government securities held, 1928-1935, 262; holding Treas-

- ury balances to solve excess reserve problem, 256; acceptance purchases, *see* acceptances; collateral loans made by, *see* collateral loans; discount policy of, *see* federal reserve policy.
- Federal Reserve Bank Notes, description of, 59-60; provisions for in Emergency Banking Act of 1933, 178; circulation of, 179; being retired, 225.
- Federal Reserve Bank of New York, acceptance rate and discount rates, chart, 137.
- Federal Reserve Board, power to require rediscounting for one federal reserve bank by another, 47; established foreign exchange division, 93; "moral suasion" policy of, in 1929, 150-152; cited, 199-200; control of credit on registered securities, 221-223; title and other changes, 238-239.
- Federal Reserve Clearing and Collection System, 80-89; *see also* clearings and collections.
- Federal Reserve Credit, uses of in connection with member bank deposits and federal reserve notes in circulation, 116-118; chart of total federal reserve credit outstanding, 1916-1935, 117; relationship to gold movements and money in circulation, 121-122; relationship to money rates, 122-124; use of in connection with "frozen" credits, 124-125; relationship to gold movements and money in circulation, 124-128; effect of dealing in government securities, 141; chart, showing principal items outstanding, 143; security speculation, 148-150; depression of 1929-1931, use of, 152-154; outstanding in 1932, 158; outstanding in early 1933, 173; provisions of Banking Act of 1933 concerning, 192-193.
- Federal Reserve Districts, minimum capital per district, required by law, 28; how determined, 28-29; map of United States, showing districts, 30; mobilization of reserves in, 45-46.
- Federal Reserve Notes, collateral required and deposited with federal reserve agent, 60-61; gold reserve, 61-62; legal minimum reserve for, may be reduced in time of emergency, on payment of a graduated deficiency tax, 62-63; elasticity, 62-65; amount outstanding and collateral, 63; one federal reserve bank may not pay out those of another except on payment of tax, 64; possibility of further contraction of, 64-65; chart, showing amount in circulation, 1926-1935, 66; Glass-Steagall emergency provisions regarding issue of, against United States government bonds, 67-69; relationship to federal reserve credit outstanding, 116-118; expansion of during the War, 121-123; relationship to gold movements and federal reserve credit, 124-128; retirement of, 125-126; provision of Glass-Steagall Act of 1932 concerning, 157; not redeemable in gold, 208; substitution for, by silver certificates, 219; no changes in character instituted in Banking Act of 1935, 248.
- Federal Reserve Policy, equilibrium of discount rates throughout country, 55; "cushion" effect of federal reserve credit, 121-122; effect on member bank reserves and gold movements, 121-128; discount rates and open-market operations, 134-142; discounts, 135-139; chart, show-

- ing fluctuations in discount rates and open-market buying rates of Federal Reserve Bank of New York, 1919-1936, 137; support of the acceptance market, 139-142; acceptances, 139-140; United States securities, importance of dealings in, 140-142; United States government securities of, 141-142; business activity, 142-145; chart, showing fluctuations in principal items entering into federal reserve credit outstanding, 143; open-market operations vs. discount rate, 144-145; financial crises and federal reserve policy, 146-147; purchases of government securities, 146-148; security speculation and federal reserve policy, 148-150; "moral suasion," use of in 1929, 150-152; acceptances, 152-154; depression of 1929-1931, 153-154; hesitant during 1928, 154; fairly consistent with accepted principles of central bank practice, 154; control of reserve requirements by Board of Governors 243; *see also* open-market operations.
- Federal Reserve System, contractility of circulating credit, 78-79; stabilizing influence for member bank reserves, 128; did not lessen severity of business cycle, 134-135; prevented panic after Great Britain went off gold, 155; unable to prevent banking panic of 1933, 171-174; admission of mutual savings banks and Morris Plan banks, 196-197; membership facilitated, 246-247; recent monetary legislation hinders system's functioning as central bank, 259-266.
- Fiscal Agents of Government, federal reserve banks serve as, 99-105; valuable services of federal reserve banks during War, 102-103 and 108-114.
- Float, how handled under old banking system, 21-23; evils of, under old banking system largely eliminated under federal reserve system, 86-87; under the federal reserve system, 80-97; evils of, eliminated under federal reserve system, 91; *see* clearings and collections.
- Foreign Branches, of American national banks, established, 93.
- Foreign Exchange, difficulties with, prior to federal reserve system, 23-24; federal reserve system and foreign exchange, 92-93; banks organized under federal charters to carry on, 93-97.
- Foreign Trade, acceptances and foreign trade, chart, 96; *see* Edge Amendment.
- Franchise Tax, discontinuance of payment, 197.

G

- Gilbert, S. Parker, mentioned, 254.
- Glass-Steagall Act of 1932, relating to federal reserve notes, 67-69; emergency measure relating to collateral loans, 76-78; enactment of and provisions, 156-157; results, 157-159; *see* Banking Act of 1933.
- Gold, reserves of gold certificates may be reduced in time of emergency, 62-63; emergency legislation to free gold, 67-69; United States bonds no longer payable in, 69; circulation outlawed, 106-107; as primary

- reserve funds, 116-118; monetary stock of, in United States, 1916-1935, chart, 117; mobilization of gold in central banks, 119-120; outflow of, factors counteractive to, 123-124; suspension of payments of, 183; embargo on exports of, and abrogation of "gold clause," 184; and "old" gold certificates withdrawn from circulation, 208; Secretary of the Treasury to prescribe conditions for using, 209; purchases authorized, 211; Treasury holdings in 1934, 217; reduction in dollar content of, increased reserves, 251; *see also* reserves.
- Gold Certificates, as collateral for federal reserve notes, 61; amount of, held against federal reserve note issue, 62-63; in circulation, 1916-1936, chart, 117; provisions of Gold Reserve Act of 1934 concerning, 207-208; "old" certificates being retired, 225.
- Gold Dollar, weight of, to be fixed by President, 187.
- Gold Movements, during the War, to United States, 121-123; 1922-1925, 125-126; 1925-1931, 126-127; from United States, 153; from United States, in 1931, 155-156; in 1932, 159; to United States, in 1934, 251; *see* gold.
- Gold Purchase Plan, provisions and results, 202-205.
- Gold Redemption Fund, may be counted as part of reserves, 61-62.
- Gold Reserve Act of 1934, enacted and provisions of, 206-212; put into effect, 212-213.
- Gold Settlement Fund, *see* clearings and collections and interdistrict settlement fund.
- Gold Standard, mobilization of gold in central banks and world departure from, 119-120; world return to, after War, 120-121; departure from by Great Britain, 155; abandonment of by United States, 183; definition of, 183n; bullion, in United States after Gold Reserve Act, 214-215; *see also* gold.
- Greenbacks, issue authorized by Thomas Amendment, 187.

H

- Hoarding, in Treasury vaults before federal reserve system, 25-27; 1929-1936, 67.

I

- Index of Industrial Production, chart for United States, 1916-1935, 143.
- Industrial Committee, for making industrial advances, 163.
- Industrial Production, chart, 143.
- Inelasticity, of credit under old banking system, 8-19; of bank notes under old banking system, 11-17; chart, showing long-time inelasticity of national bank notes—incapacity for expansion during a period of rapid national growth, 14; chart, showing seasonal inelasticity of national bank notes, 16; of deposit currency under old banking system, 17-18; evil results of credit inelasticity, 18-19.

- Inflation, Glass-Steagall Act, emergency provisions for temporary encouragement of, 67-69 and 76-78; of member bank credit and remedial measures, 128-134; time deposits in relation to, 130-131; velocity of deposits in relation to, 131-134; effects of brokers' loans for account of "others" upon inflation and remedies in 1931, 133-134; of securities and federal reserve policy, 148-150; struggle against, in 1929 by Federal Reserve Board by use of "moral suasion," 150-152; hesitant policy of Federal Reserve Board in 1928, 154; possibilities of, under Thomas Amendment, 185-189; extent possible under federal reserve system, 252-253.
- Insurance, of bank deposits, 194; *see* federal deposit insurance.
- Interdistrict Settlement Fund, 51; description of, 89-91.
- Interest, special rate may be fixed by Board of Governors, 62-63; on demand deposits, 104-105; on bank deposits, 194-195; *see also* discounts, money rates *and* federal reserve policy.

K

- Kemmerer, Edwin W., cited, 99, 123, 131, 178, 183, 187, 202, 212, 218.
- Kinley, David, cited, 9.

L

- Leadership, lacking under old banking system in times of emergency, 3.
- Legal tender, provision for federal reserve notes, 69.
- Legislation, emergency banking requested by President in 1933, 176.
- Liberty Bonds, extensive use of in collateral loans, 75-76; financing by federal reserve banks, 108-113.
- Liberty Loans, effect on depositary system, 102-103.
- Loans, federal reserve banks directly to individuals, partnerships and corporations, 161-162; on notes of member banks, 179; real estate, national bank restrictions on, relaxed, 247-248.

M

- Macmillan Report, cited, 123.
- Map, showing federal reserve districts, 30.
- Member Banks, must purchase stock in federal reserve banks, 32-33; grouped into three classes for electing federal reserve bank directors, number and capital of groups, 35-36; as depositaries of government funds, 99-100; credit provision of Glass-Steagall Act of 1932 concerning, 157; loans to, by federal reserve banks, 179; chart, showing amount of government securities held, 262; advances on time and demand notes by federal reserve banks to member banks, 244-246.
- Member Bank Credit, 1922-1931, 128-131; inflation of, and remedial measures, 128-134; chart, 1916-1935, 129; time deposits in relation to, 130-131; use of in brokers' loan market and inflation, 133-134; 4-6

- months commercial paper rate, chart, 137; rates charged customers, 138; use of in speculation, 148-150; Federal Reserve Board statement on use of in speculation, 151-152; control of credit used for speculative purposes, 220-222.
- Member Bank Reserves, all deposited in federal reserve banks, 42-43; legal reserves on deposit with federal reserve banks, 44; mobility of reserves, inter-district, 46-56; mobility of reserves, intra-district, 56-57; emergency legislation of 1932 to relieve pressure upon, due to lack of eligible paper, 72n; chart, showing member bank deposits in federal reserve banks, 1916-1935, 117; effect of open-market operations of federal reserve banks upon, 124-128 and 145-148; requirements altered, 242-243; chart, 249; problem of excess reserves, 249-257; percentages required, 252.
- Miller, Dr. A. C., cited, 263-264.
- Monetary Gold Stock, *see* gold.
- Money in Circulation, bonds bearing circulation privilege, 12n; inelasticity in national bank note circulation, charts showing, 14 and 16; chart, showing elasticity and amount of federal reserve note circulation, and amount of other kinds of money, 1926-1935, 66; hoarding, 1929-1936, 67; relation to gold movements and federal reserve credit, 124-128; chart, showing amount of, 129; *see also* federal reserve bank notes *and* national bank notes.
- Money Rates, bring about counteractive forces, 123-124; *see* interest; buying rate of federal reserve banks for open-market operations in acceptances, *see* open-market operations; customer-bank rates, *see* member bank credit; federal reserve bank discount rates, *see* federal reserve policy.
- Mobility, of reserves, inter-district, under federal reserve system, 46-56; of reserves, intra-district, under federal reserve system, 56-57; of funds through the gold settlement fund, 89-91.
- Mobilization of reserves under federal reserve system, 45-46; of gold in central banks, 118-121; of reserves, amendment of 1917, 119.
- "Moral Suasion," 150-152; *see* federal reserve policy.
- Mutual Savings Banks, provision for admission to federal reserve system and membership to date, 29n; admission to federal reserve system, 196-197.

N

- National Agricultural Credit Corporation, 99.
- National Banking Laws, minor amendments to, in Banking Act of 1935, 248.
- National Banks, as depositaries of government funds, 25; must join the federal reserve system, 29; number of in the United States, 31; may own stock in banks organized under "Edge Amendment," 93; allowed to

- issue preferred stock, 177-178; restrictions on real estate loans relaxed, 247-248.
- National Bank Notes, reasons for inelasticity, 11-13; bonds bearing circulation privilege, 12n; bonds bearing circulation privilege, chart, 1880-1914, 14; charts, showing inelasticity of, 14 and 16; under federal reserve law, 58-59; circulation extended, 1932, 160; all retired, 223-225.
- National Credit Corporation, to alleviate banking situation after crash of 1929, 167.
- National Monetary Commission, mentioned, 9.
- New York Clearing House, *see* brokers' loans.
- Notes, United States and Treasury of 1890, reserves, 209; Treasury of 1890, being retired, 225.

O

- Open-market Operations, of federal reserve banks, described, 48-52; of federal reserve banks, relation to discount rates, 49; of federal reserve banks, support of acceptance market, 92-93; of federal reserve banks, acceptances outstanding, 96; acceptance rate, chart, 137; of federal reserve banks, 139-141; to end deflation, 158; provisions for in Thomas Amendment, 186-187; Banking Act of 1933, provisions, 197-198; expanding basis of bank credit, 250.
- Organization Plan of Federal Reserve System, democracy of, explained, 35-38.
- Out-of-town Checks, *see* clearings and collections.

P

- Par-clearing and Collection System, description of under federal reserve system and membership in, 84-89; *see also* clearings and collections.
- Pitt, Courtney, cited, Preface.
- Policy, *see* federal reserve policy.
- Price Level, effect of gold purchase plan on, 205.
- Primary Reserves, *see* gold.
- Profits of Federal Reserve Banks, 72.
- Promissory Notes, of member banks, 74-75; collectible under federal reserve clearing and collection system, 88-89; rates on customer-bank, *see* member bank credit; rates on open market, *see* open-market operations.

R

- Rates, *see* money rates.
- Reconstruction Finance Corporation, functions of, 167-168; unable to prevent panic of 1933, 172; purchase of gold by, 203-204.
- Rediscounting, negligible under old banking system, 17-18; by one federal reserve bank for another, 46-48; emergency measure for, 62-63, and

- 73-74; by federal reserve banks for member banks, kinds of paper eligible for, 74-76; rates on, *see* federal reserve policy; *see also* discounts.
- Reserves, importance of cash reserves under old banking system, 4; scattered prior to federal reserve system and therefore ineffective, 4-7; immobile under old banking system, 6-7; district centralization of, under federal reserve system, 41-45; requirements for member banks under Federal Reserve Act, 41-43; provisions of the National Bank Act, 43n and 44n; legal percentages required under Federal Reserve Act, 44; inter-district mobility of, under federal reserve system, 46-56; intra-district mobility of, under federal reserve system, 56-57; gold certificate reserve required against federal reserve notes, may be reduced, 62-63; legal reserves against deposits of federal reserve banks, 70-72; legal requirements less rigid under federal reserve law than formerly, 70-73; member bank reserve, how increased by rediscounting, 72-74; held against government deposits, 104; provision of Thomas Amendment for, 188; legal requirements changed, 208-209; plan of Committee on Bank Reserves, 243-244; changes in requirements should be avoided, 254; problem of excess reserves, 249-257; *see also* gold and member bank reserves.
- "Revalorization Profit," 107-108.
- Riddle, J. H., cited, 255.
- Riefler, W. W., cited, 136, 137, 139.
- Routing of Checks, under old régime, 21-23; gradually eliminated under federal reserve system, 87; *see also* clearings and collections.
- Roosevelt, President Franklin D., cited, 203.

S

- Secretary of the Treasury, apportioning government funds among depositaries under old banking system, 26; depositing government funds, 98-99; cited, 105; cited, 114.
- Security Speculation, relation to federal reserve policy, 148-152.
- Silver, provisions of Thomas Amendment for, 187-188; President authorized to fix weight of silver dollar, 211-212.
- Silver Purchase Act of 1934, enactment and provisions of, 215-216; terms complied with, 217-218; bearing on federal reserve system, 218-220.
- Smith, James G., cited, Preface; 144.
- Spahr, Walter E., cited, 140.
- Speculation, federal reserve credit and speculation, 148-150.
- Stabilization Fund, 108 and 108n; resulting from gold "profit," 210-211.
- State Banks, may join the federal reserve system, 29; number of members of the federal reserve system, 29-31; number of, in the United States, 31; regulations for obtaining government deposit insurance, 32; *see also* member banks.
- Sterling Bills, decline in relative importance of, 92-93.
- Strong, Governor, cited, 101-102.

- Sub-treasuries, as depositaries of government funds, 25; abolition, 105-106.
- Surplus of Federal Reserve Banks, manner of accumulation and size, 33-34.
- Suspensions, *see* bank suspensions.

T

- Tax, graduated deficiency tax on reserve held against federal reserve notes, 62-63; on paying out federal reserve notes of another federal reserve bank, 64.
- Thomas Amendment, provision for elasticity, 70-71; gold weight of dollar, 107; provisions and enactment of, 185-188; greenback issue, 219n; part repealed by Banking Act of 1935, 241.
- Time Deposits, chart, showing amount of, 129; *see also* deposits.
- Tippetts, Charles S., cited, 32.
- Trade Acceptance, use of, encouraged by federal reserve system, 52; nature of, 52-53; development under federal reserve system, 52-54; collectible under federal reserve clearing and collection system, 88; *see also* acceptances.
- Treasury, hoarding in Treasury vaults before federal reserve system, 25-27; growing importance of central banking functions of treasury and government, 259-266; *see also* Secretary of the Treasury.
- Trust Companies, may join the federal reserve system, 29; *see also* member banks.
- Turnover of Deposits, *see* velocity of deposits.

U

- United States Government, prices of government bonds bearing circulation privilege, 1880-1914, chart, 14; fiscal needs of government ill-supplied by old banking system, 25-26; difficulties with government deposits before the federal reserve system, 26; bond-secured bank notes, 58-60; emergency provision of Glass-Steagall amendment to permit issue of federal reserve notes against government securities, 67-69; paper used for purchasing government securities eligible for rediscount at federal reserve banks, 98-99; provision concerning deposits of, 98-99; further deposit provision needed under conditions prevailing, 99-103; depositaries, kinds and amount of deposits held, 103; reserves held against government deposits, 104; amendment of Federal Reserve Act in 1928 concerning government depositaries, 104; liberty bond financing by the federal reserve banks, 108-113; failure of depositaries in 1933 105; sub-treasuries abolished, 105-106; federal reserve policy on selling securities of, 141-142.

- United States Government Bonds, bearing circulation privilege, 12n; no longer payable in gold, 69; carrying circulation privileges redeemed, 223-225.
- United States Government Securities, increase in purchases of, due to Glass-Steagall Act of 1932, 157; chart, showing amount bought by federal reserve banks, 143; federal reserve bank holdings increase, 250; plan of selling by federal reserve banks to solve excess reserve problem, 255; chart, showing amount held by federal reserve and member banks, 1928, 262.
- United States Supreme Court, decision on "gold cases," 184-185.

V

- Velocity of Demand Deposits, chart, 129; relation to expansion and inflation, 1928-1929, 131-134; proposed legal reserve requirements based on deposit velocity, 243-244; *see also* member bank deposits.

W

- Westerfield, Ray B., cited, 218.
- Wickens, David L., cited, 166.
- Willis, H. Parker, cited, 81n.

