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NUMBER 24

PORTFOLIO POLICIES OF COMMERCIAL
BANKS IN THE UNITED STATES
1920-1939

BY
PEARSON HUNT



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BANKS IN THE UNITED STATES
1920-1939

BY

PEARSON HUNT

Assistant Professor of Economics

and

Fellow of Berkeley College

Yale University



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HARVARD UNIVERSITY
GRADUATE SCHOOL OF BUSINESS ADMINISTRATION

GEORGE F. BAKER FOUNDATION
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FOREWORD

The manuscript here presented deals with a topic in which the author, Dr. Pearson Hunt, originally became interested while working on the thesis which he submitted for partial fulfillment of the requirements for the degree of Doctor of Commercial Science. Dr. Hunt, who had received the degree of M.B.A. from the Harvard Graduate School of Business Administration in 1933, was given the degree of D.C.S. by this School in 1939. The present Study, which is a revision and enlargement of some parts of the original thesis, was prepared by Dr. Hunt while he was a member of the Department of Economics at Yale University. Subsequently he received an appointment as Assistant Professor of Finance at the Harvard Business School, effective September 1, 1940. Because his manuscript has been deemed of sufficient importance to warrant having it called to the particular attention of students of statistics and of finance, it is published herewith as No. 24 of the series of Business Research Studies.

HOWARD T. LEWIS,
Director of Research.

BOSTON, MASSACHUSETTS
JANUARY, 1940

PREFACE

It has been said that while it is impossible to predict the future precisely, it is a great help to know which way one is going in the present. The author hopes that this monograph, though it may seem somewhat pedestrian in its progress, will prove useful in the more accurate measurement of the present and the recent past. Not only are some old measures revised, but certain new series are presented which he expects will be useful to students of banking trends.

The inspiration and advice of Professor J. Franklin Ebersole, of the Harvard Graduate School of Business Administration, is gratefully acknowledged. Without his encouragement and assistance, this monograph would never have been completed, or even begun.

Although I assume entire responsibility for the accuracy of the material presented herein, I have had considerable assistance in the handling of statistics. Mr. Lee P. Burgess contributed accurate work and an enthusiasm for the project which was a great encouragement to me. Mr. J. B. Lockhart also cheerfully furnished much help. Through them I have become indebted to the Bursary Fund of Yale University, which financed the work they did for me.

PEARSON HUNT

NEW HAVEN, CONNECTICUT
JANUARY, 1940

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PORTFOLIO POLICIES OF COMMERCIAL BANKS IN THE UNITED STATES: 1920-1939

CHAPTER I

PRELIMINARY SURVEY OF THE DATA TO BE USED

Selection of Basic Data

Almost every study of American banking practices makes use of one or more of the series of banking statistics published by the Comptroller of the Currency, the Board of Governors of the Federal Reserve System, or (for recent years) the Federal Deposit Insurance Corporation. A somewhat confusing abundance of material is provided by this multiplicity of sources, and the investigator must choose the data most useful for his purpose. Although similar in many respects, the different series have different characteristics, which must be evaluated before any one of them is to be used, otherwise the most appropriate series might be overlooked.

Despite its apparent advantage of inclusiveness, the series of reported resources and liabilities of All Banks in the United States¹ is of limited value, for several reasons. In the first place, it is too inclusive, since its totals include private banks and savings banks, as well as the usual types of commercial banks. This difficulty is easily remedied, however, by the exclusion of the undesirable components. Such a procedure is used below, to form a series of All Commercial Banks in the United States.² Even with this correction, however, the

¹ This series excludes such private banks as do not report to the Comptroller of the Currency, as well as those private, Morris Plan, and industrial banks whose figures are not published by state banking departments. The series appears in: U. S. Comptroller of the Currency, *Annual Reports*, e.g., 1939, pp. 35-37; and more briefly in U. S. Board of Governors of the Federal Reserve System, *Annual Reports*, e.g., 1938; and the *Federal Reserve Bulletin*, e.g., Vol. XXVI (March, 1940), p. 223.

² The Board of Governors of the Federal Reserve System, in its discussion of member bank statistics, omits only the mutual savings banks from the total. It has seemed preferable to the author to omit also private banks and stock savings banks, although the latter group cannot be separated after 1935. See "Member Bank Statistics," *Federal Reserve Bulletin*, Vol. XXI (Nov., 1935), pp. 711-719.

series is not so useful as others, because the statement of resources and liabilities is not accompanied by figures of earnings and expenses, charge-offs and recoveries, or other details elsewhere available. Further, there is reason to doubt the items as classified, for the series is a summation of data from the various state and federal authorities, whose classifications of resources and liabilities differ. The reported figures have been fitted into the form used by the Comptroller, and some error is probable, although major divisions such as that between Loans and Investments, or between Time Deposits and Demand Deposits, can probably be trusted.

For these reasons, it is advisable to select one of the other series, after checking it against the data for All Commercial Banks to determine its reliability as a sample. The newly developed series published by the Federal Deposit Insurance Corporation will not be considered, however, despite the new and useful subsidiary information which appears in the annual reports of the corporation.³ The major reasons for this exclusion are, first, that the series does not go back of 1934; second, that much of the detail appears only for the insured banks which are not members of the Federal Reserve System; and third, that the totals for all insured banks in some years represent careless consolidations of statements having unlike classifications of assets.⁴

As at present reported, both the series of All National Banks and that of All Member Banks appear in substantially the same form with re-

³ Especially the classification of banks by size of deposits. It is to be hoped that this classification will soon be used for all insured banks.

⁴ For example, the equality of Commercial and Industrial Loans for All Insured Banks, and for Insured Banks not Members of the Federal Reserve System. U. S. Federal Deposit Insurance Corporation, *Annual Report 1936*, pp. 136, 142.

Exhibit 1. Total Resources of Various Groups of Banks: June 30, 1920-1939

Year	Resources				
	All Commercial Banks ¹	All National Banks		All Member Banks	
	Millions of Dollars	Millions of Dollars	Percentage of All Commercial Banks	Millions of Dollars	Percentage of All Commercial Banks
1920	\$44,527	\$22,197	50%	\$32,194	72%
1921	42,018	19,638	47	29,639	71
1922	42,304	20,706	49	31,724	75
1923	40,174	21,512	54	33,795	84
1924	47,706	22,566	47	35,777	75
1925	51,896	24,351	47	39,105	75
1926	54,101	25,316	47	40,845	75
1927	57,141	26,581	47	42,810	75
1928	60,030	28,508	47	45,092	75
1929	60,419	27,440	45	45,908	76
1930	62,090	29,117	47	47,907	77
1931	57,614	27,643	48	45,289	79
1932	44,965	22,368	50	35,911	80
1933	39,408	20,860	53	33,046	84
1934	43,656	23,902	55	37,385	86
1935	47,585	26,061	55	40,725	86
1936	55,057	29,702	54	46,534	85
1937	56,491	30,337	54	47,469	84
1938	56,103	30,387	54	47,169	84
1939	61,027	33,181	54	51,908	85

Source: U. S. Comptroller of the Currency, *Annual Reports, 1920-1937*, e.g., 1939, pp. 35-36; U. S. Federal Reserve Board, *Member Bank Call Reports, June 30, 1920-1939*.

¹National banks, state commercial banks, and loan and trust companies. From June 30, 1936, item includes stock savings banks.

spect to the national figures of resources, liabilities, and earnings and expenses. But in the years prior to 1925, the member bank figures appeared in considerably less detail. With respect to the possibility of subdivision, both series can be broken down by Federal Reserve districts and by Reserve cities, etc. Only the national bank figures, however, may be broken down to individual states, and to Reserve cities within states.¹ Also, only the national bank figures can be broken down to groups based upon the size of the banks, although even this series does not give many details of resources and liabilities.

Finally, the resources of the national banks have formed a more constant percentage of the resources of all commercial banks than do the resources of all member banks. The details are presented in Exhibit 1.

¹ Member bank figures are available by states, but not in the same detail. U. S. Board of Governors of the Federal Reserve System, *Member Bank Call Reports*.

These considerations, together with the fact that Federal Reserve statistics are not available for years prior to 1914, while national bank figures (not always in the same detail) go back as far as 1867, lead to the conclusion that national bank figures would be the most satisfactory, provided that they can be shown to be a reliable sample of all commercial banks.

The usual assumption with respect to the choice of a sample is to the contrary. Federal Reserve figures are generally selected because of the obvious fact that the member banks are a larger group, and include the national banks in their number.

But the largest sample of a "universe" is not always the most accurate. The investigator's interest usually goes beyond mere balance sheet totals, turning to changes in the proportions to the total of various classes of resources and liabilities. In this field, the author's investigations indicate that the Federal Reserve figures do not

show any substantial superiority over the national bank figures. In fact, there is a slight preference in the other direction.

This conclusion is based upon an investigation of the available series for June 30, 1922, 1927, 1932, 1937, and 1939. The reported resources and liabilities of All Commercial Banks, All National Banks, All Member Banks, and Member Banks Reporting Weekly for these dates were collected, and are presented in comparative form in Exhibit A, page 43.¹

Significant comparisons can most easily be made by the use of balance sheet ratios. The following ratios have been computed. They are presented in Chart 1, and in Exhibit B, page 48.

Ratio to Total Deposits

Capital Accounts

Demand Deposits²

Loans and Discounts

Investments

Cash and Reserve Deposits³

Ratio to Demand Deposits²

Loans and Discounts

Investments

Ratio to Total Resources

Loans and Discounts

Investments

Total Deposits

Ratio to Capital Accounts

Loans and Discounts

Investments

Ratio to Investments

United States Government Securities

Loans and Discounts

A study of these ratios indicates that the scale of usefulness inclines toward All National Banks, as ratios of this series have a tendency to be closer to the ratios for All Commercial Banks than are those of other series. Only in the case of the

¹Earnings figures were not compared, as there is no such series for all commercial banks.

²As used in the exhibits, Demands Deposits exclude amounts due to banks and U. S. deposits.

³For 1937 and 1939, this ratio could not be computed, and the ratio of Cash and Cash Items to Total Deposits was substituted.

ratios based on capital accounts do the All Member Banks figures seem superior, and here the difference is not great. It is certainly clear that either series can be used as a sample of all commercial banks. But for the reasons stated above, the use of national bank figures is preferable.

The series of Member Banks Reporting Weekly, while by no means as complete, seems to give good approximations of the general situation in many ways, but with the important exceptions of ratios involving demand deposits, which are influenced by the smaller amounts of time deposits in the larger city banks; and in the ratio of United States Government Securities to Investments, where the large portfolios of governments owned by city banks act to distort the sample.⁴

The superiority of the national bank figures as a sample of all commercial banks over the larger sample of member banks is probably due to the preponderance of city banks among the state banks included in the member bank total.

The reader may have noted that certain items in the All Member Banks series shown in Exhibit A are larger than the corresponding items for All Commercial Banks. The discrepancies are as follows:

Due to Banks, 1922

United States Deposits, 1922

United States Government Securities, 1922,
1927

Loans on Farm Land, 1927

State Bonds, 1927

Loans to Banks, 1932

Stock Owned, 1932

Time Deposits — Banks, 1932

Accrued Items, 1932

In addition, the amount of United States Government Securities reported for All Member Banks in 1932 and 1937 is disproportionately large. Similar discrepancies would no doubt be found between the All National Banks and All Commercial Banks series, if the national bank sample were larger.

⁴This distortion is generally recognized. The usefulness of the series lies in its timeliness, and in its reflection of changes in the policies of the larger member banks. Cf. "Member Bank Statistics," *op. cit.*

Chart 1. Ratios Computed from Reported Resources and Liabilities of Various Groups of Banks: June 30, 1922, 1927, 1932, 1937, 1939

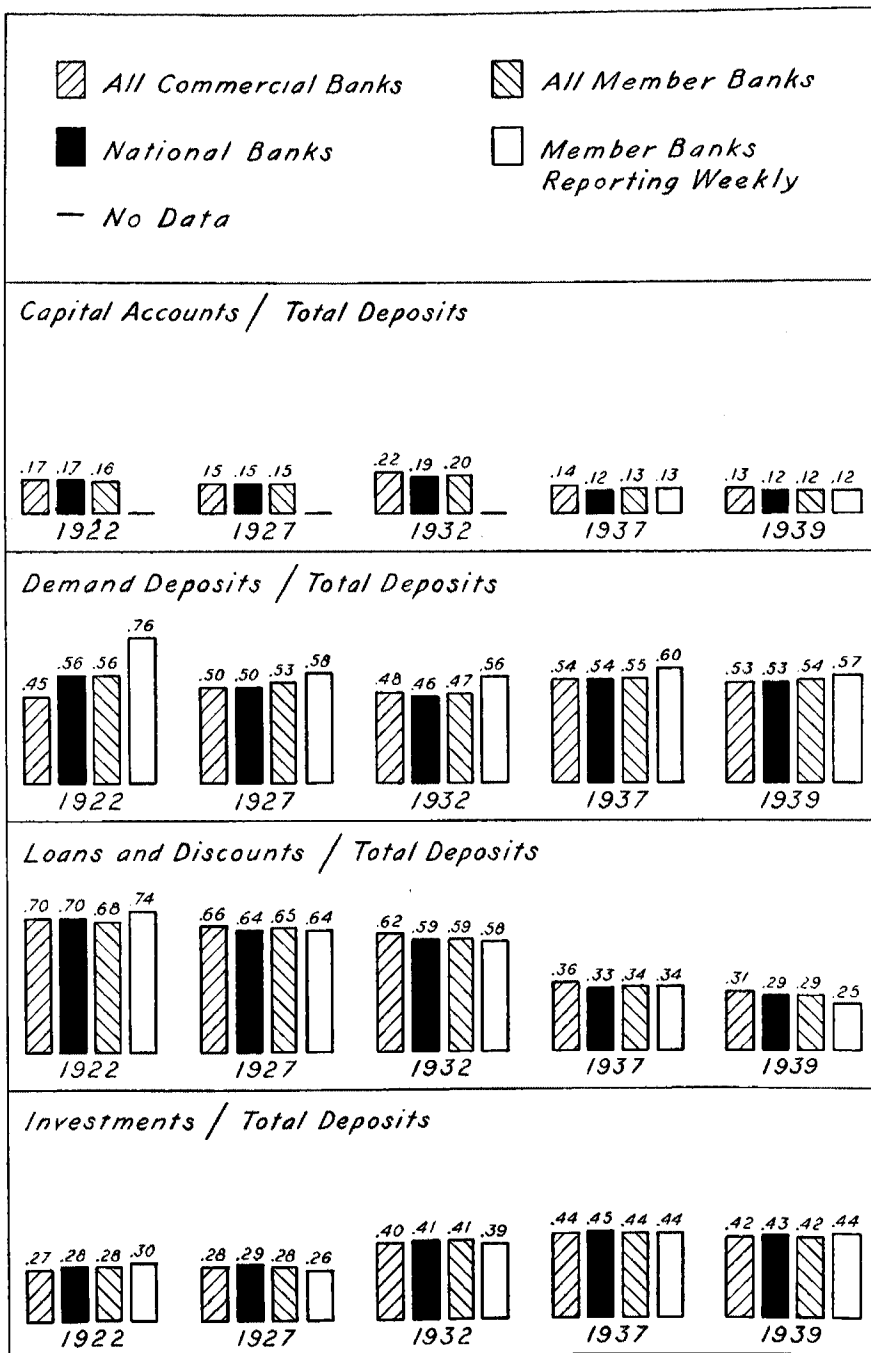
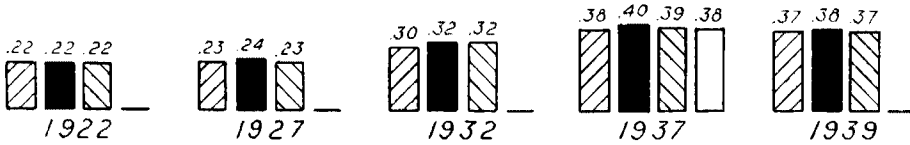
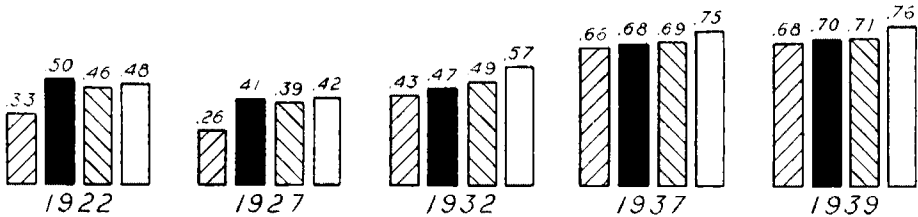


Chart 1 (continued)

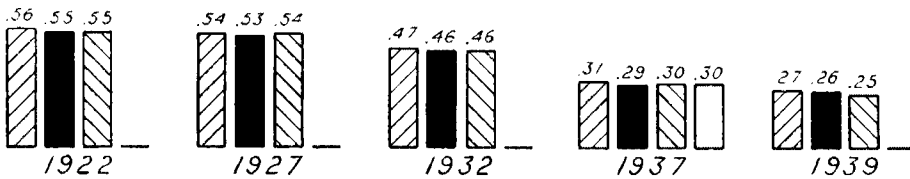
Investments / Total Resources



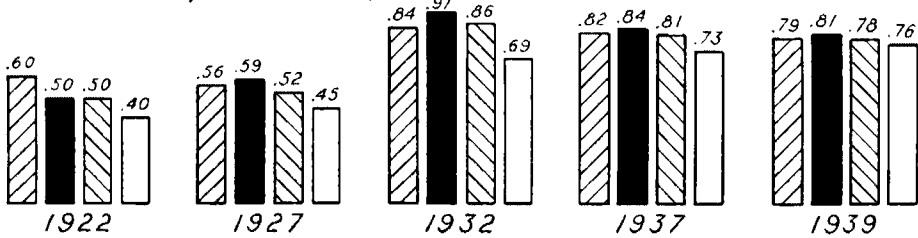
U.S. Government Securities / Investments



Loans and Discounts / Total Resources



Investments / Demand Deposits



Total Deposits / Total Resources

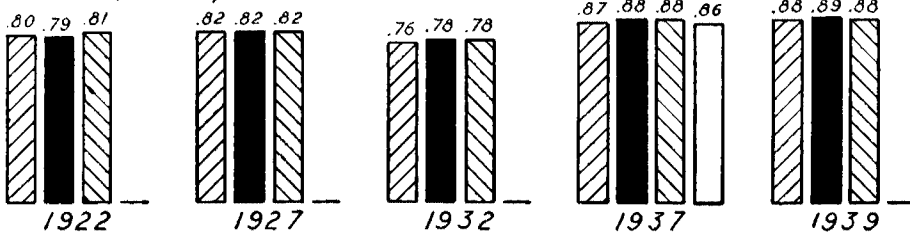
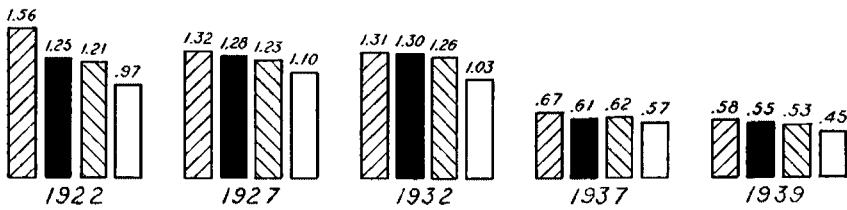
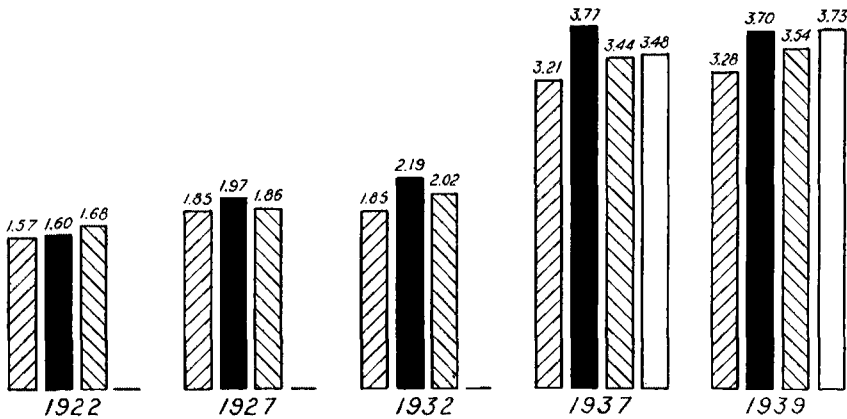


Chart 1 (continued)

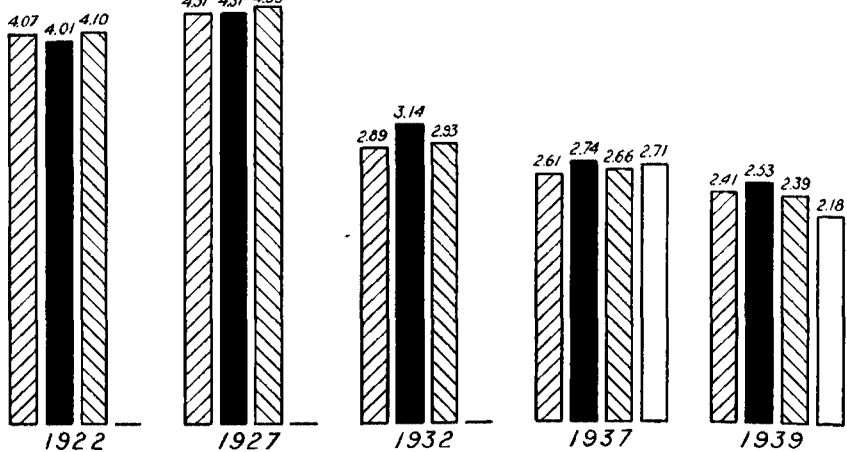
Loans and Discounts / Demand Deposits



Investments / Capital Accounts



Loans and Discounts / Capital Accounts



Such errors no doubt arise from the fact that the basic data for the series of All Commercial Banks come from various sources using different forms. Corrections have been made on the basis of interpolation from comparable figures, but they are not generally available.¹ For present purposes, it is sufficient to note the evidence of inaccuracy in the figures for All Commercial Banks referred to above.

The conclusion drawn from this investigation is that either national bank figures or member bank figures are satisfactory samples of the condition of all commercial banks in the United States, but that the former series has a slight advantage. This advantage is strengthened by the longer period of time over which the Comptroller has presented detailed figures, and by the possibilities of making certain classifications of the group, such as by size of bank and by states, which are not available to users of member bank statistics.

Reclassification of Reported Assets

The principal amounts of a bank's resources are to be found among its "earning assets," which contribute to earnings through interest or discount. Cash reserves and other reserves which do not produce revenue are not included in the meaning of the term, nor, on the other hand, are a bank's building, fixtures, etc., even though they may furnish some income in the form of rent.

Traditionally a bank's portfolio is classified into the two groups of Investments, and Loans and Discounts, which will first be defined by listing the types of assets under each. Loans and Discounts include the items defined below as loans commercial in form, loans not commercial in form, and real estate loans. Investments include all types of securities held, such as United States Government obligations; state, county, and municipal bonds; railroad bonds; etc.

Finding a rationale for this division between Investments and Loans and Discounts is not easy, since it is really a result of the course of banking legislation and traditions. To use the term of the loan as a basis would involve many shifts of clas-

sification, such as that of real estate loans to the group of Investments. To use marketability as a basis would cause confusion because of the existence of open market paper in the class of Loans and Discounts.

The usefulness of the present distinction between Investments on the one hand and Loans and Discounts on the other lies in the fact that in general investments are bought after an analysis which emphasizes marketability and minimizes the banker-customer relationship. Conversely, loans and discounts maximize the importance of credit analysis within the bank, for sale of the asset on the open market is not contemplated. Thus a bank looks to the markets for the liquidity of its investments, and to the customers (except for the possibility of rediscount) for the liquidity of its loans and discounts. Such a basis for distinction justifies inclusion of real estate loans under Loans and Discounts, despite their usual long term of life. At many times, however, because of this long-term characteristic, real estate loans are best considered as a class by themselves.

This division of earning assets on the basis of their expected manner of liquidation means that we can look to changes in their relative importance in bank portfolios as indicators of changing bank policies with respect to liquidity. Thus for example, the recent increase of funds in the investments portfolio at the expense of the loans and discounts must be taken as a measure of an increasing reliance of banks in the United States upon the security markets as a source of liquidity — in other words, the increasing dependence of banks upon "shiftability" instead of "self-liquidation." The change will be more fully described and analyzed later in this monograph.

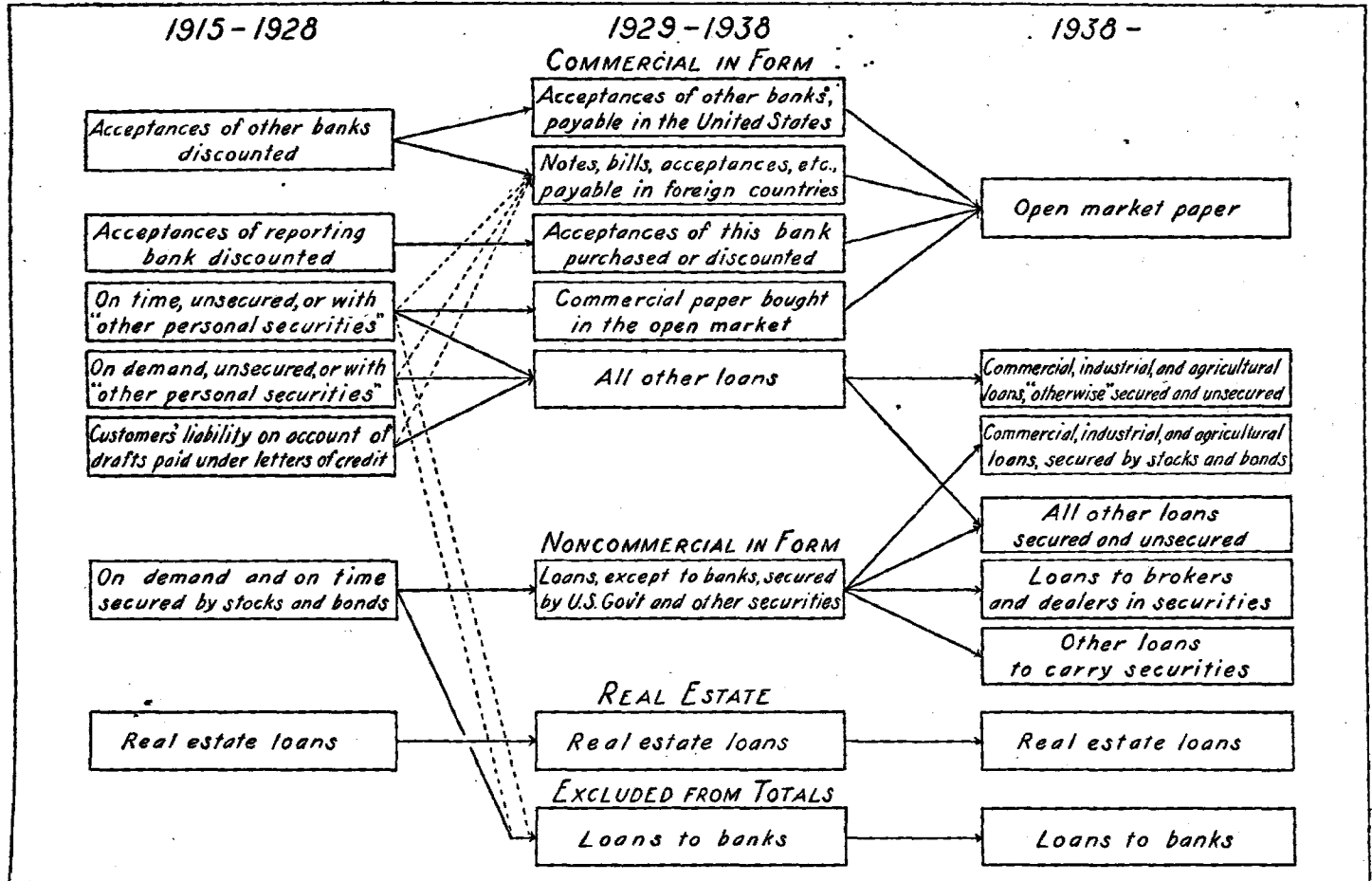
However, anyone commencing to study changes in the liquidity of bank portfolios is soon confronted with the unfortunate fact that the reporting agencies have not until recently classified the items of loans and discounts on the basis of differences in liquidity.²

In the absence of such a classification, students have taken one of two figures as a sufficiently accurate index of the amount of commercial loans. The majority have chosen to use the amount of All

¹ Henry R. Bowser and Harold T. Pearson of the Federal Reserve Bank of Boston have made such corrections, but they decline to make the data available to the author except as it has appeared in "Absorption of the United States Debt," by J. B. Hubbard, *Review of Economic Statistics*, Vol. XVIII (Aug., 1936), pp. 126-133.

² In 1936 the Federal Deposit Insurance Corporation made a step in this direction, in 1937 the Federal Reserve System also changed its forms, and in 1938 the Comptroller of the Currency followed suit. Cf. Chart 2 and n. 5, p. 9.

Chart 2. Loan and Discount Classifications Used by the Comptroller of the Currency



Other Loans¹ as their criterion. Others have used the total of all the items of Loans and Discounts except loans to banks, loans on securities as collateral, and real estate loans.²

The lack of any general practice in this matter shows that investigators have placed little importance on the choice involved. This lack of emphasis is easily justified by the admitted fact that either series contains many loans which are commercial in form only.³ But when it is desired to try to measure commercial loans over a period of years, it is necessary to abandon All Other Loans as a measure, because it was not available before 1929, and its amount cannot be made up from any of the items used. In Chart 2 are presented the classifications of Loans and Discounts used by the Comptroller in various periods.

¹ Examples: (1) Federal Reserve System. "... the increased demand for commercial loans was reflected through May 12 in so-called 'other' loans, and since that time in the newly reported item of 'commercial, agricultural and industrial loans.'" *Federal Reserve Bulletin*, Vol. XXIII (July, 1937), p. 630.

(2) Federal Reserve Bank of New York. (Referring to a chart showing All Other Loans) "... the volume of commercial loans in this district . . . rose . . . In other districts also . . ." etc. U. S. Federal Reserve Bank of New York, *Annual Report for the Year Ending Dec. 31, 1936*, p. 16.

(3) American Bankers' Association. "Other loan" figures are treated throughout this report as being representative of changes in commercial banking (sic) credit." *Changes in Bank Earning Assets* (1936), p. 11.

(4) New York State Bankers' Association. "The 'all other loans,' which include the strictly commercial loans . . ." *Banking Developments in New York State, 1923-1934*, p. 5.

(5) Books and monographs.

(a) "... the trend of strictly commercial loans . . . has been generally downward . . . but . . . this trend was hidden because of the great volume of collateral loans . . . Separate figures for 'other loans' and loans on securities . . ." von Tresckow, W., *Merchants of Debt* (Young and Ottley, Inc., 1936), p. 17.

(b) (Referring to a table showing "all other loans," which are footnoted "largely commercial . . .") "... the decreased emphasis upon commercial as contrasted with investment operations is apparent." Steiner, W. H., *Money and Banking* (1935), p. 225.

² Examples: (1) Federal Reserve System. "They (all other loans) cover, therefore, loans for commercial . . . purposes . . . not secured by bonds or by real estate. In addition to these loans, holdings of acceptances and of commercial paper bought in the open market, also reflect commercial loans." U. S. Board of Governors of the Federal Reserve System, *Annual Report, 1936*, p. 21.

(2) League of Nations. (Referring to a chart showing loans other than loans on securities) "This item may be taken to represent loans to commercial customers." League of Nations, "Money and Banking, 1937/1938," *Publications II, 1938, A3*, Vol. I, p. 38, n. 6.

³ In the final analysis, no loan can be called self-liquidating until after it has been paid off in the way intended.

It will be seen that consistency over a period of years can be obtained only by taking as the measure of commercial loans the total of the items indicated.⁴ Even then, the Loans to Banks will be included prior to 1929, and there will be some error due to the change-over to the new Federal Reserve classification.⁵ The classification suggested enables a breakdown of Loans and Discounts into the classes of Commercial in Form, Noncommercial in Form (chiefly loans on securities),⁶ and Real Estate. These are classes which have definite characteristics from the point of view of banking theory and practice. They relate to eligibility, liquidity, certainty of repayment, and other matters in ways which are familiar to all who are acquainted with the subject. Consequently, the ensuing material will be based on the classifications indicated.

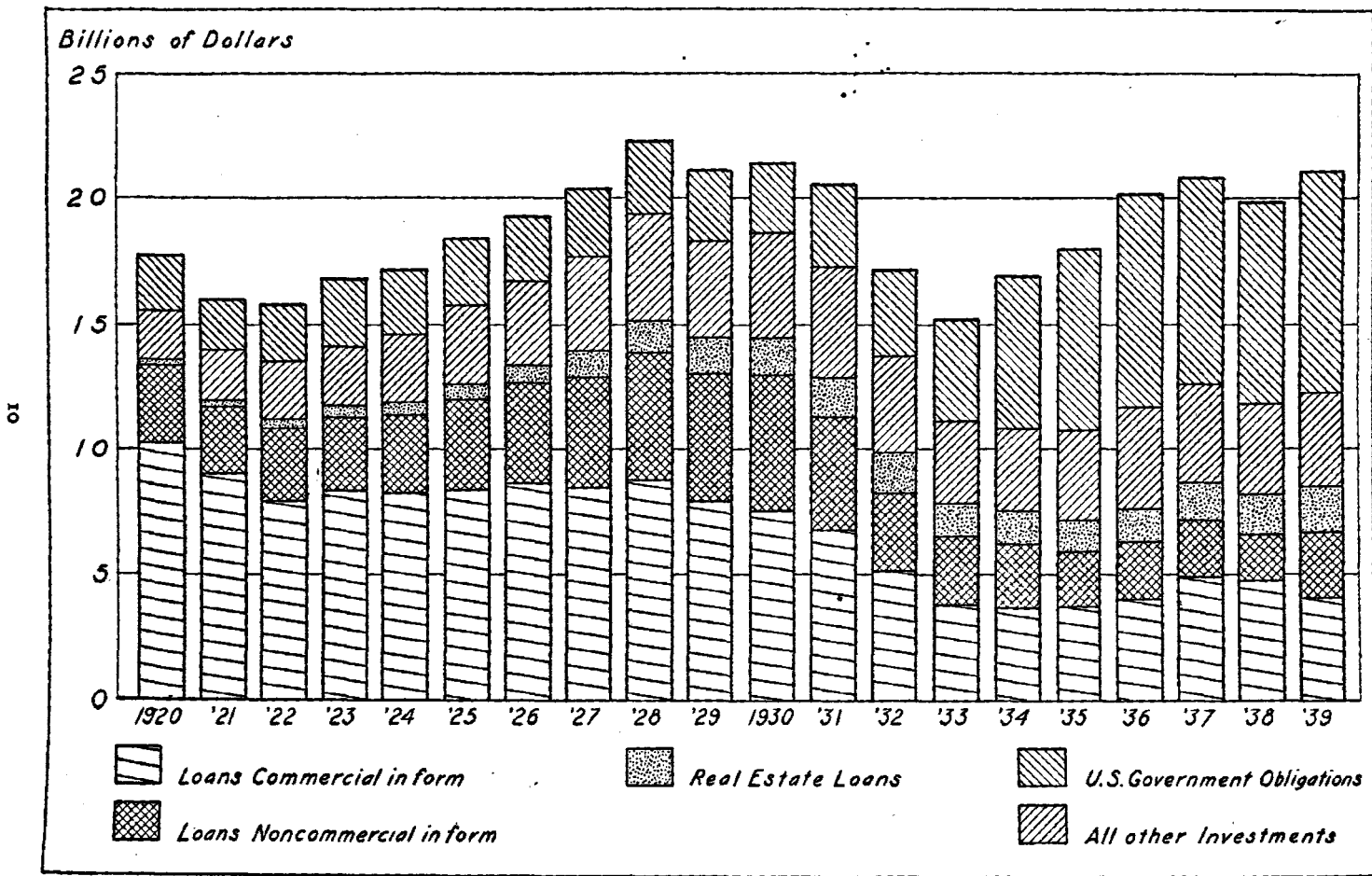
⁴ The proposed classification does not conflict with that used by the reporting agencies. See U. S. Board of Governors of the Federal Reserve System, *Annual Report, 1936*, p. 21, where it is said: "They (all other loans) cover, therefore, loans for commercial, agricultural, and industrial purposes, installment loans, personal loans, etc., not secured by stocks or bonds or by real estate. In addition to these loans, holdings of acceptances and of commercial paper bought in the open market also reflect commercial loans." In a letter to the author dated July 14, 1937, Mr. E. H. Gough, Deputy Comptroller, stated: "It is supposed, of course, that acceptances of other banks would be self-liquidating, but commercial paper bought in the open market might or might not be. No presumption that such paper is self-liquidating is thought warranted." The author assumes that the qualification with respect to commercial paper was made in contrasting that class of loans with acceptances, and not in contrast to All Other Loans.

⁵ The new classification of Loans and Discounts is better, but it could be improved. While it requires a more discriminating judgment on the part of the reporting bank, it does not demand any information not ordinarily obtained by a bank as lender. A major objection is the inclusion under Commercial Loans of any loan for a commercial purpose, regardless of maturity. The new classification is a more sensible breakdown by types of borrower, but from the point of view of this discussion it does not proceed far enough toward an analysis of commercial loans by purpose.

Another objection may be raised, if directed toward the new All Other Loans item. Its title is misleading since it is not a continuation of the former series bearing the same name. The title Miscellaneous Loans might be useful. More important, it is subject to useful classifications. Two possible classes which seem to be of growing importance are: loans to individuals for personal purposes (installment purchases, etc.) and loans made for housing renovation and modernization. Cf. the thorough classification suggested in *Report of the Committee on Finance and Industry* (The "Macmillan Report"), Cmd. 3897 (H. M. Stationer's office 1931), par. 410, p. 176.

⁶ The term "securities" is used by the reporting agencies in the limited sense of stocks, bonds, and similar corporate and governmental instruments, and not in the general sense of any property used as collateral.

Chart 3. Loans, Discounts, and Investments of All National Banks: As of June 30, 1920-1939



CHAPTER II

DESCRIPTION OF CHANGES IN BANK PORTFOLIOS, 1920-1939

Since the purpose of this paper in studying the past is to use it as a basis for understanding present trends, it is sufficient to examine the period 1920-1939, which begins with a severe though relatively brief depression, proceeds through the prosperous twenties and through the crisis and recovery periods of the thirties. To go back of 1920 would be to enter the period of aftermath of war when banking assets reflected war policies. From 1920 to 1939, although the war continued to influence events, the policies of peace-time banking have outweighed those of war.

Furthermore, as will appear below, the period 1920-1939 is the one in which the greatest decline of commercial lending has taken place. Before the war period, the problem of declining volumes of loans was not acute.

Changes in Earning Assets of All National Banks

As indicated above, the changing proportions of earning assets in the portfolios of all the commercial banks in the United States during the period in question can best be studied through the figures for national banks as presented in the *Annual Reports* of the Comptroller of the Currency.¹ The absolute amounts of the figures used are, of course, smaller than the true figures for all commercial banks. Allowance for the difference will be made where necessary.

Exhibit C, page 50, presents the amounts of the loans, discounts, and investments of all national banks as of June 30, 1920-1939, together with a percentage analysis of the distribution of items among their various classes. The material in the table has been used in making Charts 3, 4, and 5 which accompany these pages.

The ensuing description of changes in the makeup of bank earning assets will first take up the items of Loans and Discounts, which are, as pre-

viously stated, loans commercial in form, loans not commercial in form, and real estate loans. Then follow the Investments, divided into United States Government obligations; state, county, and municipal bonds; and various other investments.

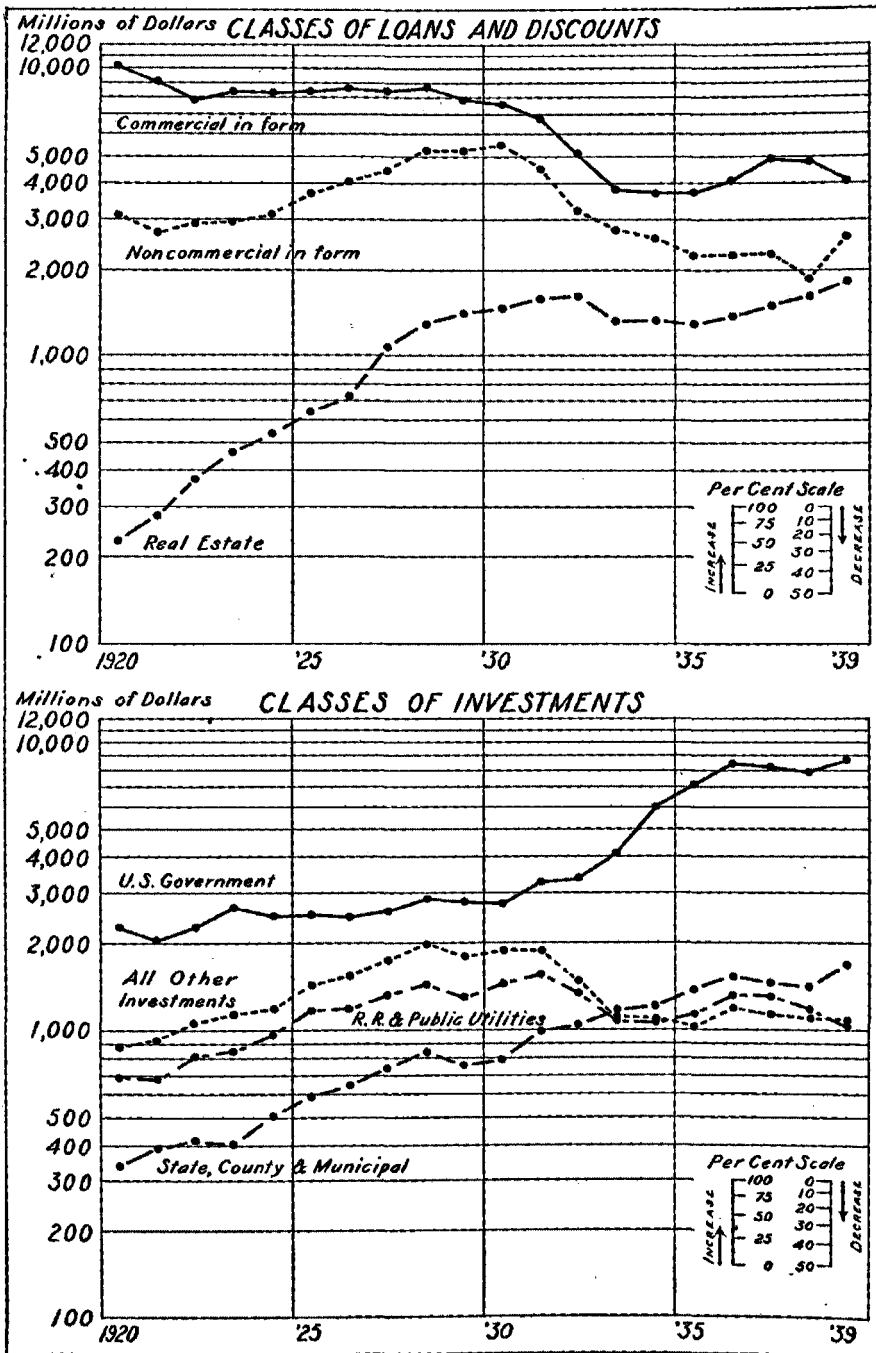
Changes in Loans and Discounts — Dollar Amounts It will be seen from Exhibit C and Chart 3 that the dollar volume of self-liquidating loans, as measured by the series of Loans Commercial in Form, shows its highest value for June 30, 1920, at the beginning of the series. Starting in that year at \$10,263,697,000,² the volume showed a steady decline to \$7,969,462,000 in 1922, followed by a period of stability with minor fluctuations between \$8,338,268,000 and \$8,745,373,000 through June 30, 1928. The 1929 volume fell below eight billion to \$7,909,324,000, and there ensued a steady decline to \$3,826,448,000 in 1933. While the 1934 figure was slightly below that of 1933, the change was relatively small, and the three years, 1933, 1934, 1935, can be called years of stability at the bottom of the cycle. The 1936 figures were above those of 1935, and the 1937 values were still higher at \$4,928,015,000. A decline took place in the ensuing two years, to \$4,095,968,000 in 1939. This amount is \$6,197,729,000 less than the amount at June 30, 1920, the beginning of the period being studied, but \$430,412,000 higher than the 1934 low.

To summarize the behavior of commercial loans, the highest point occurred at the start of the period. It was followed by rapid declines during the ensuing two years of depression. After 1922 and until 1928 there was a period of stability which took place despite rising business activity and increases in other types of lending. Rapid decline was resumed after 1929, and continued until 1933. These were years of declining business activity. Following the years of 1934 and 1935, when loan

¹ Unless otherwise indicated, the basic statistical materials used in this chapter were taken from these *Annual Reports*. Much of the data has been reclassified as indicated above, or in this chapter.

² Unless otherwise indicated, all dollar figures in the text of this chapter have been rounded by substituting ciphers for the last three figures.

Chart 4. Changes in Loans, Discounts, and Investments of All National Banks:
As of June 30, 1920-1939



volumes remained at bottom, the volume of commercial loans began to rise, and 1937 marked the highest figure reached after 1935. These later changes show a rough agreement with changes in general business activity. The question of the correlation of these two items will be discussed below.¹ Turning from commercial loans to all forms of loans and discounts, we find a different history. The 1920 amount was \$13,611,416,000. The years, 1921 and 1922, were years of a decline about as great as the decline in commercial loans, since the other items in the total showed compensatory changes. In 1922-1928, contrary to the commercial loans, total loans and discounts rose steadily, with an especially large increase in 1927-1928. The increase came from both the other types of loans, of which the real estate loans showed the greatest rate of increase, and the loans based on securities as collateral (loans not commercial in form) showed the largest absolute increase.

Although in 1928-1930 real estate loans and loans not commercial in form continued to increase in volume, the total loans and discounts declined slightly because of the decrease in commercial loans. The total was \$15,144,995,000 in 1928, and \$14,548,165,000 in 1930, reflecting a decrease of \$1,154,922,000 in commercial loans, partly offset by increases in other types of loans totaling \$558,092,000. After 1930, the noncommercial loans joined the decline, and fell until 1935, when total loans and discounts also reached bottom at \$7,283,041,000. Real estate loans grew until 1932, and fell but slightly thereafter, but the changes were not sizeable enough to offset the general decline. Total loans and discounts in 1939 amounted to \$8,549,255,000, the increase being due chiefly to the growth of real estate loans. Noncommercial loans did not rise appreciably from 1935 to 1937, and declined in 1938, probably a reflection of dullness in the securities markets.

Data are not available in sufficient detail to permit a statement of the effect of bank closings and reopenings upon the figures just given. Enough information is available, however, to justify the conclusion that the changes were due much more largely to other factors. Deposits in banks suspended in 1929-1933 amounted to nearly \$8,000,000,000, but transfers to banks still open

replaced some \$2,000,000,000, and reopenings released about \$1,000,000,000. The balance of about \$5,000,000,000 was not experienced in any one year, and applies to all commercial banks, not to national banks alone. Probably not more than \$2,000,000,000 can be assigned to the sample group used here.²

Changes in Loans and Discounts — Proportions The relative changes in earning assets are more important than the changes in dollar amounts.

As shown by the ratio scale used in Chart 4, real estate loans had a high and steady rate of growth until 1932, followed by a decline between 1932 and 1933, and slow growth thereafter. The increase of real estate loans from \$229,829,000 in 1920 to \$1,617,281,000 in 1932 represents a gain of 604%. This was followed by a decline which in 1935 amounted to 20% of the 1932 amount. However, the decline was more than made up by 1939 when the amount of real estate loans was \$1,829,163,000, a gain of 696% over the whole period. This class of asset shows the greatest rate of growth of any of the ones studied. Its vitality is approached only by the growth in holdings of governmental debts.

In the period 1920-1939 the extent of variation in the groups representing commercial loans and those representing noncommercial loans is about the same, but the variations have occurred in different ways.

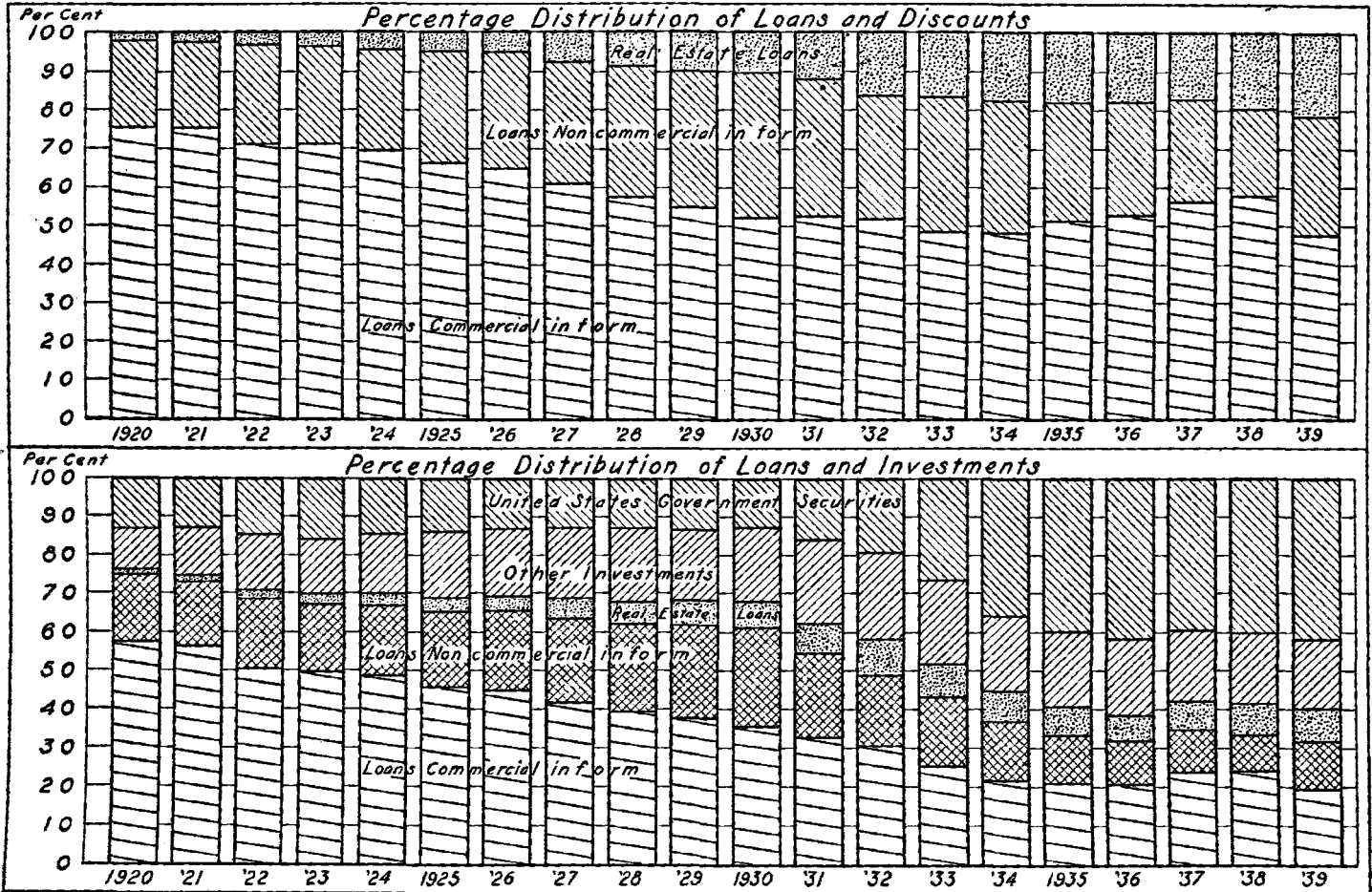
The noncommercial loans declined 13%, from \$3,117,890,000 in 1920 to \$2,699,167,000 in 1921, then grew until 1930. In that year these loans were \$5,484,713,000, an increase of 103% over 1921. From 1930 to 1935 the volume of noncommercial loans fell to \$2,251,274,000, a loss of 59%. The years 1936 and 1937 showed practically no change over 1935, although there was a 32% gain in the commercial classification, while the 1939 figure was \$2,624,124,000, an increase of 40% in one year, in contrast to the 14% decline experienced by the noncommercial loans in the same year.

The commercial loans showed a 22% decline in 1920-1922, and a period of small variation (10% from the maximum to the minimum) in 1922-1928. This period of stability is really a down-

² Hart, A. C., *Debts and Recovery* (Twentieth Century Fund, 1938), p. 41; Tables 4, 6.

¹ *Infra*, Ch. III, pp. 29-30.

Chart 5. Percentage Distribution of Loans, Discounts, and Investments of All National Banks: As of June 30, 1920-1939



trend when the concurrent growth of the other classes of loans and discounts is remembered. Commercial loans declined after 1928 until 1934, the loss being 58%. The gain from that time to the 1937 high was 34% of the 1934 figure. Despite these gains, the decline over the whole period, 1920-1939, was 60%.

Notable in all the classes of loans and discounts is the violence of the changes. It is not unusual to observe growths of well over 100% or declines of 50%. A summary of the changes leads to the following statement. Real estate loans have been the most vital of the types of loans and discounts; noncommercial loans had a large "bulge" during the period of the big bull market, but in 1939 were lower than in 1928; and commercial loans, after the readjustment of the depression of 1920-1921, held even until 1928, the year before the end of the boom, declined until the bottom of the depression was reached, and revived when business revived.

These facts are shown in the upper part of Chart 5, where the total of loans and discounts for each year is represented as 100%, and the distribution of the types of loans is made. The chart reflects the growth of real estate loans, the bulge in loans on securities, and the decline and partial recovery of loans which are commercial in form. It shows also that self-liquidating paper is still the source of about half the volume of the Loans and Discounts of national banks.

Changes in Investments — Dollar Amounts

The growth in the importance of investments has not proceeded at equal rates for all of the types which are subject to purchase by banks. The greatest growth, as is well known, is in holdings of United States Government debt, especially in recent years. The volume grew slowly and irregularly in 1921-1932, from \$2,019,497,000 to \$3,352,666,000, a gain of 66%. The gain from 1932 to 1936 was from \$3,352,666,000 to \$8,447,364,000, or 152%. There was a small decline in 1937 and in 1938 which was more than made up by 1939, when this item reached \$8,769,729,000.

Holdings of state and municipal obligations also increased, but at a more regular rate, from \$338,357,000 in 1920 to \$1,527,644,000 in 1936, a gain of 35%. There was a small decline in 1937, and an even smaller one in 1938, and the 1939 figure

showed the maximum of the period, \$1,693,684,000.¹

Investments in the securities of private debtors, as contrasted with governmental debtors, increased from 1920 to 1928, held even to 1931, then declined to 1933. From the later year to 1935 they held even, then rose slightly to 1937, and declined to 1938. The gain in 1920-1928 was from \$1,578,533,000 to \$3,415,820,000, or 116%. The decline in 1931-1933 was from \$3,421,349,000 to \$2,177,577,000, or 36%.² The gain in 1933-1937 was from \$2,177,577,000 to \$2,451,463,000, or 13%. The decline to 1938 was 9%.³ In 1939, the amount was \$2,089,473,000.

Changes in Aggregate Earning Assets

When total loans and investments are considered instead of either class alone, the great decline of self-liquidating paper as a portion of bank earning assets becomes more apparent. Reference to Exhibit C and the lower part of Chart 5 will indicate that commercial loans made up an ever-decreasing portion of bank earning assets from 1920, when they were 57.67%, to 1936, when they were 20.17%, of the total. There was a slight gain in 1937 and 1938, with the latter figure 23.98%, but in 1939 there was a decline to 19.41%.

A similar, but not as regular, decline took place in the proportion of all types of loans and discounts to total loans and investments, which was 76.48% in 1920, 38.18% in 1936, and 40.52% in 1939. There was a period of stability at about 70% from 1922 to 1930, because of the growth of

¹ The growth of bank holdings of U. S. debt more than kept up with the growth of the federal debt until 1937. The percentage of the gross federal debt held by all national banks as of June 30, 1920-1939, is given below:

1920- 9.34%	1925-12.36%	1930-17.02%	1935-24.99%
1921- 8.42	1926-12.57	1931-19.38	1936-25.11
1922- 9.95	1927-14.02	1932-17.20	1937-22.56
1923-12.05	1928-16.42	1933-17.89	1938-21.58
1924-11.68	1929-16.56	1934-22.23	1939-21.69

(Source of national banks' holdings of U. S. bonds: U. S. Comptroller of the Currency, *Annual Reports, 1920-1939*, e.g., 1939, p. 14; and of gross debt of the U. S.: U. S. Treasury, *Annual Report of the Secretary, 1939*, pp. 450-451.)

² The decline in this period, if measured in market values, was probably greater. The figures as presented reflect the "convention values" permitted by the Comptroller. These were above market value for many types of bonds. "Operations of National and Federal Reserve Banking Systems," *Hearings, Senate, Banking & Currency, 71st, 3rd, S. Res. 71 (1931)*, p. 1077.

³ Although a discussion of subdivision in Investments by issues of private debtors would be possible, little would be gained by it since each class has behaved in a similar fashion. The available data are presented in Exhibit C.

**Chart 6. Proportion of Loans and Discounts to Total Loans and Investments of All National Banks Classified by Size Groups:
As of December 31, 1927-1937**

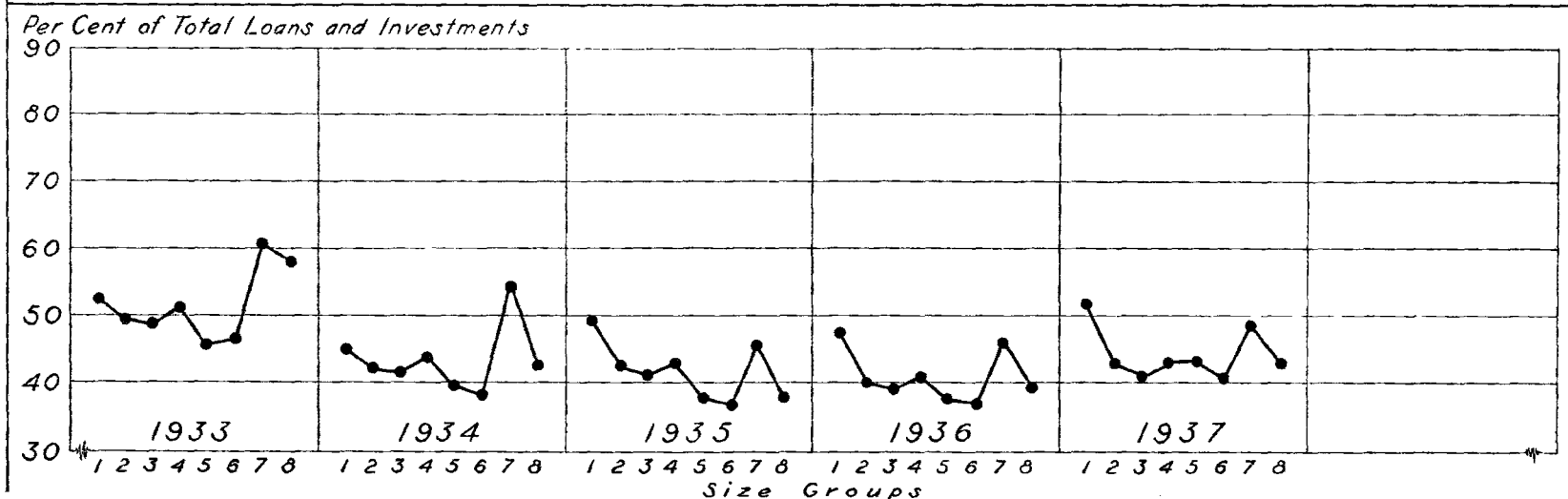
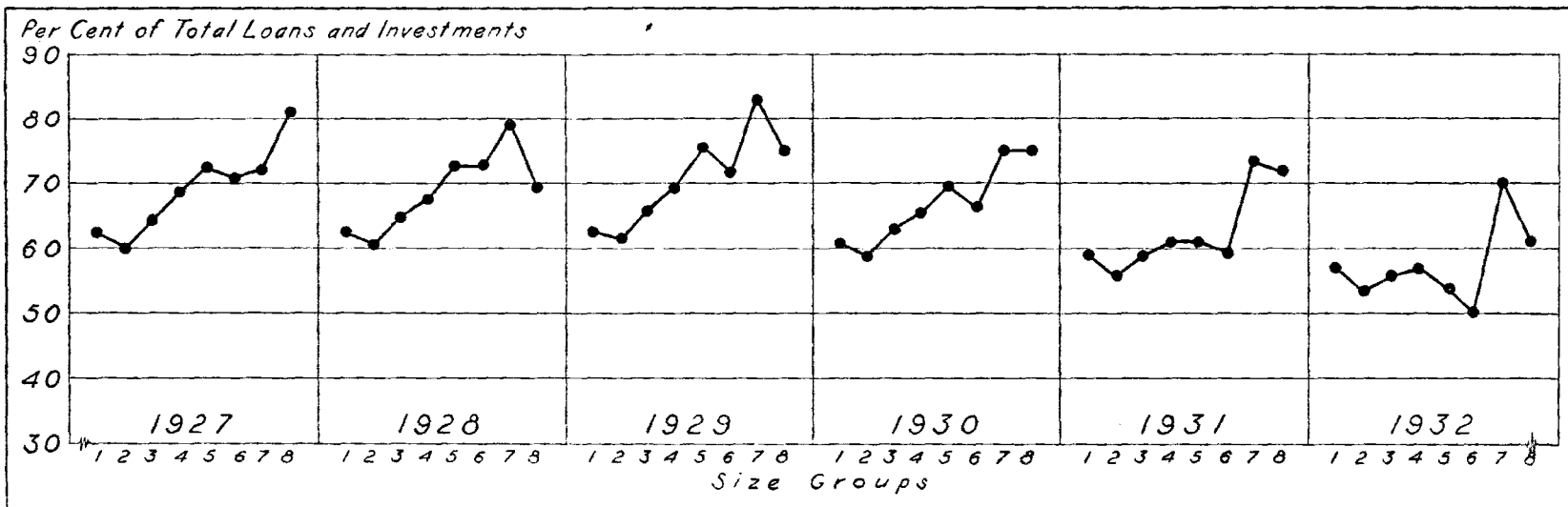
Size Groups Based on Amount of Capital Stock

1. = \$0 - \$49,999
2. = \$50,000 - \$199,999

3. = \$200,000 - \$499,999
4. = \$500,000 - \$999,999

5. = \$1,000,000 - \$4,999,999
6. = \$5,000,000 - \$24,999,999

7. = \$25,000,000 - \$49,999,999
8. = \$50,000,000 or more



real estate loans and the larger amounts of loans on securities which were outstanding during this period, offsetting the lack of growth in the volume of loans of the commercial type.

Thus it can be observed that the great decline in the importance of self-liquidating loans among bank earning assets is in part attributable to a decline in the lending function in favor of investing. If all types of loans and discounts had maintained their importance relative to investments, commercial loans in 1939 would be \$7,732,155,000, or 36.64% of the total instead of 19.41%. While this figure would have represented a substantial decline from the 57.67% of 1920, it nevertheless shows the declining importance of all types of loans in bank portfolios, except, of course, real estate loans.

To summarize the findings for all national banks, it is clear that there has been a great change in the characteristics of bank portfolios, and that the change has been toward increasing the proportion of investments and real estate loans at the expense of loans and discounts, which are presumably more liquid as well as local.

The change is evidenced in the rates of growth or decline of various classes of assets. Real estate loans, probably the least liquid of any class, have grown at the highest rate. Other loans have declined. Investments have increased, and the greatest increase in this group is found in the holdings of governmental obligations, which in 1939 were in excess of all forms of loans and discounts.

Changes in Earning Assets—National Banks by Size Groups

Changes in the banks of the United States as a whole having been investigated, it is advisable to study banks by groups, for in group behavior may be found evidence useful in analyzing the causes of changes. It has been too easily assumed that there are no significant classes of commercial banks in the United States. In this monograph two unused but significant classifications will be offered. First the banks will be divided into size groups. In a subsequent section they will be analyzed by geographical areas, where the predominance of the Eastern district has obscured variations in other regions of the country.

The *Annual Reports* of the Comptroller of the Currency have presented, for years ending December 31, certain details of the assets of national

banks by groups based on the amount of capital stock. These appear with a one-and-a-half-year lag, commence with the figures for 1927, and cease with those for 1937.¹ Furthermore, since they do not provide any subdivision of loans and discounts, an analysis of the proportion of commercial loans is not possible. The figures which are presented in Exhibit D, page 53, and Chart 6 do, however, confirm that loans and discounts in the period 1927-1936 have been an ever decreasing part of total loans and investments. They also show that the large banks in the early years of the period had a tendency toward a greater proportion of loans and discounts than the small banks; but that this tendency was reversed at the end of the period except for the banks with capital from twenty-five million to fifty million dollars (never over four in number), whose proportion of loans has not declined so much as that of the other groups of large banks.

If it be assumed, as is probably the case, that there is a rough correlation between size of bank and size of customer, these figures would confirm the hypothesis that large concerns have freed themselves of the need of bank loans more fully than the small concerns have done.

Changes in Earning Assets—National Banks by Geographical Districts

It is possible to obtain as of June 30 each year a breakdown of earning assets of national banks in various geographical districts. In the *Annual Reports* of the Comptroller of the Currency, each Reserve and Central Reserve city is listed separately, and the figures for the country banks are presented by states. Thus it is possible for an investigator to study banks by regions of his own choosing.

A possible division for analysis is that between country banks and Reserve city banks. However, it is an arbitrary one, not now based upon economic differences. Although in the past the Reserve cities might have been distinguished from less important centers, at present there are many cities whose importance is fully as great, but whose banks are classed as country banks. Because of the nature of the classification, neither group can be analyzed usefully from the point of view of portfolio policy. The country banks do not repre-

¹ Inferred from correspondence with the Comptroller's Office, spring of 1940.

sent agricultural interests alone,¹ and the Reserve city banks are not members of a complete group of similar cities.

In fact, the conditions governing bank policies are due much more to regional differences than to the size of communities. Thus, in general, the economic situation of cities reflects the prosperity of the surrounding towns and villages, etc. A useful breakdown of the national figures can be made by taking a total of all the banks in a certain region, regardless of whether they are in the country or any class of city. Exhibit E is the result of such a combination for the years 1922, 1927, 1932, 1937, and 1939. It shows the amounts and percentage distribution (on the same basis as the national figures used above) of total loans and investments for seven districts covering the United States.² Chart 7 has been made from Exhibit E, page 54.

Of these districts, the New England, Eastern, and Middle Western Industrial districts are the most industrialized. The remaining four districts can be said to reflect agricultural influences more than others. Of these latter, the agricultural characteristics of both the Southern and Pacific districts are separable from the "granger" districts.

Confirmation of the general characteristics of the regions chosen is found in the percentage of total earning assets represented by the class of

¹ A comprehensive study of loans, discounts, etc., classified by national banks in agricultural counties, semi-agricultural counties, and nonagricultural counties, by states, was prepared as of March 22, 1922, but has not been repeated. U. S. Comptroller of the Currency, *Annual Report, 1922*, pp. 676-687.

² The grouping (shown below) is the same as that used by the Comptroller except for the division of the Middle Western district, where the states whose principal activities are industrial have been separated from those primarily agricultural.

New England:	Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut.
Eastern:	New York, New Jersey, Pennsylvania, Delaware, Maryland.
Middle Western Industrial:	Ohio, Indiana, Illinois, Michigan.
Southern:	Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Texas, Arkansas, Kentucky, Tennessee.
Western:	North Dakota, South Dakota, Nebraska, Kansas, Montana, Wyoming, Colorado, New Mexico, Oklahoma.
Middle Western Agricultural:	Wisconsin, Minnesota, Iowa, Missouri.
Pacific:	Washington, Oregon, California, Idaho, Utah, Nevada, Arizona.

loans which are commercial in form. On June 30 in the years studied, the agricultural regions showed higher figures than the industrial. Except in 1937 and 1939, in the years studied the three districts which showed the largest percentages of this type of paper in their portfolios were districts where the agricultural influence predominated. In 1937 and 1939 the first two districts were agricultural as was the fourth. In no year was the rank of any agricultural district, measured by the proportion of commercial loans to total loans and investments lower than fifth. By contrast, the Eastern district probably the most highly industrialized, was lowest in rank for each year studied.

A logical interpretation of this phenomenon is that the early summer is the time when the greatest amount of credit is outstanding to farmers. Agricultural loans to farmers are made to finance the growing season, and are paid off after the harvest. The studies of Kuznets confirm the presumption that, speaking generally, the harvest season does not come into full force until after June 30, although in the case of citrus fruits there is no summer peak, and the wheat harvest in some states begins by the middle of June.³ Further confirmation of this seasonal peak of loans in the agricultural regions is found in the work of Beckhart, Smith, and Brown,⁴ whose studies of the seasonal variation of All Other Loans in the Federal Reserve districts show that the banks in agricultural areas have a pronounced seasonal in June and July, whereas the city banks do not.

In view of these facts, we may assume that the classes as presented do separate the industrial and agricultural regions of the country in a reasonably satisfactory manner.

Certain other differences in portfolio proportions should be noted before changes in the separate items are discussed. The 1927 "bulge" in loans on securities affected the portfolios of the industrial New England and Eastern districts more than the others. It will also be noted that the relative importance of loans of this type is consistently greater in these districts. This fact seems to justify the common assumption that interest in securities is centered in the commercial areas of the country.

³ Kuznets, S., *Seasonal Variations in Industry and Trade* (National Bureau of Economic Research, 1933), pp. 49, 88, 91, 102.

⁴ Beckhart, B. H., Smith, J. G., Brown, W. A., Jr., *The New York Money Market*, Vol. IV (1932), pp. 438-486.

Finally, it will be noted that the 1937 figures show that United States debt played a greater part in the portfolios of national banks in the Eastern and Middle Western states than elsewhere and that in the Western states there was a very small proportion of loans which were not in the self-liquidating class. This preponderance of commercial loans also appears in other agricultural districts in the more recent years.

The rates of change in the various items of loans and discounts will now be compared, district by district. But first it is important to investigate whether the recent wave of bank failures has affected any one district so much more than others that any changes during the period 1922-1937 must be discounted. Reference to Chart 7 shows that changes in the number of banks have not been in the same proportion for all the districts studied. The greatest rate of decline is found in the Western, Middle Western Agricultural, and Pacific districts. Next in order of speed of decline come the Southern and Middle Western Industrial districts. The Eastern and New England areas evidence relative stability. Although part of this reduction in numbers came from the combination of banking units, the performance of the series indicates clearly where the greatest amounts of failures took place. The ensuing description must be read with these differences in mind, although no numerical correction can be offered to aid the analyst.

The curves of Chart 7 show many similarities and differences in the percentage changes of items. The most noticeable of these is the predominance of the forces of decline in the lending activities of banks in the Western and Middle Western Agricultural states. In the case of total loans and discounts, these two districts showed by far the largest percentage declines. In the case of commercial loans these districts showed a steady downward trend, quite contrary to the experience of other districts. In the case of noncommercial loans, these districts, although they shared in the years of growth, experienced a greater shrinkage than that taken in the other districts in the years of decline. Even in real estate loans, where the growth factor was the largest, the Middle Western Agricultural district showed the smallest net gain over the period, and the Western region experienced steady decline.

These two districts did not show such unusual percentage changes in their investments, where the

rate of growth was comparable to that in other agricultural areas, and stronger than in the Eastern and New England districts. Were it not for the comparability of this behavior, the decline in the items of loans and discounts might be attributed almost entirely to the relatively large number of bank failures in these regions. As it is, the basic cause is more probably the agricultural depression, which struck most heavily in these regions and in the South, where great rates of decline were experienced in certain of the items of loans and discounts. The agricultural depression caused a great shrinkage in the volume of local loans in the areas affected.

The district with the greatest vitality of growth was the Pacific area. Its banks increased their real estate loans and their investments in railroad and public utility bonds decidedly more rapidly than did the banks of other districts. The rate of growth in holdings of United States bonds was nearly equalled by the New England states, and was surpassed by the Middle Western Industrial region, although the latter district was a laggard until after 1932. The decline in commercial loans was less for the Pacific area than elsewhere, and there was a notable absence of any substantial decline in noncommercial loans.

The vitality of this region can perhaps be explained by the growth of the Far West as a residential and industrial center, as well as by the relative prosperity of its agriculture.

It will be recalled that the national total of loans in the commercial class increased in 1922-1927, decreased markedly in 1927-1932, and decreased further in 1932-1939. During the first of these periods the Western and Middle Western Agricultural districts showed declines, while the greatest rate of rise was in the Southern district. The declines of 1927-1932 were least in the Pacific and New England districts and greatest in the Southern, Western, and Middle Western Agricultural states. The behavior in 1932-1937 was diverse. There was a sizeable decline in the Eastern district, while there was a substantial increase in the Middle Western Industrial area, and the Pacific district showed smaller gains. The other districts showed little change. By 1939, the industrial regions experienced further declines, in this type of loan, while the agricultural regions held fairly even.

These changes are difficult to interpret. The decline in the Eastern district, which includes New

**Chart 7. Changes in Loans, Discounts, and Investments of National Banks, by Regions of the United States:
As of June 30, 1922, 1927, 1932, 1937, 1939**

(Ratio Scale, Lines Shifted Vertically to Permit Easy Comparison of Relative Changes)

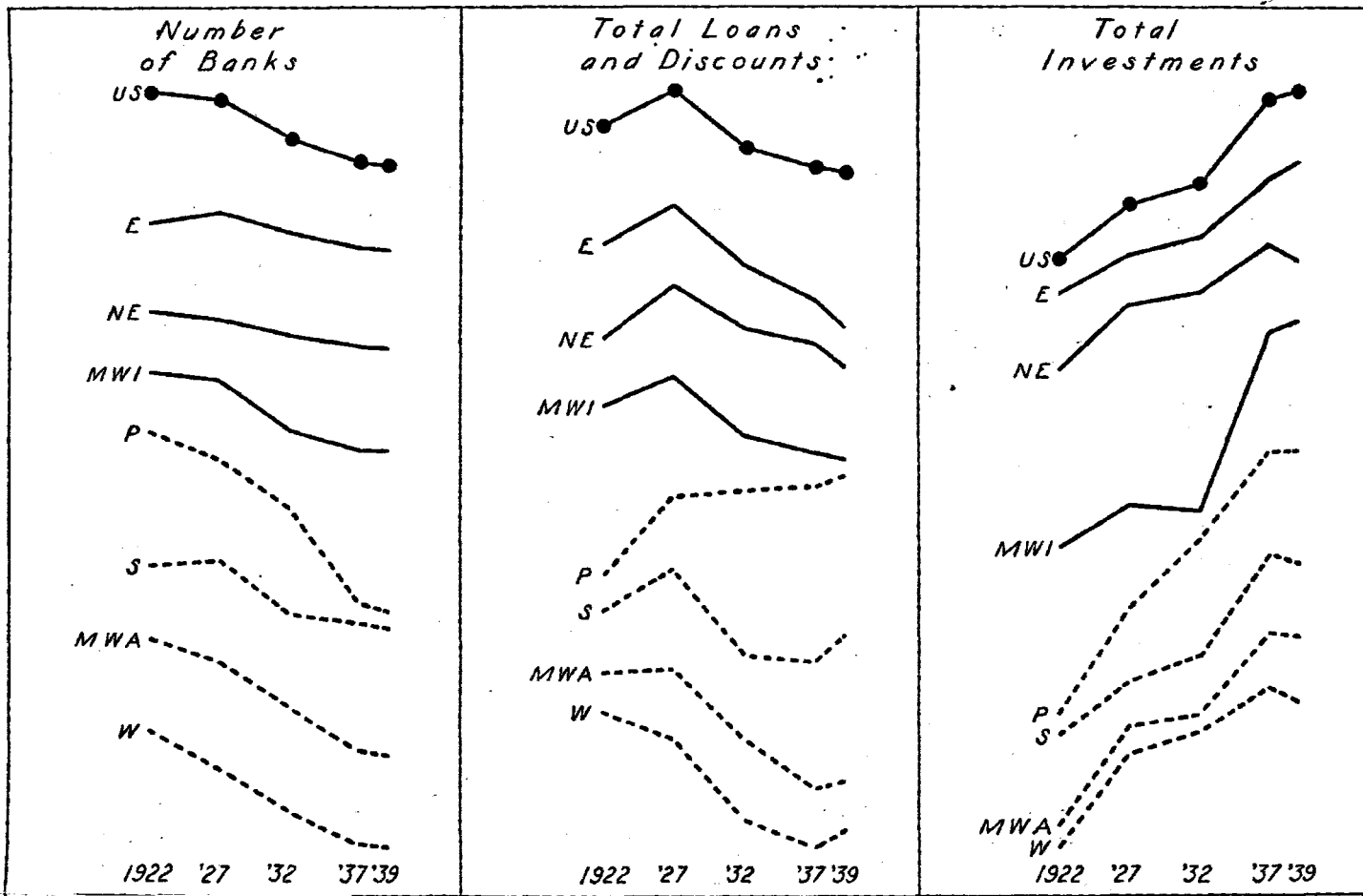


Chart 7 (continued)

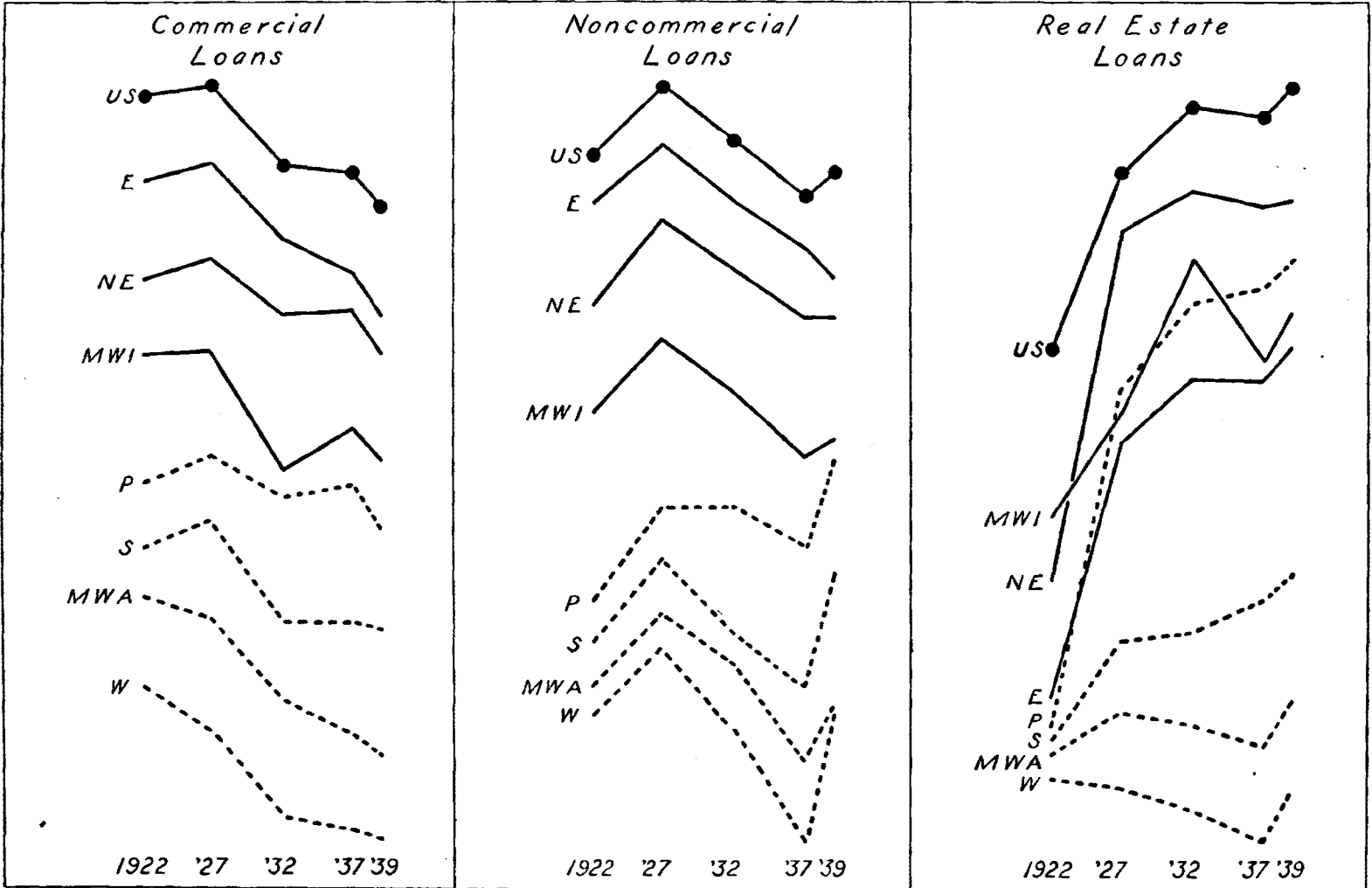
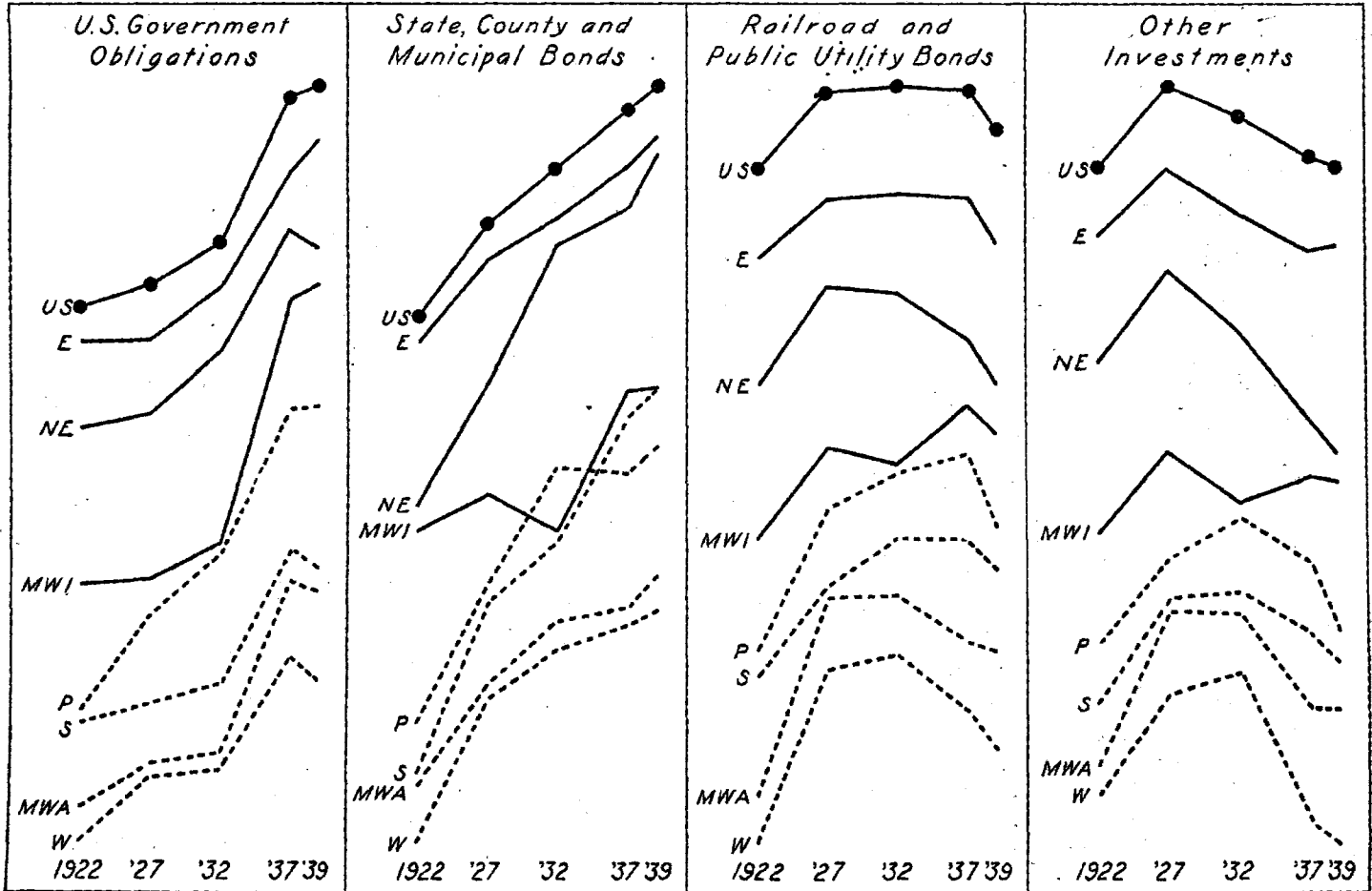


Chart 7 (continued)



York City, perhaps reflects a national decline in the borrowings of large firms, many of which have accounts in New York. It confirms the indications already mentioned that the larger companies are using bank credit to a smaller degree. At any rate, it is important to observe that there has been a decline in the amount of self-liquidating paper held by banks in an industrial district during the recent years of industrial recovery.

Turning to noncommercial loans, that is, loans on securities as collateral, we find that the national figure increased greatly from 1922 to 1927, and that this change was experienced almost uniformly in every district. The national figure declined from 1927 to 1937, and the various districts followed with but one exception. The exceptional district was the Pacific area, where the volume of these loans declined very little in the period. The national increase from 1937 to 1939 was experienced most strongly in the agricultural districts, although gains were registered everywhere except in New England.

Every district but the Western and Middle Western Agricultural shared in the very high rate of growth of real estate loans from 1922 to 1927. The Western district exhibited steady declines to 1937, and but a small growth from that year to 1939. The Middle Western Agricultural district had only a moderate growth. In the other districts, the greatest rate of growth for the period 1922-1927 was in New England where the gain was 728%. The Pacific district was a close competitor. In 1927-1932 the national figures continued their growth, but the behavior of the districts was more diverse. The Pacific district continued its spectacular growth, with New England not far behind, the Southern district slowed up sharply in its rate of growth, and the other districts continued high rates of increase. The diversity of behavior continued during the period 1932-1937, when the national average showed a decline. The Pacific district showed an increase, as did the Southern, while the Western and Middle Western Agricultural districts continued downward at about the same rate, and the Middle Western Industrial district lost a part of what it had gained since 1932. After 1937, the national growth of the volume of real estate loans was resumed. Contrary to previous experience, the rates of growth in various regions were similar. The rapidly growing districts had reached a period of stability, while even the Western district participated in the growth. It

seems likely that the districts which had experienced the most rapid growth had reached a period of stability, while the districts that had gone through deflationary periods were also stabilized.

Over the entire period of seventeen years, three districts have exhibited the strongest growth factors. These are the Pacific, which experienced a building boom, and the Eastern and New England districts, where the percentage gains are undoubtedly due in part to the small dollar amounts outstanding in the base year.

The amount of United States bonds held by all national banks grew continually from 1922 to 1939, and most rapidly in the period 1932-1937. The growth has been uneven in terms of districts. In 1922-1927, the Pacific, Western, and Middle Western Agricultural districts grew the most rapidly; and the Eastern and the Middle Western Industrial states showed practically no change. In the period of 1932-1937 all districts showed large increases, but from 1927 to 1932 only the Eastern, New England, Middle Western Industrial, and Pacific districts showed rates of increase comparable to that of the later period.

From 1937 to 1939, four districts registered declines in the amounts of United States obligations owned, while the national total showed an increase. One of these four was the New England industrial region. The agricultural districts were the Southern, Middle Western Agricultural, and Western. The most rapid increase took place in the Eastern district.

The national total of state and municipal bonds owned increased throughout all the periods under consideration. There was also an increase in every district, except that in 1927-1932 the Middle Western Industrial declined to about the 1922 level, and in 1932-1937 the Pacific states showed a small decline. The largest growth in the entire period was that of the Southern states, with the Eastern, Middle Western Industrial, and Western states at the lower end of the scale.

In the case of investments in railroad and public utility bonds the national total shows an increase in 1922-1927 which was shared by all the districts. The high rate of growth in the Middle Western Agricultural is especially worthy of note. In 1927-1932 the national figure held even while two districts—the Southern and Pacific—increased their investments of this type. In the period 1932-1939 the national total again declined. Three districts, the Middle Western Indus-

trial, the Southern, and the Pacific, ran counter to the trend, and the Eastern district showed no significant change. The most rapid drop was in the Western and Middle Western Agricultural states which had had largest rates of increase in 1927-1932.

In the case of other investments, there is a diversity of behavior in which the four agricultural regions are alike in sharing the national rate of rise in 1922-1927, resisting the national rate of decline in 1927-1932 — sometimes with increases — and declining at a faster rate than the national average in 1932-1937. Meanwhile, the Eastern and New England districts exhibited changes much like the national average, and the Middle Western Industrial states showed a rate of growth in 1932-1937 which was unique.

Throughout this study, the predominant influ-

ence which the Eastern area exerts on the national average stands out clearly. This predominance is, of course, due to the size of this district in the sense of dollar values of banking assets.

The foregoing evidences of differences in the behavior of the banks of various parts of the country show that conclusions based upon the national totals may be in error. Such errors would be especially apt to occur when the probable causes of observed changes are being considered, for a national change may be a resultant of conflicting forces in different regions. Further, the fact that certain differences persist over the years is of considerable importance. For instance, the persistence in the agricultural areas of a higher proportion of loans which are commercial in form than is found in the industrial areas can be a starting point for further analysis.

FACTORS AFFECTING BANK PORTFOLIOS, 1920-1939

It seems inadvisable in this monograph to attempt an exhaustive discussion of the factors which have caused, or helped to cause, the changes in bank portfolios that have been described in the preceding chapters. As a matter of fact, it is the author's conviction that the available factual material is not sufficiently complete. Not only do the available statistics, such as series showing amounts reinvested by businesses, leave much to be desired, but there are also many areas, such as that of the effect of bank examinations upon portfolio policy, in which statistical measurement has not been attempted, if it be possible at all.

The more modest purpose of this chapter is to discuss a few of the possible causes of the decline of the commercial loan about which the author feels that he may have something useful to add to an open discussion. The first group of factors will be classed as "extra-governmental"; the other group will relate to governmental influences.

Certain Extra-Governmental Factors

Changed Ways of Financing Working Capital Needs The general topic of secular changes in the manner of doing business as causes of the decline of the commercial loan has been discussed many times. The following outline indicates the general causes which have been subject to the most frequent mention:

1. Reduced needs for working capital to support a given volume of sales.

a. Lower inventories of raw materials, goods in process, and finished goods;¹

b. Effects of more liberal credit terms granted to customers.

¹ National Industrial Conference Board, *Recent Economic Changes* (1929), Ch. V (by M. T. Copeland); Lyon, L. S., *Hand to Mouth Buying* (Brookings Institution, 1929). A later study, elaborating upon those mentioned, is Steiner, W. H., et al., *The Security Markets* (Twentieth Century Fund, 1935), p. 190f. An interesting study tending to confirm the conclusions reached herein is Currie, L., "The Decline of the Commercial Loan." *Quarterly Journal of Economics* (Aug., 1931), Vol. XLV, pp. 698-709.

2. Provision of working capital from funds obtained by sale of securities, earnings withheld from dividends, and reserves for depreciation and depletion.²

Further statistical evidence on this matter may be gained from a study of balance sheet ratios which compare sales and inventory figures for various classes of American enterprise. There are several sources of such figures, as will appear below, of which the most useful for the present purposes are the "Statement Studies" of the Robert Morris Associates. The studies are superior to other sources of balance sheet data available over a period of years because there has been an attempt, not entirely successful, to include the same companies in each year's series, and because care has been taken to secure the "typical" (usually the median) figure for each class of enterprise.³ The figures are made even more useful for present purposes because the statements furnished to the Associates are sent in by banks, which presumably select from their files the statements of firms of the type that might be users of bank credit.

The most satisfactory measure by which the supposed reduction of investment in inventories can be checked from balance sheet figures is the ratio of sales to merchandise, which would show a rising trend if there had been a reduction in the sizes of inventory necessary to support a given volume of sales.

² U. S. Bureau of Internal Revenue, *Statistics of Income* (Washington, annually); Nerlove, S. H., "A Decade of Corporate Incomes," *Chicago Studies in Business Administration*, Vol. II, No. 4 (1932), p. 60; Crum, W. L., "The National Income and its Distribution," *Journal of the American Statistical Association*, Vol. XXX (March, 1935), pp. 35-46; Mills, F. C., *Economic Tendencies in the U. S.* (National Bureau of Economic Research, 1932), p. 425; Amos, J. E., "The Economics of Corporate Saving," *Illinois Studies in the Social Sciences*, Vol. XXII, No. 2 (1937); Epstein, R. C., Clark, F. M., *A Source-Book for the Study of Industrial Profits* (1932). See also Nerlove, S. H., *op. cit.*; Mills, F. C., *op. cit.*, p. 21; and Kuznets, S. S., *National Income and Capital Formation, 1919-1935* (National Bureau of Economic Research, 1937).

³ Wall, A., "Typical Financial Statements," *Bulletin of the Robert Morris Associates*, Dec., 1928, pp. 3-15.

This ratio was examined for 32 trades covered in the Robert Morris studies.¹ The results, classified according to manufacturers, middlemen, and retailers, are tabulated in Exhibit 2, for the years from about 1922 through 1929.²

Exhibit 2. Change in Ratio of Sales to Merchandise in 32 Trades: Early 1920's through 1929

	Manu- facturers	Middle- men	Retailers	Total
Rising Trend . . .	8	7	5	20
Declining Trend	3	2	3	8
Trend Absent . . .	2	0	2	4
Total	13	9	10	32

The trend in the years mentioned confirms that found by Copeland, Lyon, and Currie cited above. Studies by Moody's Investors Service and the Federal Reserve Board's indices of sales and inventories for department stores lead to a similar conclusion.³ There can be little doubt that less working capital was required at the end of the prosperous twenties than at the start.

The ratios for the years subsequent to 1929 or 1930, however, are very erratic. No general trend can be established for trade as a whole or for any one trade. It is apparent that the force of the great depression has been much greater than the trend established. The variability of the ratios during this period may indicate that success in reducing the inventories needed to support a given volume of sales is more dependent upon ability to predict sales volumes than upon efficiencies in the transportation and production fields. This presumption is made more plausible by evidences in the Robert Morris figures of similarly erratic behavior in the depression of 1921.

But although the trend has been broken, it may well be resumed when the period of readjustment comes to an end. It cannot continue forever, of course, but there is no reason to suppose that all

¹ The author is indebted to the Robert Morris Associates for permission to use the central files of the organization, as unpublished "common figures" for several trades and years were thus made available.

² The determination of trends was accomplished by graphic methods. The grouping of trades represents the author's judgment, based on the names used by the Robert Morris Associates.

³ Moody's Investors Service, "Financial and Operating Ratios," *Industrials* (annually), e.g., 1937, pp. a44-a74. See also *Federal Reserve Bulletins*, Vol. XXII, p. 631; Vol. XXIV, p. 232.

the improvements in transportation, manufacture, or market analysis are behind us. The strength of such changes, however, is apparently not sufficient to carry on despite severe depressions, and therefore cannot be a real factor in the recent years of declining commercial loans.

At the same time that the development of more economical ways of handling inventories has been taking place, there has been a considerable increase in the amounts of credit available to people for financing their retail purchases. Much of this increase has been made available through the various types of lending institutions discussed below, but a substantial amount may have been provided by the mercantile establishments themselves, through the usual "charge account" and variations on the customer credit theme. A recent writer has said:

The old theory, that charge accounts of the thirty-day class were merely an accommodation and a convenience to customers and allowed them to pay their bills once a month and to have a complete record of their purchases, is still true to some extent. But those firms who are still maintaining that this is the only reason for operating a thirty-day charge account department are rather closing their eyes to the true facts of the case.⁴

The same author, who is Secretary of the National Retail Credit Association, has prepared statistics from the Census of Distribution which indicate that the volume of retail credit sales has not in-

⁴ Hert, A. H., "Charge Accounts of Retail Merchants," *Annals of the American Academy of Political and Social Science*, Vol. CXCVI (Mar., 1938), p. 111.

Exhibit 3. Credit Sales as a Percentage of Total Sales of Retailers: 1927-1936

Year	Sales on Open Account	Sales on the Installment Plan	Total
1927	48.6%	12.1%	60.7%
1928	not available	...	...
1929	46.9	11.3	58.2
1930	47.3	11.2	58.5
1931	43.8	10.0	53.8
1932	42.9	9.1	52.0
1933	42.7	9.7	52.4
1934	46.8	10.7	57.5
1935	46.7	12.2	58.9
1936	44.7	14.0	58.7

Source: Hert, A. H., "Charge Accounts of Retail Merchants," *Annals of the American Academy of Political and Social Science*, Vol. CXCVI (Mar., 1938), p. 113.

creased more rapidly than the volume of sales itself. There has been some decrease in the proportion of sales on open account, but the proportion of installment sales has increased somewhat, though not in a startling fashion. When both types of credit are considered, the recent growth of credit sales is seen to be largely a recovery from the 1932 low.

In fact, the tendency of these and other studies is to show that retailers themselves have not been increasing their credit volumes to an important extent. There has no doubt been a change in attitudes toward credits, and a lengthening of the collection period, but the data do not support any conclusion that retailers have used up their savings of working capital which have resulted from efficient handling of inventories by advancing larger volumes of customer credits.

This conclusion is also supported by the Robert Morris ratios for sales to receivables. If these changes have had a great effect upon the amount tied up in receivables, this ratio should indicate the fact by a decline over the years. The actual trends for 52 and 53 trades were as shown in Exhibit 4.

Exhibit 4. Change in Ratio of Sales to Receivables in 52 and 53 Trades

	Early 1920's through 1929			
	Manu- facturers	Middle- men	Retailers	Total
Rising Trend . . .	13	5	3	21
Declining Trend	7	7	8	22
Trend Absent . . .	5	4	0	9
Total	25	16	11	52
	1930-1937			
	Manu- facturers	Middle- men	Retailers	Total
Rising Trend . . .	10	11	8	29
Declining Trend	4	3	1	8
Trend Absent . . .	10	3	3	16
Total	24	17	12	53

It will be seen that since 1920 there has been no decisive trend toward increasing the amount of open book credits. The greatest tendency in this direction, as was to be expected, was among retailers in years prior to 1929. The figures of the ratio in subsequent years are more confused,

with an almost unanimous tendency toward an extremely low figure either in 1932 or in 1933. The trends given in the above table express the general tendency since 1929, with the exception of the low year. It would appear that, since 1929, there has been little desire to use current funds to finance open book accounts.

This is a long way from any conclusion that the volume of customer credits has not been increasing. But it does indicate that most of the increased customer financing has been done by other lenders than the sellers themselves.

These considerations lead to the conclusion that there has been, on balance, a tendency for banks to lose loan volume because of more efficient handling of working capital by their customers. But it is clear that this tendency has not been the principal cause of the decline in the volume of bank loans for commercial purposes.

Reinvested Profits Probably the factor of reinvested funds is of major importance among the forces causing changes in commercial bank portfolios. Businesses regularly have at their disposal considerable quantities of funds, some of which must immediately be disbursed for current expenditures, but some of which may be available for purchase of new assets, payment of liabilities, distribution to stockholders, etc. Fortunately, it is possible to obtain rough figures indicating the amounts so available. The amounts include (a) earnings withheld from dividends, (b) allowances for depreciation and depletion, and (c) funds raised by the sale of securities in excess of securities retired.

However, great difficulties will be found in reaching accurate totals from the usual sources. It is unnecessary to repeat the discoveries of others in this field.¹ A few additional difficulties may, however, be noted.

None of the usual series of new corporate flotations makes any allowance for repayments of issues by corporations which are not at the same time issuing new securities. Abbott has made such

¹ *Supra*, p. 25, n. 2. See also Ebersole, J. F., Burr, S. S., Peterson, G., "Income Forecasting by the use of Statistics of Income Data," *Review of Economic Statistics*, Vol. XI (Nov., 1929, pp. 171-196); Buchenan, N. S., *The Economics of Corporate Saving* (1940), pp. 261-267; Eddy, G. A., "Security Issues and Real Investment in 1929," *Review of Economic Statistics*, Vol. XIX (May, 1937), pp. 79-91. Cf. Woodward, D. B., "Changes in Capital Financing," *Journal of the American Statistical Association*, Vol. XXXIII (March, 1938), p. 13ff.

a correction to the *Chronicle's* figures by subtracting from the total of corporate security sales an amount for issues called and matured.¹ The balance is thought to be the net issue for new capital.

In theory, Abbott's figure should be more accurate and smaller than any of the series mentioned above. However, the Moody series for "productive" issues is smaller for every year of the period under consideration.

It should be noted at this point that the figures which indicate the amounts available for acquisition of new assets do not include any amounts made available from refunding issues which were used to pay bank loans. Such a practice could also be a source of the decline in bank lending, although it would not alter total assets significantly.

Despite such difficulties, however, the statistics show that there have been available large amounts of funds which might have been used to pay bank loans.² To what extent have they been so used? A survey of the literature on the subject shows that many writers believe that corporate policies have tended toward the substitution of capital funds for bank loans. Currie has stated an explanation for this which is quite persuasive.³ He points out that unstable business conditions may be considered normal in the United States, and that, under such conditions, the dangers of inopportune maturities seem greater than possible savings of interest expense through short-term, seasonal borrowing. Other writers, while not offering as full an explanation, have noted the simultaneous occurrence of declining bank loans and large amounts of uninvested funds.

Analysis of the Robert Morris figures confirms these findings, the confirmation being especially strong for the years preceding 1929. The significant ratios are: net worth to debt, net worth to fixed assets, and notes payable to total assets. The first ratio indicates how the owner's investment is changing in relation to the quantity of borrowed money. This ratio should increase if it is to support the idea that businesses have been reinvesting earnings or selling stock, and eschewing bonds or other payables.

For the 53 to 54 trades for which this ratio is

presented in the Robert Morris figures, a sizeable plurality had such an increasing trend up to 1929 and a small plurality thereafter, as is shown in Exhibit 5.

Exhibit 5. Change in Ratio of Net Worth to Debt in 54 and 53 Trades

	Early 1920's through 1929			
	Manu- facturers	Middle- men	Retailers	Total
Rising Trend . . .	10	9	5	24
Declining Trend . . .	4	5	3	12
Trend Absent . . .	11	3	4	18
Total	25	17	12	54
	1930-1937			
	Manu- facturers	Middle- men	Retailers	Total
Rising Trend . . .	9	6	4	19
Declining Trend . . .	5	6	5	16
Trend Absent . . .	11	4	3	18
Total	25	16	12	53

Turning to the ratio of net worth to fixed assets, we recall that the trend should be increasing if the increase in ownership funds is being devoted to working capital purposes. Here again the ratios confirm the theory, as precisely half the trades had such a trend up to 1929. For the following years, the evidence is much less conclusive, since the ratios were much affected by rapid changes in profitability due to the depression. Only the first period is tabulated in Exhibit 6.

Exhibit 6. Change in Ratio of Net Worth to Fixed Assets in 54 Trades: Early 1920's through 1929

	Manu- facturers	Middle- men	Retailers	Total
Rising Trend . . .	14	10	3	27
Declining Trend . . .	4	3	5	12
Trend Absent . . .	8	2	5	15
Total	26	15	13	54

Finally, the ratio of notes payable to total assets should decline in those trades where there has been a decline in the amount of short-term borrowing although size has increased. Assuming, as is reasonable, that most of the notes payable represent bank credit, the plurality of cases of de-

¹ Abbott, C. C., *The New York Bond Market, 1920-1930* (1937), pp. 34-46, Appendix E.

² Even during the years 1931-1934, profitable corporations had about seven billion dollars to spend or hoard. Amos, J. E., *op. cit.*, p. 38.

³ Currie, L., *op. cit.*

creasing trend is another confirmation. Here again, the ratios after 1929 are not helpful. The useful figures are shown in Exhibit 7.

Exhibit 7. Change in Ratio of Notes Payable to Total Assets in 53 Trades: Early 1920's through 1929

	Manu- facturers	Middle- men	Retailers	Total
Rising Trend	11	5	3	19
Declining Trend	8	8	7	23
Trend Absent	6	3	2	11
Total	25	16	12	53

This evidence all points toward the truth of the general contention that businesses have reduced bank loans by the reinvestment of earnings and the sale of long-term bonds or stocks. More conclusive evidence is found, however, when one examines the individual trades making up the pluralities referred to above. The number of trades listed with (to 1929) increasing trends in the ratio of net worth to debt, and of net worth to fixed assets, as well as a decreasing trend in the ratio of notes payable to total assets, is seven, and seventeen additional trades appear in two of the lists, a total of twenty-four trades appearing at least twice on the three lists. No such grouping was found in the lists for contrary trends.

It appears certain that a significant part of the decline of bank loans for commercial purposes is due to business policies which have emphasized the retirement of short-term debt.

Business Cycles That there should be a relationship between the course of the business cycle and the volume of commercial loans seems to be a proposition so elementary that it does not need analysis. The actual relationship, however, is more complicated than would appear at first glance.

Simple correlations between the volume of commercial loans and indices of general business, of inventories, etc., are not successful. A multiple linear correlation between the volume of self-liquidating loans and rough indices of the value of current production and the value of stocks on hand gave a coefficient of correlation of .5855, and a coefficient of determination of .3428 for all call dates from June 30, 1919 to June 30, 1938. While

these figures are not high enough to be at all conclusive, they might encourage further investigation. The major difficulties are in the finding of suitable numerical data measuring the magnitudes desired, at times which coincide with national bank call dates.

Although the volume of current production affects the amount of working capital in use by a business, the *value* of current production is of far greater importance than the *volume* of production, since both working capital and bank credit deal in monetary units. In making the experimental correlation mentioned above it was necessary to create an index, since the Census of Manufactures does not appear sufficiently frequently, and no other measure of the value of current production was found, except one of the National Industrial Conference Board,¹ which is derived by a method similar to the author's.

The index of the value of current production was computed by multiplying the appropriate month-end figure of the Federal Reserve Board's Unadjusted Index of Industrial Production with the Bureau of Labor Statistics' Index of the Wholesale Price Level for the same date.

Such an index of the value of production, unfortunately, is limited to current productivity in manufactures and mining, and it does not relate to agricultural production. An attempt was made to find a satisfactory measure of agricultural activity, but none was discovered.

Because bank credit for commercial purposes is used at least as frequently to support inventories as to support current production,² it is as important to have a measure of the value of stocks of goods on hand as it is to measure the value of current production. Consequently, an index was constructed. It was the product of the above-mentioned wholesale price index and the appropriate figures of the Index of Stocks of Raw Materials and Manufactured Goods, unadjusted for trend or seasonal, compiled by the Bureau of Foreign and Domestic Commerce.

No claim is made that these indices are accurate measures of the variables desired; yet even the relationship established should be more satisfactory than that developed by the Economic Policy Commission of the American Bankers' Associa-

¹ National Industrial Conference Board, *Monthly Bulletin*.

² Beckhart, B. H., Smith, J. G., Brown, W. A., *The New York Money Market*, Vol. IV (1932), pp. 459-475.

tion¹ (apparently under the leadership of Leonard P. Ayres), although the conclusions are similar. This Commission related the total earning assets of all commercial banks, as of a certain date, with the annual estimates of the national income. This relationship showed that the earning assets were growing more rapidly than the national income up to 1930, and that the subsequent decline was small. As for the relationship of commercial loans and the national income, the former have decreased more rapidly.

The Commission justified its relationship of loans to national income on the ground that the latter was "the most comprehensive available index of purchasing power, and so of general business activity,"² and that bank loans and general business activity were related.

Besides avoiding the statistical difficulties of relating annual income figures to loan volumes at specific dates, the author's figures express what seems to him to be a much more specific relationship, and one from which more useful conclusions can be drawn, such as that if the national income rises as relative inventories fall (due perhaps to improved methods), the probable resulting increase in productive activity may not mean an increase in commercial bank loans. The converse would also be true, as for instance in the period 1937-1939, when the increase of the value of commodity stocks seems to have held up the volume of commercial loans (so-called) despite a rapid decline in the value of production and the national income.

In view of the important effect of price upon the value of current production and of stocks, the future of commercial lending activity cannot be measured solely by estimating the volume of production and stocks. As far as its desire for an increased demand in commercial loans is concerned, the banking fraternity should appreciate measures designed to raise the general price level.

Time Deposits The existence of time deposits, which are mostly savings deposits, in a bank's liabilities is sometimes taken as a justification for the making of slow loans, such as those on real estate, and investments. It is, therefore,

said that the growth of time deposits is an important cause of the decline in self-liquidating loans. If, runs the argument, banks do not have to maintain liquidity for demand deposits, they will gladly make capital or real estate loans or buy bonds because of the higher rates of interest which are available on such credits.³

If this theory were valid, it should be reflected by a negative correlation between the amount of time deposits and the amount of commercial loans. A spot diagram of these two factors was made for the years 1920-1939. It indicated no relationship. The growth of time deposits cannot, therefore, be said to be directly a cause of the decline in commercial lending.

The fact that during the period in question the required reserve was only 3% of time deposits was probably more important in persuading banks to solicit time deposits than was a high rate of return on any one type of earning asset. However, the desire for time deposits led to the setting up of high interest rates on savings and other time accounts for competitive purposes. It is a possible consequence of this situation that banks were persuaded to make high-rate loans in order to obtain a good margin of revenue over the interest paid out. Investments of some types would be attractive for such a purpose, but local mortgage loans would be more so. The causal relationship seems to run from a desire to carry 3% reserves so as to release funds for all types of lending, to competitive rates on time deposits, to real estate loans. This chain of causation runs in the opposite direction to the one most frequently suggested.

Consequences of Increased Investments The new emphasis on investments in bank portfolios has increased the decline in bank earning power which would in any case have taken place after 1930 because of the unusually low interest rate structure prevailing since that year. The reason for emphasis on factors of interest decline is that customarily yields on investments held are lower than on loans to customers. Furthermore, bank statistics show that in recent years the difference has been more pronounced than before.⁴

¹ "Report of Economic Policy Commission," *Proceedings of the Convention of the American Bankers' Association* (Supplement to the *Commercial and Financial Chronicle*, Oct. 30, 1937), pp. 28-29.

² *Ibid.*, p. 28.

³ Ostrolenk, B., and Massie, A. M., *How Banks Buy Bonds* (1932), p. 12.

⁴ *Federal Reserve Bulletin*, Vol. XXV (Nov., 1939), pp. 963-969. The difference in rates varies from one region to another. (Footnote 4 continued on page 31)

This situation is clearly shown by Exhibit 8 which presents the pertinent figures and percentages for all national banks as of June 30, 1927-1939.¹ It is apparent that the productivity per dollar of principal of both types of assets has fallen, and that the yield from investments is consistently lower than the average rate on loans. During the period, the relative importance of the two items to the total gross revenue has changed so that investments, although carrying lower yields, in 1937 had grown to such importance that they furnished almost half the revenue, as the figures in Exhibit F, page 58, demonstrate. This lowering of the productivity of bank portfolios has several important consequences other than the obvious one of reducing the income of stockholders.

Exhibit 8. Rates of Return on Loans and Investments, for All National Banks: Years Ending June 30, 1927-1939

Year	Return on Investments	Return on Loans
1927	4.5%	5.7%
1928	4.6	5.6
1929	4.4	6.0
1930	4.4	6.3
1931	4.4	5.6
1932	4.0	5.4
1933	3.9	5.3
1934	3.4	5.0
1935	3.2	4.7
1936	2.7	4.5
1937	2.7	4.3
1938	2.6	4.4
1939	2.5	4.5

Source: U. S. Comptroller of the Currency, *Annual Reports*, 1937, pp. 103-109; 1939, pp. 18-19; and Exhibit C. The income figures used were without correction for charge-offs, recoveries, or profits from the sale of securities. The average amounts of loans and investments outstanding were calculated by averaging the respective book values at the beginning and the end of the year.

One result of declining profit margins which is of great general importance is the reduction of net earnings which are available to cover the

¹The table could not be carried back beyond 1927 because in the previous years the Comptroller did not segregate income on loans from income on investments.

In New York City customer rates run lower than high-grade bond yields, but in other districts the relationship is as stated in the text.

dividend payments and losses of various kinds. In recent years, profits on the sale of securities and net recoveries have exceeded the profits which have been withheld from dividends.² Such a situation cannot go on indefinitely. It leads to a progressive weakening of the capital position of the banking system, and therefore to a lessening of its ability to withstand losses. Furthermore, the eventual reduction of the rate of dividends on capital will undoubtedly prove to be a deterrent to the sale of additional capital stock. In the near future, bank capital expansion is unlikely to occur in substantial amounts, except from governmental sources, or from existing stockholders who may be forced to act to bolster the ratio of their capital to their existing investments.

The prospective shrinkage in annual additions to surplus funds available to support losses on earning assets brings up the question of whether, in the long run, investments are safer than loans and discounts. If so, there is less need to be concerned over the falling annual surpluses since the quality of bank portfolios can be said to be improving as the proportion of safer assets increases even at a time when gross earning power is declining.

A frequent approach to this problem is made by calculating the ratio of charge-offs, or charge-offs less recoveries, to the book value of a group of assets.³ Such a study will show that loss ratios, with few exceptions, have been higher for investments than for loans and discounts.⁴ This is especially true when one removes government bonds from the total used as a base in calculating loss ratios on investments, on the ground that government bonds are not a source of charge-offs. On this basis, the loss ratio on investments over the period 1921-1939 was higher than that on loans for every year except 1923 and 1938.

But since losses must ultimately be made up out of earnings, it is more important to examine the relationship between losses on classes of assets and the earnings which these assets provide, after allowance for recoveries. Such a study cannot be carried out for years prior to 1927 since the Comp-

²U. S. Comptroller of the Currency, *Annual Report*, 1937, pp. 103-107; 1939, pp. 18-19.

³Examples: U. S. Comptroller of the Currency, *Annual Report*, 1937, p. 128; Wilkinson, J. H., *Investment Policies for Commercial Banks* (1938), Ch. 1.

⁴Wilkinson, *op. cit.* (in which little importance is attributed to these results); see also Willis, H. P., Chapman, J. M., Robey, R. W., *Contemporary Banking* (1933), Chs. XIX, XXI.

troller's reports do not segregate the items of income or of recoveries. The latter circumstance would not be a bar to analysis, but the former is.

Exhibit F presents the items which are pertinent to the analysis, that is, gross earnings, charge-offs, and recoveries on investments and on loans and discounts. The most important relationship in considering banks on a "going concern" basis is that of net charge-offs after allowance for recoveries to gross income. This comparison cannot be made without adjustment of the published figures because of the regrettable fact that recoveries on investments were combined with profits on sale of securities in 1933, 1934, and 1935.

It is not proper to include profits on sale of securities as a deduction from charge-offs. The item is the total "excess of sale price over cost, less premium amortized, of securities sold or exchanged."¹ Thus it does not include any amount representing gains over book values which had previously been reduced by charge-offs. Such items are "recoveries." On the whole, therefore, profits on sales of securities represent operations with entirely different bonds than those which gave rise to charge-offs and recoveries. There is seldom any similar operation possible with the loan account. Therefore it has seemed reasonable when attempting a comparison of net losses on investments with net losses on loans to omit the item of profits on sales of securities, even though it can be argued with logic that the taking of profits on securities is an operation which is inseparable from the ownership of a bond portfolio.

In order to do this, it has been necessary to estimate the amount of recoveries in 1933, 1934, 1935 and the first half of the year ending June 30, 1936. However, such an estimate cannot be made with any accuracy. The years for which figures exist do not establish any trend that might form the basis of an estimate, and no published data give any assistance in the form of correct figures for any group of banks. The author has tried various schemes, but none of them gave satisfactory results.

Only the following adjustments have been made in Exhibit F. The 1936 figure can be estimated by doubling the amount which was reported for

¹ U. S. Federal Deposit Insurance Corporation, *Instructions for the Preparation of Reports of Condition on Form 64 and Reports of Earnings and Dividends on Form 73 by Insured State Banks not Members of the Federal Reserve System* (1937), p. 19.

the last six months of the period. Further, because it does not seem reasonable that recoveries could have exceeded charge-offs in 1935, the recovery item for that year has been reduced to the amount of the charge-offs.²

Using these adjusted figures, the exhibit shows that there has been little to choose between loans and investments when the losses are measured against the earnings they provide. Over the period 1927-1939 the net losses of each class took just over 20% of their gross earnings — a much higher figure than bankers like to contemplate.

There is considerable divergence from year to year, and it can be said that investments show periods of losses earlier in depressions than do loans, and that net charge-offs on loans are a heavier burden on earnings than charge-offs on investments during periods of prosperity. Further, it is clear that the burden of charge-offs alone is larger for investments, but that larger recoveries counterbalance this figure. Such a phenomenon is of great interest to banks in weak capital positions, as they may be closed before the recoveries begin to be taken. It is also of interest in view of the present abnormally low level of interest rates, which may be a cause of substantial charge-offs when and if bonds are sold after rates begin to rise, although there seems to be a tendency to overemphasize this matter.

The conclusion seems inevitable that banks have followed dangerously liberal dividend policies for many years. But there seems to have been little to choose in the long run between loans and investments as sources of losses, if proper weight is given to the earnings which each class provides. Furthermore, the author believes that the dangers of losses from rising interest rates have been overemphasized. An important cause of today's record lows is the government's policy of favoring the holding of large excess reserves by the banks. It is difficult to conceive how such a policy can be reversed as long as large-scale deficit financing proceeds, or the national debt continues to include a large proportion of relatively short-term issues. The Treasury and the Federal Reserve System have ample powers at their disposal to "rig" the market for some years to come.

² The excess is possible, of course. However, (1) it has not occurred in any other year, and (2) the recoveries are probably in large part over "convention" values which were considerably higher than the actual market values reached during the depression.

But even were money-market rates to rise, the consequences to banks can easily be overemphasized. The amount of the change in the market value of bank portfolios which will take place when interest rates change depends partly upon the maturities owned and the coupon rates of the bonds. On the average it is safe to say that portfolio maturities are well over five years and less than twenty. Coupon rates on high-grade bonds are currently as low as $2\frac{1}{4}\%$ or less. It is clear that large losses would be possible if interest rates were to rise to pre-depression levels.

Such possible losses may seem large until they are interpreted. In the first place, as indicated, bank policies vary greatly. Those banks which have clung exclusively to the bonds with short terms need have no fear of insolvency even though, as is possible, short-term rates were to change more violently than long-term rates. Those banks which have substantial amounts of short-term bonds may quite possibly be able to carry their long-term bonds toward maturity without any necessity of sale.¹ If so, they can take full advantage of the present rules of examination which permit carrying high-grade issues at book values above market values. Those banks which have concentrated their investments in long maturities will have recognized the risk, and will forestall it to some extent by sales at opportune moments.

In short, it seems that the risks of bank failures caused by rising interest rates have been overemphasized. The losses which are feared can be guarded against by proper spacing of maturities, etc., and every bank has consciously or unconsciously made some preparation against the day.

However, even though the risks of a wave of bank failures resulting from rising rates have been exaggerated, it is probable that charge-offs will be necessary. Such charges will reduce net earnings. This may or may not in the long run be fully offset by increased gross revenues from the higher rates

¹ Such a policy is highly recommended by many experts, and is being adopted by banks. See Atkins, P. M., *Bank Secondary Reserve and Investment Policies* (1930); Ostrolenk, B., and Massie, A. M., *op. cit.*; American Bankers' Association, Bank Management Commission, "Secondary Reserves and Security Buying," and "Investment Policies of Banks," *Commercial Bank Management Studies*, No. 3 and No. 11 (1932); Wilkinson, J. H., Jr., *Investment Policies for Commercial Banks* (1938), pp. 2, 3. For similar statements, see Price, A., "Bank Investments." Allendorfer, C. W., "What Have We Learned?," Stronck, H. M., "Fundamental Banking Policies and Principles," *Commercial and Financial Chronicle*, American Bankers' Association Convention Section (1932), pp. 38, 42, 53.

of interest. If not, stockholders may look forward to reduced dividends, which experience shows to have been excessively large in past years.

One effect of declining bond prices should be given special notice. In the past few years bank examiners have allowed the maintenance of book values of good quality bonds at amounts above current market values on the grounds that market prices are below "intrinsic worth."² But if such a bond be sold, the decline has to be recognized. Hence there is especial reluctance to sell such a bond, and a short-term bond is sold when funds are needed, or a loan is allowed to mature without renewal or replacement. In times of stress, this situation may cause greater pressure on other types of assets, notably short-term bonds and loans.

Furthermore, it is possible that some emergency may develop which will force a single bank or a group of banks to become liquid by selling bonds. It has long been recognized that owners of securities have to look to the market when they wish to convert their holdings into cash.³ That is, the "liquidity" of their holdings depends upon "shiftability," the ability to find a buyer at the time when sale appears desirable. On the whole, banks and others have found it possible to dispose of moderate amounts of bonds at satisfactory prices. But when a widespread demand for cash strikes most banks at the same time, there is every reason to expect some decline in market quotations, despite the probable action of the supervisory authorities to supply funds. The situation has been described aptly as follows:

To a degree, and certainly at a price, bonds partake of the liquidity for which real estate is noted — when you can sell it you won't, and when you want to sell it you can't.⁴

The deflationary period of 1930–1933 is a case in point. It is a matter of general knowledge that bond prices fell greatly, especially in 1932 when business confidence was at a nadir. The decline applied to bonds of all grades, although governments were not affected by fears of business collapse. High-grade bonds commenced their decline in the middle of 1931, and their prices fell almost continuously for a year. Barron's index shows a

² *Infra*, pp. 38–39.

³ *Supra*, n. 1; also Berle, A. A., and Pederson, V. J., *Liquid Claims and the National Wealth* (1934).

⁴ Decker, O. P., "Principles of Bank Investment Policy." *The Bankers Magazine*, Vol. CXXXVII (Oct., 1938), p. 339.

decline of about 22% in that period. Second-grade bonds, of course, declined more. Banks which were forced to sell during this period took heavy losses, indicated in Exhibit F, page 58, and some of them were forced to close their doors.

However, there are reasons in addition to those already mentioned for thinking that the great declines of bond prices which took place in the recent depression will not be repeated. In the first place, and unless recent steps are completely reversed, banks will carry larger excess and required reserves into the next period of deflation. Although the latter can be drawn upon only if they are released at the proper time by the Board of Governors of the Federal Reserve System, it is probable that they will be made available. More important than this, however, is the trend toward providing sources of funds other than the proceeds of sale on a market; that is, the increased willingness of governmental agencies to lend on bonds. This matter has already been discussed.¹

Certain Governmental Factors

Governmental influences over bank portfolio policies fall naturally into three groups. The one most frequently discussed is the role of the government as borrower. Also, the government and its corporations and credit agencies are often examined to determine whether or not their lending has altered the size and the make-up of bank portfolios. In this paper, the treatment will be confined to a discussion of the powers of the government to influence policy by advice to, or participation in, the management of banks. This latter matter is an important aspect of the subject about which little has been said.

The powers of the Federal Reserve System and the Treasury to exercise the accepted devices of

¹ U. S. bonds are already subject to rediscount at par: U. S. Board of Governors of the Federal Reserve System, *Regulation A*, Series of 1937, p. 8. The stabilization fund has the power to deal in government bonds, and has large cash balances on hand: 48 Stat. 341 (1934), 50 Stat. 4 (1937). *Commercial and Financial Chronicle*, Vol. CXLVIII (March 4, 1939), p. 1251. Under the Thomas Amendment, the President may order extensive purchases of bonds by the Federal Reserve banks: 48 Stat. 51-54 (1933), 48 Stat. 113 (1933), 48 Stat. 342 (1934). Also, the Treasury may buy bonds for the Social Security and other "trust funds." Cf. Hubbard, J. B., "The United States Debt," *American Economic Review*, Vol. XXVII, supp. (March, 1937), pp. 86-98. Further, proposals which would freeze the bank's holdings have reached the level of serious discussion: e.g., Seltzer, L. H., "The Problem of Our Excess Banking Reserves," *Journal of the American Statistical Association*, Vol. XXXV (March, 1940), pp. 24-36.

quantitative credit control, and thus to alter the amounts of the reserves of commercial banks, are well known. Many people, however, do not realize the extent of the devices that are available for qualitative credit control, quite apart from "moral suasion." Recent changes in legislation and policy have turned the general influence of these devices in the direction of increased liberality in lending policies, and away from emphasis on the desirability of large holdings of short-term commercial paper, although the latter attitude has not entirely disappeared.

The powers of governmental agencies which make up the existing machinery for qualitative credit control are to be found (1) in the limitations of eligibility for rediscount, (2) in the restrictions on amounts and types of loans, (3) in the various means of participating directly in bank management, such as the limited power of the Federal Reserve to order out of office a recalcitrant bank officer, or the authority of the Federal Deposit Insurance Corporation to suspend insurance of deposits in an uncooperative bank, and (4) in the influence of examinations upon bank managements. These devices will be discussed in the order given.

Eligibility for Rediscount One of the purposes for which the Federal Reserve System was set up was the provision of a reservoir of credit to which member banks could turn by rediscounting paper. Another purpose of the system was the fostering of desirable commercial loans. These two purposes could be, and were, combined so that the desirable types of commercial paper were the only types made eligible for rediscount. The first form of the Federal Reserve Act and the first regulations issued under it were the most severe in this respect. The idea of encouraging banks to prefer loans of this type by limiting rediscounting to them continued in force, with minor changes, until 1932 when an emergency provision was enacted which later was made permanent by the Banking Act of 1935.

The new attitude appeared in the first draft of The Banking Act of 1935 which proposed complete abandonment of the scheme of restricted eligibility in favor of an authorization to Federal Reserve banks to lend to members on "promissory note secured by any sound assets."²

² U. S. Congress, 75th, 1st, S. 1715, H.R. 7617 (1935).

The bill was altered during the process of being passed by Congress, principally because of the efforts of Senator Glass and others in the upper house,¹ and the final enactment left unaltered the eligibility provisions of previous acts, but made permanent the power of the Reserve banks to lend on any asset, although at a rate of interest at least one-half of one per cent higher than the rediscount rate. This extra charge has come to be referred to by practicing bankers as a "penalty rate."

The new Board of Governors of the Federal Reserve System has implemented the liberalization of policy toward acceptable assets by promulgating a revision of its regulations covering rediscounts, etc. The rediscount feature, without penalty rate, is continued as before, amplified, however, by the inclusion of construction loans with maturities of six months or less which are accompanied by an agreement requiring someone to advance the full amount of the loan at the completion of construction.²

Loans subject to penalty rate will be made if secured by ". . . assets of any of the classes enumerated below which are satisfactory to the Federal Reserve bank, or paper secured by assets of such classes:"³ (1) eligible paper, (2) paper which would be eligible except for too long a period of maturity, (3) investment securities, (4) mortgages insured under Title II of the National Housing Act, (5) Home Owners' Loan Corporation or Federal Farm Mortgage Corporation bonds, (6) municipal obligations, (7) satisfactory real estate mortgages, or (8) installment paper.⁴

Such a change in the availability of Reserve bank credit, besides evidencing a new attitude toward the way of accomplishing the purposes of the Reserve system, undoubtedly will influence banks to make less liquid loans with longer maturities. The quantitative effect of this change cannot be measured because there have been several other changes in the attitudes of governmental authorities which have also affected bank portfolio policies — to say nothing of profound changes in the economic system of the country.

Especially worthy of notice, however, are the provisions permitting rediscounts on the security

of real estate loans, and of installment paper. These two fields of activity have been of growing importance to commercial banks in recent years.

Restrictions on Amounts and Types of Loans The second class of powers which give governmental authority a partial qualitative control of credit is that indicated by the above heading.

Legal limitations of this nature fall into two groups. There are, first, those which specify the maximum amounts which may be lent to any one interest, and second, those which limit the types of loans which may be made.

Probably the best-known of the provisions of the first class is Section 5200 in the National Banking Act⁵ whose basic provision is that:

The total obligations to any national banking association of any person, co-partnership, association or corporation shall at no time exceed ten per centum of the amount of the capital stock of such association . . . and ten per centum of its unimpaired surplus fund.

These words are followed by many exceptions, designed to allow larger advances in cases where the excess loan is accompanied by some evidence, such as a bill of lading, showing that it represents "actually existing values." The net result of the section as amended is to allow loans in excess of the 10% limit, but only where they are made in connection with current commercial transactions or are secured by United States Government bonds. Similar provisions will be found in most state banking laws. In other parts of the National Banking Act, certain subsidiary provisions can be found. No member bank may lend to a bank examiner,⁶ nor may a member bank lend on its own stock as collateral,⁷ nor may an executive officer of a member bank borrow from his bank.⁸

The wisdom of the limitations just outlined has never been seriously questioned, and they have not been altered in any substantial way since the advent of the New Deal in 1933. They do not con-

⁵ 1 Rev. Stat., Sec. 5200 (1864), as amended: 34 Stat. 431 (1906); 40 Stat. 967 (1918); 41 Stat. 296 (1919); 44 Stat. 1229 (1927); 48 Stat. 72, 191 (1933); 49 Stat. 713 (1935).

⁶ 38 Stat. 272 (1913); 40 Stat. 970 (1918). This and subsequent provisions mentioned above apply to all member banks.

⁷ U. S. Comptroller of the Currency, *National Bank Act as Amended* (1935), par. 431.

⁸ *Ibid.*, par. 209; U. S. Board of Governors of the Federal Reserve System, *Regulation O*.

¹ U. S. Senate, "Banking Act of 1935," *Report*, Banking and Currency, 74th, 1st, No. 1007 (1935), p. 13.

² U. S. Board of Governors of the Federal Reserve System, *Regulation A*, Series of 1937, pp. 2, 3.

³ *Federal Reserve Bulletin*, October, 1937, p. 986.

⁴ *Ibid.*, pp. 5, 6, 12-14.

stitute, nor were they intended to constitute, any great limitation to the lending activities of banks.

Turning to the laws which limit the types of loans which are permissible, and looking first at the ability of banks to lend on real estate as collateral, one finds a progressive liberalization. Until the passage of the Federal Reserve Act in 1913, national banks were not authorized to make loans on real estate as collateral. State banks could do so under laws of varying strictness. Section 24 of the Federal Reserve Act permitted national banks not located in a Central Reserve city to lend on improved unencumbered farm land in their Federal Reserve district up to 50% of the actual value of the property, for periods not over five years. The total of such loans could not exceed 50% of the bank's unimpaired capital and surplus, nor one-third of the time deposits.¹

In 1916, minor changes were made in the foregoing provisions. The area in which such loans could be made was changed to be a circle with a hundred-mile radius and the bank at the center, and loans on other types of real estate were permitted, but only for terms of one year.² In practice the maturity date was seldom effective, as the general practice was to carry notes past due for indefinite periods. This method was, of course, equivalent to constant renewal.

The growth in the volume of national bank loans on real estate, which was described in Chapter II, took place under the above provisions until 1927 when new legislation, sponsored by Representative McFadden, was enacted. The former laws were broadened by permitting loans to be made on any type of improved real estate up to a period of five years and up to one-half of the bank's savings deposits. Other provisions remained as before.³

This trend toward liberalization reached its climax in the National Housing Act,⁴ and the Banking Act of 1935.⁵ At the date of writing, national banks may make loans secured by improved real estate of any type up to 50% of appraised value and five-year maturity, or up to 60% of appraised value and ten-year maturity if 40%

of the loan is to be amortized within ten years. Such loans can be made up to 100% of unimpaired capital and surplus of the bank, or up to 60% of time deposits, whichever is greater. Furthermore, real estate loans which are insured under Title II of the National Housing Act are not included in the above restrictions, and may be bought without limit. It will be remembered that such loans may be made up to 80% of appraised value, and may have a twenty-year maturity. Finally, loans to finance the construction of residential and farm buildings, if maturities do not exceed six months, will not be deemed real estate loans, and may be made up to 50% of the unimpaired capital and surplus.

The above provisions represent a change in the rules asked for in the original draft of the Banking Act of 1935,⁶ where one finds that loans up to 75% of actual value were to be permitted if completely amortized over a twenty-year period. However, unamortized loans were to be limited to three years; the bank's own real estate was to be included at book value in computing the total which could be lent; and all member banks were made subject to the provisions.

Thus one finds a trend in legislation parallel to the growth of the volume of real estate loans in bank portfolios which has opened up considerable possibility of the expansion of commercial bank credit into this field. Inasmuch as loans of this nature are notoriously illiquid, there is an implied duty on the part of the governmental agencies to provide ample rediscount facilities where they are required. This appears to have been done.

By contrast, one finds that the freedom of the banks to make loans on securities as collateral has been much reduced. The author has found no law prior to 1933 which limited the ability of member banks to accept stocks and bonds as collateral for loans. However, as an outgrowth of the stock market inflation of 1928-1929 and the subsequent investigation of 1931,⁷ the Banking Act of 1933 provided that the Federal Reserve Board could limit by Federal Reserve districts the percentage of individual bank capital and surplus which might be represented by such loans, and that the Board could direct a member bank to refrain from fur-

¹ 38 Stat. 273 (1913). It is believed that national banks prior to the passage of the provision cited made loans which relied upon real estate values, and that formal liens were sometimes obtained despite the intent of the law.

² 39 Stat. 754 (1916).

³ 44 Stat. 1932 (1927).

⁴ 48 Stat. 1248-1263 (1934).

⁵ 49 Stat. 706-707 (1935).

⁶ U. S. Congress, 74th, 1st, S. 1715, H. R. 7617 (1935), Sec. 270.

⁷ "Operation of National and Federal Reserve Banking Systems," *Hearings, Senate, Banking and Currency*, 71st, 3rd, S. Res. 71 (1931), *passim*.

ther increase in such loans on penalty of suspension of rediscount privileges. These powers were to be used when necessary to prevent excessive speculation in securities.¹ They have not yet been exercised. The Banking Act of 1935 exempted from the above provisions loans fully secured by United States Government obligations.²

In addition, the Board of Governors was given extensive powers by the Securities Exchange Act of 1934 to set the margins of collateral required of such loans whenever the collateral consisted of securities registered on a national securities exchange, and the purpose of the loan was the financing of transactions in securities.³

Under the foregoing provisions, the Board of Governors has issued regulations covering the permitted margins which have been altered from time to time.⁴

Clearly, the purpose of these laws and regulations is to enable the Board of Governors to limit the amounts of bank credit used for trading in securities. Taken together with the prohibition upon the placing of brokers' loans for the account of others,⁵ the mechanism for rigid control over the quality and quantity of an important class of bank credit has been set up.

Direct Governmental Participation in Bank Management

The third group of instrumentalities for qualitative credit control that are now available to various governmental agencies is one which includes a miscellany of devices of a disciplinary nature, through which the central group can oust officers, or participate in the election of the management.

For example, the Reconstruction Finance Corporation, for those banks whose preferred stock it has purchased, has the power to exercise equal voting rights with common stockholders as long as preferred dividends are not in arrears more than one semi-annual payment, and to exercise double the number of votes available to common stockholders when preferred dividends are in arrears more than the one payment. Also, the Reconstruction Finance Corporation, with the ap-

proval of the appropriate banking commissioner, may demand the removal of an unsatisfactory officer or director, and insist upon the selection of a satisfactory substitute. Very few cases of the use of this power are on record.⁶

The Federal Deposit Insurance Corporation has authority to terminate the insurance of any insured bank which persists in "unsound banking practices."⁷ A lengthy procedure of notifications, warnings and hearings is required, but ultimately a bank may have its insurance terminated. Such a bank is required to notify its depositors of the termination of insurance, an act which will usually result in the cessation of business by the bank, as the depositors will probably withdraw their balances quite rapidly.⁸

In view of the number of times in which use of the power has been threatened, it is of interest to study a summary by the Federal Deposit Insurance Corporation with respect to what it considers to be unsound banking practices. Only the portions relating to portfolio policy are quoted. They are significant also because they undoubtedly express the prevailing attitude not only at the Federal Deposit Insurance Corporation, but also in the Comptroller's office, the Federal Reserve System, and the Reconstruction Finance Corporation.

Quality (of assets) is a matter of individual judgment made in the light of detailed knowledge. . . . A bank should maintain a balance among different types of assets in accordance with the demands which it may expect to meet. A bank should not purchase securities or make loans involving excessive risk of loss. . . .

Examiners of the Corporation are instructed not to criticize an individual loan on the basis of the time of its probable repayment but solely on the basis of the probable ability of the debtor to keep his obligation current and sound. Examiners are instructed to criticize a loan because of lack of credit information regarding the borrower, because the loan is made for speculative purposes involving undue risk of loss, because the loan represents an over-extension of

⁶ In a letter to the author dated Feb. 7, 1939, J. F. Herson, Administrative Assistant of the Reconstruction Finance Corporation, states, "This Corporation has maintained its policy of voting the preferred stock purchased by it along with the holders of a majority of the common stock, departing from this policy only in a few isolated cases."

⁷ 49 Stat. 690-691 (1935).

⁸ The first case in which insurance was terminated is that of the North Bergen Trust Co. Suspension of insurance resulted in an immediate change of management and subsequent readmission to membership. *New York Times*, April 17, 1937, 1:7; April 21, 1937, 13:4. Cf. Federal Deposit Insurance Corporation, *Annual Report, 1938*, pp. 18-19.

¹ 48 Stat. 167 (1933).

² 49 Stat. 713 (1935).

³ 48 Stat. 886 (1934).

⁴ U. S. Board of Governors of the Federal Reserve System, *Regulation U; Annual Report, 1934*, pp. 35-39, 52; *1936*, pp. 30-33; *1937*, pp. 34, 201, 207; *1938*, pp. 34, 73.

⁵ 48 Stat. 181 (1933).

credit or undue concentration for a bank in a single line, because the loan involves improper assumption of management risks by the bank, or because the loan is illegal. Examiners are also instructed to criticize any loan upon which a loss appears probable, and any loan in which a loss has actually been sustained by the bank but not charged off. Instructions are given to comment also upon an undue concentration of loans by types and maturities tending to produce a lack of balance among the assets of the bank.

... Individual banks should establish investment programs which apply the principle of diversification to the total assets of the bank rather than to the securities account alone. ... A proper maturity schedule depends both upon the quality and maturities of the loans and discounts and upon the character of the liabilities. Only high-grade bonds should be purchased. They should be purchased for investment with the expectation of holding them to maturity. ...

... Profits from transactions in securities should not be used for dividends. Such profits should be placed in a special valuation account to be used to offset losses. ... A bank which adheres to the policy outlined above need not be concerned about price fluctuations on high-grade bonds held for investment.¹

The reader will have noted that nowhere is there any scheme for judging the quality of the assets by their form or maturity. Here is another evidence that the old concept of "eligible paper" has been abandoned as a test of the adequacy of loan policy.

The Board of Governors of the Federal Reserve System also has disciplinary authority over the member banks which may be used to influence their portfolio policies. The principal powers relate to the use by member banks of "unsafe or unsound practices," such as "speculative carrying or trading in securities, real estate, or commodities," or for "any other purpose inconsistent with the maintenance of sound credit conditions."² Wherever such practices are discovered, the Board of Governors may, after due notice, warning, and hearing, either suspend the offending bank from the credit facilities of the Federal Reserve System, or order the removal of the responsible officer or director, or both. There are also other disciplinary powers not related to portfolio policies.³

¹ U. S. Federal Deposit Insurance Corporation, *Annual Report, 1937*, pp. 16-17.

² 48 Stat. 162-163 (1933).

³ 40 Stat. 233 (1917), as amended 46 Stat. 251 (1930) (forfeiture of membership for refusing to be examined); 40 Stat. 234 (1917) (forfeiture of membership for certifying a check against an overdrawn account); 48 Stat. 162, Sec. 20 (1933)

These powers have been used in but two cases in the period 1933-1937, both in the latter year.⁴ It appears that they will be used infrequently, and for the same purposes as motivate the Federal Deposit Insurance Corporation, except that there will probably be more attention to the relationship of loans to undesirable speculative activities, especially in the stock market. Such matters are the particular concern of the Board of Governors of the system.

The Role of the Bank Examiner The most frequent regular personal contact between the regulatory agencies and individual banks is through the bank examiner. Although there is no direct enactment that the examiner's suggestions must be obeyed, and examples of willful disregard can be found,⁵ it is almost certain that the bank examiner's opinions have real influence over the loan and investment policies of most of the banks which he visits.

While the general form of the laws under which the examiners operate have not changed greatly, the administrative rulings have been altered considerably. Recent alterations have been in the direction of greater liberality of credit.

The opinion of the Federal Deposit Insurance Corporation, quoted above,⁶ is an instance of the changed attitude toward the "necessity" of holding short-term paper.

The following excerpts, expressing the combined judgment of the Federal Reserve System, the Comptroller of the Currency, and the Federal Deposit Insurance Corporation, form additional evidence of the extent of the change. (The material has been rearranged by the author.)

The present captions of the classification units, namely, "Slow," "Doubtful," and "Loss" are to be abandoned.

⁴ U. S. Board of Governors of the Federal Reserve System, *Annual Report, 1937*, p. 24.

⁵ "Operation of National and Federal Reserve Banking Systems," *Hearings*, Senate, Banking and Currency, 71st, 3rd, S. Res. 71 (1931), pp. 4-5, 631-635; Ebersole, J. F., *Bank Management—a Case Book* (2d ed., 1935), pp. 398-412 (Bank of United States).

⁶ *Supra*, pp. 37, 38.

(forfeiture of membership for continuing a securities affiliate); 48 Stat. 162, Sec. 31 (1933) (forfeiture of membership for having more than the permissible number of directors); 48 Stat. 166 (1933) (forfeiture of membership because holding company affiliate will not comply with law); 48 Stat. 182 (1933) (removal of officer who borrows beyond authorized sums).

The classification units hereafter will be designated numerically and the following definitions thereof will be printed in examination reports:

I. Loans or portions thereof the repayment of which appears assured. These loans are not classified in the examination report.

II. Loans or portions thereof which appear to involve a substantial and unreasonable degree of risk to the bank by reason of an unfavorable record or other unsatisfactory characteristics noted in the examiner's comments. There exists in such loans the possibility of future loss to the bank unless they receive the careful and continued attention of the bank's management. No loan is so classified if ultimate repayment seems reasonably assured in view of the sound net worth of the maker or endorser, his earning capacity and character, or the protection of collateral or other security of sound intrinsic value.

III. Loans or portions thereof the ultimate collection of which is doubtful and in which a substantial loss is probable but not yet definitely ascertainable in amount. Loans so classified should receive the vigorous attention of the management with a view to salvaging whatever value may remain.

IV. Loans or portions thereof regarded by the examiner for reasons set forth in his comments as uncollectible and as estimated losses. Amounts so classified should be promptly charged off.

Present practice will be continued under which the totals of II, III, and IV above are included in the recapitulation or summary of examiners' classifications.

Fifty per cent of the total of III above and all of IV above will be deducted in computing the net sound capital of the bank.

Group I securities are marketable obligations in which the investment characteristics are not distinctly or predominantly speculative. This group includes general market obligations in the four highest grades and unrated securities of equivalent value.

Group II securities are those in which the investment characteristics are distinctly or predominantly speculative. This group includes general market obligations in grades below the four highest, and unrated securities of equivalent value.

Group III securities: securities in default.

Group IV securities: stocks.

Neither appreciation nor depreciation in Group I securities will be shown in the report. Neither will be taken into account in figuring net sound capital of the bank.

The securities in Group II will be valued at the average market price for eighteen months just preceding examination, and fifty per cent of the net depreciation will be deducted in computing the net sound capital.

Present practice will be continued under which net depreciation in the securities in Group III and Group IV is classified as loss.¹

The conclusion is inescapable that most of the present qualitative controls now available to governmental bodies are being used to foster the expansion of commercial bank credit along lines which would have been frowned upon a few years ago. The response is slow, but there is some evidence that it is growing in force.

As and when bankers respond in quantity of credits to this urge to make loans of less liquidity, the central bank must assume the increased risks of emergencies when it will be necessary to furnish funds through extensive rediscounts. Here again one sees the force of events leading the banking system toward long-time loans, and a general-asset rediscount policy. No individual banker, confronted by such a general trend, can plan to be the survivor if the credit structure comes tumbling down. The author does not presume to conclude that it will come tumbling down,² but he foresees a grave emergency when the central bank may be greatly strained, and the Federal Deposit Insurance Corporation may be forced to regret charging rates based upon losses resulting from one type of examination to meet the losses resulting from a more liberal one.

¹ U. S. Board of Governors of the Federal Reserve System, *Annual Report*, 1938, pp. 89-90. Cf. *ibid.*, pp. 16-18.

² For Cassandra-like prophecies, see Whitney, C., *Experiments in Credit Control, the Federal Reserve System* (1934), Ch. IX; Dunkman, W. M., *Qualitative Credit Control* (1933); Willis, H. P., Chapman, J. M., and Robey, R. W., *Contemporary Banking* (1933), p. 262 *et passim*; and, in general, any member of the group of economists associated with the name of H. P. Willis.

STATISTICAL APPENDIX

Exhibit A. Resources and Liabilities of Various Groups of Banks: As of June 30, 1922, 1927, 1932, 1937, 1939
(Millions of dollars)

	June 30, 1922	All Commercial Banks ¹	All National Banks	All Member Banks	Member Banks Reporting Weekly	June 30, 1922	All Commercial Banks ¹	All National Banks	All Member Banks	Member Banks Reporting Weekly
Number of Banks	28,031	8,249	9,892	800	Number of Banks	28,031	8,249	9,892	800	
RESOURCES					LIABILITIES					
Cash and Reserve Deposits:	\$3,054	\$1,478	\$2,300	\$1,718	Total Deposits	\$33,785	\$16,320	\$25,546	\$14,628	
Cash	753	326	465	278	Demand Deposits: ²	15,201	9,152	14,252	11,124	
Reserve Deposits	2,301	1,152	1,835	1,440	Individual Accounts	14,227	8,504	...	...
Other Cash Items	4,354	2,493	3,637	...	Certificates	630	320	...	...
Other Resources	789	221	640	...	Other	344	328	...	...
Loans and Discounts:	23,773	11,434	17,297	10,783	Due to Banks ⁴	3,792	2,953	3,964	...	
Demand, with Collateral ³	3,066	1,678	...	...	United States Deposits	125	103	156	124
Demand, Unsecured	879	658	...	...	Time Deposits:	14,667	4,112	7,174	3,380
Time, with Collateral ³	3,424	2,612	...	...	Savings Accounts	7,031	2,998	...	...
Time, Unsecured	6,972	5,818	...	...	Certificates	2,395	1,081	...	...
Real Estate:					Postal Savings	43	33	...	...
On Farm Land	362	209	...	...	Miscellaneous Time Deposits	5,198	...	...	...
On Other Real Estate	1,604	162	...	...	Bills Payable	1,036	509	723	96
All Other Loans	7,466	297	...	...	National Bank Notes	726	726	726	...
Investments:	9,179	4,563	7,062	4,405	Other Liabilities	911	303	515	...	
U. S. Government Securities	2,995	2,286	3,247	2,100	Capital Accounts:	5,846	2,848	4,214	...	
State, etc., Bonds	722	414	3,815	2,305	Stock	2,853	1,307	1,912	164	
Railroad Bonds	801	486	...	...	Surplus	2,173	1,049	1,584	...
Other Public Service Bonds	544	318	...	...	Undivided Profits	820	492	718	...
Other Securities	4,117	1,059	...	...	Total Liabilities	\$42,304	\$20,706	\$31,724	...
Banking House and Fixtures	979	452	680	...						
Other Real Estate	176	65	108	...						
Total Resources	\$42,304	\$20,706	\$31,724	...						
Total Resources as a Percentage of Total Resources of All Commercial Banks	100%	49%	75%	...						

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Sources: (a) Series of All Commercial Banks: Computed from data presented in *Annual Report of the Comptroller of the Currency, 1922, 1927, 1932, 1937, and 1939*, e.g., 1939, pp. 35-37, in table titled "All Banks in the United States." The present series includes national banks, state banks, loan and trust companies, and in 1937 and later reports, stock savings banks.
 (b) Series of All National Banks: From the *Annual Report*, supra.
 (c) Series of All Member Banks: From the *Member Bank Call Reports, June 30, 1922, 1927, 1932, 1937, 1939*.
 (d) Series of Member Banks Reporting Weekly: From the *Federal Reserve Bulletin* of appropriate date, e.g., Vol. XXVI (March, 1940), pp. 226-229.

¹ National banks, state banks, and loan and trust companies.
² Except loans with real estate as collateral.
³ Excludes deposits due to banks and United States deposits.
⁴ Includes deposits due to banks, cashier's checks, and certified checks.

Exhibit A (continued)

June 30, 1927	All Commercial Banks ¹	All National Banks	All Member Banks	Member Banks Reporting Weekly	June 30, 1927	All Commercial Banks ¹	All National Banks	All Member Banks	Member Banks Reporting Weekly
Number of Banks.....	25,133	7,796	9,099	668	Number of Banks.....	25,133	7,796	9,099	668
RESOURCES					LIABILITIES				
Cash and Reserve Deposits.....	\$3,872	\$1,770	\$2,818	\$2,021	Total Deposits.....	\$46,860	\$21,775	\$35,352	\$22,952
Cash.....	950	364	538	270	Demand Deposits: ²	23,575	10,923	18,800	13,381
Reserve Deposits.....	2,922	1,406	2,280	1,751	Individual Accounts.....	20,971	9,787	16,183	...
Other Cash Items.....	5,752	3,106	1,068	1,086	State, etc.....	1,222	694	...	...
Other Resources.....	1,430	551	3,860	...	Certificates.....	605	205	1,065	...
Loans and Discounts.....	31,013	13,965	23,133	14,718	Other.....	777	237	1,552	...
Demand, with Collateral ³	3,651	2,566	...	...	Due to Banks ⁴	5,396	3,396	4,124	3,197
Demand, Unsecured.....	1,086	822	...	...	United States Deposits.....	194	140	218	162
Time, with Collateral ³	3,910	3,260	...	...	Time Deposits: ⁵	17,695	7,316	12,210	6,212
Time, Unsecured.....	7,344	6,126	...	...	Savings Accounts ⁵	16,472	7,014	...	...
Real Estate:					State, etc.....	237	225	...	...
On Farm Land.....	370	395	478	...	Postal Savings.....	110	77	...	...
On Other Real Estate.....	2,809	757	2,240	...	Miscellaneous Time Deposits.....	876	...	...	...
On Security.....	...	...	...	6,041	Bills Payable.....	812	368	557	308
All Other Loans.....	11,843	129	...	8,677	National Bank Notes.....	651	651	651	...
Investments:					Other Liabilities.....	1,551	478	975	...
U. S. Government Securities.....	13,283	6,393	9,818	6,049	Accrued Expenses.....	70	70	...	...
State, etc., Bonds.....	3,490	2,596	3,796	2,568	Capital Accounts:				
Railroad Bonds.....	1,241	743	1,277	...	Stock.....	7,197	3,239	5,275	...
Other Public Service Bonds.....	993	657	4,745	3,481	Surplus.....	3,297	1,474	2,274	...
Other Securities.....	6,599	1,748	...	...	Undivided Profits.....	2,926	1,257	2,030	...
Banking House and Fixtures.....	1,437	680	1,037	...	Total Liabilities.....	\$57,141	\$26,581	\$42,810	...
Other Real Estate.....	354	116	176	...					
Total Resources.....	\$57,141	\$26,581	\$42,810	...					
Total Resources as a Percentage of Total Resources of All Commercial Banks.....	100%	47%	75%	...					

¹ National banks, state banks, and loan and trust companies.

² Except loans with real estate as collateral.

³ Excludes deposits due to banks and United States deposits.

⁴ Includes deposits due to banks, cashier's checks, and certified checks.

⁵ Includes time certificates.

Exhibit A (continued)

June 30, 1932	All Commercial Banks ¹	All National Banks	All Member Banks	Member Banks Reporting Weekly	June 30, 1932	All Commercial Banks ¹	All National Banks	All Member Banks	Member Banks Reporting Weekly
Number of Banks	17,840	6,150	6,980	...	Number of Banks	17,840	6,150	6,980	...
RESOURCES					LIABILITIES				
Cash and Reserve Deposits:	\$3,304	\$1,489	\$2,476	\$1,824	Total Deposits	\$34,328	\$17,461	\$27,864	\$19,388
Cash	720	338	478	240	Demand Deposits: ²	16,311	7,941	13,204	10,925
Reserve Deposits	2,584	1,151	1,998	1,584	Individual Accounts	14,233	6,710	11,491	...
Other Cash Items	3,516	1,997	3,261	...	State, etc.	1,537	1,006	1,314	...
Other Resources ³	1,258	495	775	...	Certificates	246	100	138	...
Loans and Discounts:	21,328	10,286	16,587	11,263	Other	295	125	261	...
Loans on Securities	5,955	3,182	5,570	4,745	Due to Banks ⁴	3,772	2,041	3,637	2,581
Commercial Paper and Acceptances	638	223	469	...	United States Deposits	421	213	387	340
Loans to Banks	489	332	573	...	Time Deposits:	13,824	7,266	10,636	5,542
Loans on Real Estate:				6,518	Banks	53	44	76	...
On Farm Land	494	300	363	...	State, etc.	310	248	337	...
On Other Real Estate	3,480	1,317	2,531	...	Other:				
All Other Loans	10,272	4,932	7,081	...	Pass Book	9,748	5,203	7,491	...
Investments:	13,666	7,197	11,413	7,491	Certificates	2,060	996	1,350	...
U. S. Government Securities ⁵	5,831	3,353	5,628	4,254	Miscellaneous ⁶	1,006	325	772	...
State, etc., Bonds	1,091	1,031	1,035	...	Postal Savings	647	450	610	...
Stock	588	205	648	3,237	Bills Payable ⁷	1,262	547	878	...
Foreign Securities	508	345	475	...	Acceptances	528	279	483	...
Other Bonds ⁸	5,048	2,263	3,027	...	National Bank Notes	652	652	640	...
Banking House and Fixtures	1,518	760	1,166	...	Other Liabilities ⁹	732	100	266	...
Other Real Estate	375	144	233	...	Accrued Items	75	49	110	...
Total Resources	\$44,965	\$22,368	\$35,911	...	Capital Accounts:	7,388	3,280	5,661	...
Total Resources as a Percentage of Total Resources of All Commercial Banks	100%	50%	80%	...	Reserves	435	149	344	...
					Stock	3,209	1,509	2,440	...
					Surplus	3,130	1,259	2,366	...
					Undivided Profits	554	303	511	...
					Total Liabilities	\$44,965	\$22,368	\$35,911	...

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¹ National banks, state banks, and loan and trust companies.
² Includes securities borrowed, acceptances of other banks and bills of exchange or drafts sold with endorsement, customers' liability on account of acceptances, other assets.
³ Direct obligations of the United States and obligations fully guaranteed by the United States.
⁴ Includes bonds of governmental agencies not fully guaranteed by the United States and all bonds of domestic private corporations.
⁵ Excludes deposits due to banks and United States deposits.
⁶ Includes deposits due to banks, certified and cashier's checks, cash letters of credit, traveler's checks.
⁷ Includes time deposits, open accounts, Christmas Clubs, etc.
⁸ Includes bills payable, rediscounts, agreements to repurchase securities sold.
⁹ Includes securities borrowed, acceptances of other banks, and bills of exchange or drafts sold with endorsement.

Exhibit A (continued)

June 30, 1937	All Commercial Banks ¹	All National Banks	All Member Banks	Member Banks Reporting Weekly	June 30, 1937	All Commercial Banks ¹	All National Banks	All Member Banks	Member Banks Reporting Weekly			
Number of Banks	15,013	5,299	6,357	...	Number of Banks	15,013	5,299	6,357	...			
RESOURCES					LIABILITIES							
Cash and Cash Items:.....	\$14,943	\$8,378	\$13,001	\$9,357	Total Deposits.....	\$48,959	\$26,766	\$41,633	\$28,472			
Cash.....	901	445	629	303	Demand Deposits: ²	26,407	14,404	22,850	17,058			
Reserve Deposits.....	14,042	4,153	6,897	5,400	Individual Accounts.....	23,176	12,430	20,272	16,462			
Other Cash Items.....		3,780	5,475	3,654	State, etc.....	3,231	1,974	2,578	596			
Other Resources ³	588	226	394	...	Due to Banks ⁴	6,947	4,087	6,808	5,515			
Loans and Discounts:.....	17,579	8,813	14,285	9,760	United States Deposits.....	673	379	628	547			
Loans on Securities.....	4,838	2,299	4,365	3,493	Time Deposits:.....	14,932	7,896	11,347	5,352			
Commercial Paper and Acceptances	1,174	359	523	467	Banks.....	127	107	137	117			
Loans to Banks.....	126	74	115	98	State, etc.....	345	230	292	...			
Loans on Real Estate;	530	215	265	1,169	Other:	11,990	6,511	9,245	5,235			
On Farm Land.....					3,165	1,202	2,241	Pass Book.....	1,372	592	758	...
On Other Real Estate.....					7,746	4,574	6,776	Certificates.....	964	367	815	...
All Other Loans.....				4,563	Miscellaneous ⁵	134	89	100	...			
Investments:.....	21,612	12,122	18,454	12,530	Postal Savings.....				...			
U. S. Government Securities ⁶	14,207	8,219	12,689	9,453	Bills Payable ⁷	47	9	17	...			
State, etc., Bonds.....	2,696	1,452	2,133	3,077	Acceptances.....	234	113	212	...			
Stock.....	672	252	533	...	National Bank Notes.....				879			
Foreign Securities.....	282	164	228	...	Other Liabilities ⁸	406	158	136	...			
Other Bonds ⁹	3,755	2,035	2,871	...	Accrued Items.....	111	79	104	...			
Banking House and Fixtures.....	1,208	636	980	1,302	Capital Accounts:.....	6,734	3,212	5,367	3,598			
Other Real Estate.....	561	162	355	...	Reserves.....	451	168	364	...			
Total Resources.....	\$56,491	\$30,337	\$47,469	\$32,949	Stock and Capital Notes.....	3,190	1,582	2,444	...			
Total Resources as a Percentage of					Surplus.....	2,468	1,073	1,971	...			
Total Resources of All Commercial					Undivided Profits.....	625	389	588	...			
Banks.....	100%	54%	84%	58%	Total Liabilities.....	\$56,491	\$30,337	\$47,469	\$32,949			

¹ National banks, state banks, loan and trust companies, and stock savings banks.
² Includes securities borrowed, acceptances of other banks and bills of exchange or drafts sold with endorsement, customers' liability on account of acceptances, other assets.
³ Direct obligations of the United States and obligations fully guaranteed by the United States.
⁴ Includes bonds of governmental agencies not fully guaranteed by the United States and all bonds of domestic private corporations.
⁵ Excludes deposits due to banks and United States deposits.
⁶ Includes deposits due to banks, certified and cashier's checks, cash letters of credit, traveler's checks.
⁷ Includes time deposits, open accounts, Christmas Clubs, etc.
⁸ Includes bills payable, rediscounts, agreements to repurchase securities sold.
⁹ Includes securities borrowed, acceptances of other banks, and bills of exchange or drafts sold with endorsement.

Exhibit A (continued)

	June 30, 1939	All Commercial Banks ¹	All National Banks	All Member Banks	Member Banks Reporting Weekly	June 30, 1939	All Commercial Banks ¹	All National Banks	All Member Banks	Member Banks Reporting Weekly
Number of Banks.....	14,530	5,209	6,330	...	Number of Banks.....	14,530	5,209	6,330	...	
RESOURCES					LIABILITIES					
Cash and Cash Items:	\$19,792	\$11,075	\$17,628	\$8,934	Total Deposits.....	\$53,478	\$29,470	\$45,874	\$31,667	
Cash.....	974	531	712	455	Demand Deposits: ²	28,404	15,580	24,980	18,137	
Reserve Deposits.....	18,818	5,640	10,011	8,479	Individual Accounts.....	25,189	13,644	22,448	16,720	
Other Cash Items.....		4,904	6,905		State, etc.....	3,215	1,936	2,532	1,417	
Other Resources ³	411	230	291	...	Due to Banks ³	8,699	5,216	8,481	7,616	
Loans and Discounts:	16,550	8,573	13,141	8,089	United States Deposits.....	785	491	694	546	
Commercial and Industrial.....	5,348	3,144	4,783	3,833	Time Deposits:	15,590	8,183	11,719	5,368	
Agricultural.....	1,242	680	788	303	Banks.....	204	111	156	122	
Open-Market Paper ⁴	473	267	420	543	State, etc.....	566	355	441	223	
For Purchase or Carrying Securities:					Other:					
To Brokers and Dealers.....	764	290	731	648	Pass Book.....	12,625	6,773	9,662	5,007	
Other.....	842	443	736	543	Certificates.....	1,244	554	1,401	16	
Real Estate:					Miscellaneous ¹⁰	809	338			
On Farm Land.....	566	230	284	1,161	Postal Savings.....	82	52	59		
On Residential Properties.....	2,531	1,145	1,776	51	Bills Payable ¹¹	25	4	5	...	
On Other Properties.....	1,007	454	768	1,550	Acceptances.....	128	58	119	...	
Loans to Banks.....	63	24	58	3,291	Other Liabilities.....	446	214	334	...	
All Other Loans ⁴	3,714	1,896	2,797	90	Accrued Items.....	90	46	79	...	
Investments:	22,491	12,553	19,462	13,862	Capital Accounts:	6,860	3,389	5,497	3,715	
U. S. Government Securities ⁵	15,316	8,770	13,777	10,571	Reserves.....	433	206	317	...	
State, etc., Bonds.....	3,198	1,694	2,554	3,291	Stock and Capital Notes.....	3,109	1,563	2,390	...	
Stock.....	570	224	448	...	Surplus.....	2,489	1,171	2,112	...	
Foreign Securities.....	225	126	190	...	Undivided Profits.....	829	449	678	...	
Other Bonds ⁶	3,182	1,739	2,493	...	Total Liabilities.....	\$61,027	\$33,181	\$51,908	...	
Banking House and Fixtures ⁷	1,302	609	934	...						
Other Real Estate.....	481	141	452	...						
Total Resources.....	\$61,027	\$33,181	\$51,908	...						
Total Resources as a Percentage of Total Resources of All Commercial Banks.....	100%	54%	85%	...						

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¹ National banks, state banks, loan and trust companies, and stock savings banks.

² Includes securities borrowed, acceptances of other banks and bills of exchange or drafts sold with endorsement, customers' liability on account of acceptances, other assets.

³ Includes bankers' acceptances of all types.

⁴ Includes overdrafts. Not comparable with past years' figures under same title.

⁵ Direct obligations of the United States and obligations fully guaranteed by the United States.

⁶ Includes bonds of governmental agencies not fully guaranteed by the United States and all bonds of domestic private corporations. Debentures of Federal Home Loan Banks included among United States Government Securities.

⁷ Includes items indirectly representing bank property, formerly under Loans or Investments.

⁸ Excludes deposits due to banks and United States deposits.

⁹ Includes deposits due to banks, certified and cashier's checks, cash letters of credit, traveler's checks.

¹⁰ Includes time deposits, open accounts, Christmas Clubs, etc.

¹¹ Includes bills payable, rediscounts, agreements to repurchase securities sold.

Exhibit B. Ratios Computed from Reported Resources and Liabilities of Various Groups of Banks: June 30, 1922, 1927, 1932, 1937, 1939

Items	Year	All Commercial Banks	All National Banks	All Member Banks	Member Banks Reporting Weekly
Capital Accounts/Total Deposits.....	1922	.17	.17	.16	...
	1927	.15	.15	.15	...
	1932	.22	.19	.20	...
	1937	.14	.12	.13	.13
	1939	.13	.12	.12	.12
Demand Deposits ¹ /Total Deposits.....	1922	.45	.56	.56	.76
	1927	.59	.59	.53	.58
	1932	.48	.46	.47	.56
	1937	.54	.54	.55	.60
	1939	.53	.53	.54	.57
Loans and Discounts/Total Deposits.....	1922	.70	.70	.68	.74
	1927	.66	.64	.65	.64
	1932	.62	.59	.59	.58
	1937	.36	.33	.34	.34
	1939	.31	.29	.29	.25
Investments/Total Deposits.....	1922	.27	.28	.28	.30
	1927	.28	.29	.28	.26
	1932	.40	.41	.41	.39
	1937	.44	.45	.44	.44
	1939	.42	.43	.42	.44
Cash and Reserve Deposits/Total Deposits.....	1922	.09	.09	.09	.12
	1927	.08	.08	.08	.09
	1932	.10	.09	.09	.09
Cash and Cash Items/Total Deposits.....	1937	.31	.31	.31	.33
	1939	.37	.38	.38	.28
Loans and Discounts/Demand Deposits ¹	1922	1.56	1.25	1.21	.97
	1927	1.32	1.28	1.23	1.16
	1932	1.31	1.30	1.26	1.03
	1937	.67	.61	.62	.57
	1939	.58	.55	.53	.45
Investments/Demand Deposits ¹	1922	.60	.50	.50	.40
	1927	.56	.59	.52	.45
	1932	.84	.91	.86	.69
	1937	.82	.84	.81	.73
	1939	.79	.81	.78	.76

Exhibit B (continued)

Items	Year	All Commercial Banks	All National Banks	All Member Banks	Member Banks Reporting Weekly
Loans and Discounts/Total Resources	1922	.56	.55	.55	...
	1927	.54	.53	.54	...
	1932	.47	.46	.46	...
	1937	.31	.29	.30	.30
	1939	.27	.26	.25	...
Investments/Total Resources	1922	.22	.22	.22	...
	1927	.23	.24	.23	...
	1932	.30	.32	.32	...
	1937	.38	.40	.39	.38
	1939	.37	.38	.37	...
Total Deposits/Total Resources	1922	.80	.79	.81	...
	1927	.82	.82	.82	...
	1932	.76	.78	.78	...
	1937	.87	.88	.88	.86
	1939	.88	.89	.88	...
Loans and Discounts/Capital Accounts	1922	4.07	4.01	4.10	...
	1927	4.31	4.31	4.39	...
	1932	2.89	3.14	2.93	...
	1937	2.61	2.74	2.66	2.71
	1939	2.41	2.53	2.39	2.18
Investments/Capital Accounts	1922	1.57	1.60	1.68	...
	1927	1.85	1.97	1.86	...
	1932	1.85	2.19	2.02	...
	1937	3.21	3.77	3.44	3.48
	1939	3.28	3.70	3.54	3.73
U. S. Government Securities/Investments	1922	.33	.50	.46	.48
	1927	.26	.41	.39	.42
	1932	.43	.47	.49	.57
	1937	.66	.68	.69	.75
	1939	.68	.70	.71	.76
Loans and Discounts/Investments	1922	2.59	2.51	2.45	2.45
	1927	2.33	2.18	2.36	2.43
	1932	1.56	1.43	1.45	1.50
	1937	.81	.73	.77	.78
	1939	.74	.68	.68	.58

Source: Computed from data given in Exhibit A.

¹ Excludes deposits due to banks, and United States deposits.

Exhibit C. Loans, Discounts, and Investments of All National Banks: As of June 30, 1920-1939

Items	1920			1921			1922			1923		
	8030 Banks ¹			8154 Banks ¹			8249 Banks ¹			8241 Banks ¹		
	Thousands of Dollars	Percentage of Subtotal	Percentage of Total	Thousands of Dollars	Percentage of Subtotal	Percentage of Total	Thousands of Dollars	Percentage of Subtotal	Percentage of Total	Thousands of Dollars	Percentage of Subtotal	Percentage of Total
Loans and Discounts²												
Commercial in Form.....	\$10,263,697	75.4%	57.67%	\$9,025,111	75.2%	56.30%	\$7,969,462	70.9%	50.40%	\$8,372,414	70.9%	49.58%
Noncommercial in Form.....	3,117,890	22.9	17.52	2,699,167	22.5	16.84	2,907,401	25.8	18.39	2,982,520	25.2	17.66
Real Estate Loans.....	229,829	1.7	1.29	280,237	2.3	1.75	371,291	3.3	2.35	462,737	3.9	2.74
Subtotal.....	\$13,611,416	100.0%	76.48%	\$12,004,515	100.0%	74.89%	\$11,248,214	100.0%	71.14%	\$11,817,671	100.0%	69.98%
Investments:												
U. S. Government ³	\$2,269,575	54.2%	12.75%	\$2,019,497	50.2%	12.60%	\$2,285,459	50.1%	14.46%	\$2,693,846	53.2%	15.95%
State, etc., Bonds.....	338,357	8.0	1.90	393,682	9.8	2.45	414,414	9.1	2.62	401,816	7.9	2.38
Railroad Bonds.....	416,430	10.0	2.34	404,936	10.1	2.53	486,453	10.7	3.08	593,348	9.9	2.98
Public Utility Bonds.....	283,118	6.8	1.59	277,205	6.9	1.73	318,456	7.0	2.01	337,293	6.6	2.00
Other.....	878,985	21.0	4.94	929,761	23.0	5.80	1,058,543	23.1	6.69	1,133,400	22.4	6.71
Subtotal.....	\$4,186,465	100.0%	23.52%	\$4,025,081	100.0%	25.11%	\$4,563,325	100.0%	28.86%	\$5,069,793	100.0%	30.02%
Total.....	\$17,797,881	...	100.00%	\$16,029,596	...	100.00%	\$15,811,539	...	100.00%	\$16,887,374	...	100.00%

Items	1924			1925			1926			1927		
	8085 Banks ¹			8072 Banks ¹			7978 Banks ¹			7766 Banks ¹		
	Thousands of Dollars	Percentage of Subtotal	Percentage of Total	Thousands of Dollars	Percentage of Subtotal	Percentage of Total	Thousands of Dollars	Percentage of Subtotal	Percentage of Total	Thousands of Dollars	Percentage of Subtotal	Percentage of Total
Loans and Discounts²												
Commercial in Form.....	\$8,338,268	69.6%	48.70%	\$8,376,372	66.1%	45.51%	\$8,655,597	64.5%	44.94%	\$8,454,599	60.6%	41.55%
Noncommercial in Form.....	3,105,323	25.9	18.14	3,660,897	28.9	19.89	4,036,625	30.1	20.96	4,438,662	31.8	21.81
Real Estate Loans.....	535,137	4.5	3.12	636,798	5.0	3.46	725,452	5.4	3.77	1,062,525	7.6	5.22
Subtotal.....	\$11,978,728	100.0%	69.96%	\$12,674,067	100.0%	68.86%	\$13,417,674	100.0%	69.67%	\$13,955,696	100.0%	68.58%
Investments:												
U. S. Government ³	\$2,481,778	48.5%	14.50%	\$2,536,767	44.2%	13.78%	\$2,469,268	42.3%	12.82%	\$2,596,178	40.6%	12.76%
State, etc., Bonds.....	505,328	9.8	2.95	594,700	10.4	3.23	647,801	11.1	3.36	743,539	11.6	3.65
Railroad Bonds.....	573,571	11.0	3.35	673,950	11.8	3.66	631,387	10.8	3.28	656,690	10.3	3.23
Public Utility Bonds.....	397,560	7.7	2.32	495,239	8.6	2.69	545,036	9.3	2.83	648,767	10.2	3.19
Other.....	1,183,891	23.0	6.92	1,429,788	25.0	7.78	1,548,761	26.5	8.04	1,748,044	27.3	8.59
Subtotal.....	\$5,142,328	100.0%	30.04%	\$5,739,444	100.0%	31.14%	\$5,842,253	100.0%	30.33%	\$6,393,218	100.0%	31.42%
Total.....	\$17,121,056	...	100.00%	\$18,404,511	...	100.00%	\$19,259,927	...	100.00%	\$20,348,914	...	100.00%

Exhibit C (continued)

Items	1928			1929			1930			1931		
	7691 Banks ¹			7536 Banks ¹			7252 Banks ¹			6805 Banks ¹		
	Thousands of Dollars	Percentage of Subtotal	Percentage of Total	Thousands of Dollars	Percentage of Subtotal	Percentage of Total	Thousands of Dollars	Percentage of Subtotal	Percentage of Total	Thousands of Dollars	Percentage of Subtotal	Percentage of Total
Loans and Discounts: ²												
Commercial in Form.....	\$8,745,373	57.7%	39.23%	\$7,909,324	54.8%	37.50%	\$7,590,451	52.2%	35.40%	\$6,787,721	52.6%	32.97%
Noncommercial in Form.....	5,113,707	33.8	22.94	5,113,792	35.4	24.24	5,484,713	37.7	25.58	4,537,713	35.2	22.04
Real Estate Loans.....	1,285,915	8.5	5.77	1,413,005	9.8	6.70	1,473,001	10.1	6.87	1,585,423	12.2	7.70
Subtotal.....	\$15,144,995	100.0%	67.94%	\$14,436,121	100.0%	68.44%	\$14,548,165	100.0%	67.85%	\$12,910,857	100.0%	62.71%
Investments:												
U. S. Government ³	\$2,891,167	40.5%	12.97%	\$2,803,860	42.1%	13.29%	\$2,753,941	40.0%	12.85%	\$3,256,268	42.4%	15.82%
State, etc., Bonds.....	840,461	11.8	3.77	757,207	11.4	3.59	791,954	11.5	3.69	997,220	13.0	4.84
Railroad Bonds.....	681,007	9.5	3.05	592,203	8.9	2.81	600,628	9.6	3.09	719,688	9.4	3.50
Public Utility Bonds.....	742,784	10.4	3.33	694,412	10.4	3.29	783,788	11.4	3.66	828,198	10.8	4.02
Other.....	1,992,029	27.8	8.94	1,808,853	27.2	8.58	1,897,860	27.5	8.86	1,873,403	24.4	9.11
Subtotal.....	\$7,147,448	100.0%	32.06%	\$6,656,535	100.0%	31.56%	\$6,888,171	100.0%	32.15%	\$7,674,837	100.0%	37.29%
Total.....	\$22,292,443	...	100.00%	\$21,092,656	...	100.00%	\$21,436,336	...	100.00%	\$20,585,694	...	100.00%

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Items	1932			1933			1934			1935		
	6150 Banks ¹			4902 Banks ¹			5422 Banks ¹			5431 Banks ¹		
	Thousands of Dollars	Percentage of Subtotal	Percentage of Total	Thousands of Dollars	Percentage of Subtotal	Percentage of Total	Thousands of Dollars	Percentage of Subtotal	Percentage of Total	Thousands of Dollars	Percentage of Subtotal	Percentage of Total
Loans and Discounts: ²												
Commercial in Form.....	\$5,150,241	51.8%	30.04%	\$3,826,448	48.4%	25.04%	\$3,665,556	48.3%	21.64%	\$3,734,599	51.3%	20.75%
Noncommercial in Form.....	3,182,495	32.0	18.55	2,759,876	34.9	18.06	2,594,386	34.2	15.31	2,251,274	30.9	12.51
Real Estate Loans.....	1,617,281	16.2	9.43	1,326,776	16.7	8.68	1,330,750	17.5	7.86	1,297,168	17.8	7.20
Subtotal.....	\$9,950,017	100.0%	58.02%	\$7,913,100	100.0%	51.78%	\$7,590,692	100.0%	44.81%	\$7,283,041	100.0%	40.46%
Investments:												
U. S. Government ³	\$3,352,666	46.6%	19.55%	\$4,031,576	54.7%	26.38%	\$6,003,652	64.2%	35.44%	\$7,173,007	66.9%	39.85%
State, etc., Bonds.....	1,031,407	14.3	6.01	1,162,478	15.8	7.60	1,212,397	13.0	7.15	1,386,230	12.9	7.70
Railroad Bonds.....	652,665	9.1	3.82	530,634	7.2	3.48	529,090	5.7	3.12	593,211	5.5	3.30
Public Utility Bonds.....	684,465	9.5	3.09	533,260	7.2	3.48	519,584	5.6	3.08	536,496	5.0	2.98
Other.....	1,475,449	20.5	8.61	1,113,683	15.1	7.28	1,083,830	11.5	6.40	1,027,442	9.7	5.71
Subtotal.....	\$7,146,652	100.0%	41.98%	\$7,371,631	100.0%	48.22%	\$9,348,553	100.0%	55.19%	\$10,716,386	100.0%	59.54%
Total.....	\$17,146,669	...	100.00%	\$15,284,731	...	100.00%	\$16,939,245	...	100.00%	\$17,999,427	...	100.00%

Footnotes are given at the end of the table, page 52.

Exhibit C (continued)

Items	1936			1937			1938			1939		
	5374 Banks ¹			5299 Banks ¹			5248 Banks ¹			5209 Banks ¹		
	Thousands of Dollars	Percentage of Subtotal	Percentage of Total	Thousands of Dollars	Percentage of Subtotal	Percentage of Total	Thousands of Dollars	Percentage of Subtotal	Percentage of Total	Thousands of Dollars	Percentage of Subtotal	Percentage of Total
Loans and Discounts²												
Commercial in Form.....	\$4,073,446	52.8%	20.17%	\$4,928,015	56.4%	23.62%	\$4,775,882	57.7%	23.98%	\$4,095,968	47.91%	19.41%
Noncommercial in Form.....	2,265,757	29.4	11.22	2,298,715	26.3	11.02	1,871,136	22.6	9.39	2,624,124	30.69	12.44
Real Estate Loans.....	1,370,469	17.8	6.79	1,507,270	17.3	7.23	1,626,500	19.7	8.17	1,839,163	21.40	8.67
Subtotal.....	\$7,709,672	100.0%	38.18%	\$8,734,000	100.0%	41.87%	\$8,273,518	100.0%	41.54%	\$8,549,255	100.00%	40.52%
Investments:												
U. S. Government ³	\$8,447,364	67.7%	41.84%	\$8,219,195	67.8%	39.41%	\$7,987,716	68.6%	40.10%	\$8,769,729	69.86%	41.56%
State, etc., Bonds.....	1,527,644	12.2	7.57	1,451,629	12.0	6.96	1,415,997	12.1	7.11	1,693,684	13.49	8.02
Railroad Bonds.....	665,059	5.3	3.29	673,942	5.6	3.24	595,434	5.1	2.99	535,446	4.27	2.54
Public Utility Bonds.....	653,650	5.2	3.24	638,563	5.3	3.06	555,271	4.8	2.78	478,308	3.81	2.26
Other.....	1,188,908	9.6	5.88	1,138,958	9.3	5.46	1,089,858	9.4	5.48	1,075,719	8.57	5.10
Subtotal.....	\$12,482,625	100.0%	61.82%	\$12,122,287	100.0%	58.13%	\$11,644,276	100.0%	58.46%	\$12,552,886	100.00%	59.48%
Total.....	\$20,192,297	...	100.00%	\$20,856,287	...	100.00%	\$19,917,794	...	100.00%	\$21,102,141	...	100.00%

Source: Comptroller of the Currency, *Annual Reports*, tables titled "Classification of Loans and Discounts" and "Investments of National Banks."

¹ The figures include for each year a few (never more than six) small banks which are outside the boundaries of the territorial United States.

² The items under Loans and Discounts have been reclassified as described in Chapter I.

³ After 1933, this item includes obligations of agencies which are fully guaranteed by United States. Obligations not fully guaranteed are under Other Investments.

Exhibit D. Loans and Discounts in All National Banks Classified by Size Groups: As of December 31, 1927-1937

Year	All National Banks		Capital Stock (in thousands)															
			Less than \$50		\$50-\$100		\$100-\$200		\$200-\$500		\$500-\$1,000		\$1,000-\$24,000		\$25,000-\$49,000		\$50,000 or more	
	Loans and Discounts		Loans and Discounts		Loans and Discounts		Loans and Discounts		Loans and Discounts		Loans and Discounts		Loans and Discounts		Loans and Discounts		Loans and Discounts	
	Millions of Dollars	Percentage of Total Loans and Investments	Millions of Dollars	Percentage of Total Loans and Investments	Millions of Dollars	Percentage of Total Loans and Investments	Millions of Dollars	Percentage of Total Loans and Investments	Millions of Dollars	Percentage of Total Loans and Investments	Millions of Dollars	Percentage of Total Loans and Investments	Millions of Dollars	Percentage of Total Loans and Investments	Millions of Dollars	Percentage of Total Loans and Investments	Millions of Dollars	Percentage of Total Loans and Investments
1927	\$14,831	68.2%	\$443	62.3%	\$2,636	60.0%	\$2,033	64.0%	\$1,289	68.5%	\$3,138	72.3%	\$2,782	70.6%	\$1,168	72.0%	\$1,342	81.3%
1928	15,280	68.2	463	62.1	2,720	60.4	2,144	64.5	1,251	67.6	3,162	72.3	2,836	72.6	1,156	79.0	1,548	69.2
1929	15,160	70.1	425	62.5	2,652	61.4	2,017	65.6	1,268	69.3	2,912	75.5	2,482	71.7	1,210	83.0	2,194	74.7
1930	14,369	67.0	359	60.6	2,303	58.9	1,786	63.0	1,150	65.4	2,477	69.8	2,425	66.3	1,148	75.0	2,721	75.0
1931	11,927	62.4	278	58.9	1,856	55.8	1,488	58.8	927	60.9	1,990	60.9	1,847	59.3	1,217	73.3	2,324	71.8
1932	9,848	56.5	224	56.9	1,557	53.5	1,215	55.6	729	56.8	1,608	53.7	1,326	50.1	1,023	70.0	2,166	61.0
1933	8,104	50.7	150	52.3	1,144	49.4	897	48.6	605	51.0	1,390	45.4	1,333	46.5	704	60.3	1,881	57.9
1934	7,491	41.7	113	45.0	971	42.1	836	41.7	631	43.8	1,404	39.8	1,252	38.2	461	54.2	1,823	42.5
1935	7,599	39.5	113	49.1	984	42.4	819	40.8	632	42.9	1,435	37.6	1,256	36.6	638	45.5	1,632	37.8
1936	8,271	39.3	115	47.6	1,041	40.0	890	39.0	629	40.7	1,589	37.8	1,354	36.8	716	45.8	1,937	39.2
1937	8,814	40.9	133	51.8	1,188	42.9	972	40.7	655	42.8	1,779	43.1	1,386	40.4	751	48.9	1,950	42.8

Source: Comptroller of the Currency, *Annual Reports, 1928-1938*, c.R., 1938, p. 117. This series has been discontinued.

**Exhibit E. Loans, Discounts, and Investments of National Banks, by Regions of the United States:
As of June 30, 1922, 1927, 1932, 1937, 1939**

NEW ENGLAND	1922		1927		1932		1937		1939	
	406 Banks		389 Banks		350 Banks		328 Banks		324 Banks	
	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total
Loans and Discounts:										
Commercial in Form	\$603,700	49.1%	\$689,924	39.5%	\$491,069	32.6%	\$503,986	30.8%	\$386,654	26.7%
Noncommercial in Form	239,066	19.5	402,832	23.0	295,344	19.6	221,212	13.5	222,835	15.4
Real Estate Loans	11,782	1.0	97,512	5.6	122,744	8.1	112,977	6.9	116,386	8.0
Subtotal	\$854,548	69.6%	\$1,190,268	68.1%	\$909,157	60.3%	\$838,175	51.2%	\$725,875	50.1%
Investments:										
U. S. Government	\$161,754	13.2%	\$176,339	10.1%	\$255,700	17.0%	\$535,748	32.8%	\$483,027	33.4%
State, etc., Bonds	9,473	0.7	19,900	1.1	45,064	3.1	57,747	3.5	80,755	5.6
Railroad Bonds	35,353	2.8	56,394	3.2	52,305	3.4	55,348	3.4	43,392	3.0
Public Utility Bonds	58,704	4.8	113,935	6.5	111,888	7.4	70,071	4.3	50,973	3.5
Other	108,950	8.9	192,598	11.0	133,441	8.8	78,135	4.8	63,521	4.4
Subtotal	\$374,234	30.4%	\$559,166	31.9%	\$599,298	39.7%	\$797,049	48.8%	\$721,668	49.9%
Total	\$1,228,782	100.0%	\$1,749,434	100.0%	\$1,508,455	100.0%	\$1,635,224	100.0%	\$1,447,543	100.0%

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EASTERN	1922		1927		1932		1937		1939	
	1722 Banks		1820 Banks		1623 Banks		1472 Banks		1444 Banks	
	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total
Loans and Discounts:										
Commercial in Form	\$2,634,627	40.8%	\$2,938,911	35.7%	\$1,833,827	26.7%	\$1,499,347	19.7%	\$1,163,516	15.1%
Noncommercial in Form	1,493,241	23.1	2,139,998	26.0	1,490,101	21.7	1,128,563	14.9	951,027	12.5
Real Estate Loans	54,441	0.8	252,719	3.1	370,621	5.3	364,519	4.8	448,177	5.8
Subtotal	\$4,182,309	64.7%	\$5,331,628	64.8%	\$3,694,549	53.7%	\$2,992,429	39.4%	\$2,562,720	33.4%
Investments:										
U. S. Government	\$1,028,485	15.9%	\$1,935,894	12.6%	\$1,430,155	20.8%	\$2,878,749	37.9%	\$3,488,514	45.5%
State, etc., Bonds	140,022	2.1	229,713	2.8	295,486	4.3	404,270	5.4	487,693	6.3
Railroad Bonds	370,923	5.7	451,049	5.5	440,119	6.4	423,775	5.6	335,253	4.4
Public Utility Bonds	178,829	2.8	334,824	4.0	367,058	5.3	366,615	4.8	259,798	3.4
Other	567,744	8.8	849,055	10.3	657,157	9.5	524,783	6.9	538,658	7.0
Subtotal	\$2,286,003	35.3%	\$2,900,535	35.2%	\$3,189,975	46.3%	\$4,598,192	60.6%	\$5,109,916	66.6%
Total	\$6,468,312	100.0%	\$8,232,163	100.0%	\$6,884,524	100.0%	\$7,590,621	100.0%	\$7,672,636	100.0%

Exhibit E (continued)

MIDDLE WESTERN — INDUSTRIAL	1922		1927		1932		1937		1939	
	1243 Banks		1107 Banks		876 Banks		767 Banks		776 Banks	
	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total
Loans and Discounts:										
Commercial in Form.....	\$1,215,222	50.9%	\$1,243,114	42.6%	\$611,730	27.1%	\$778,231	20.8%	\$643,020	16.8%
Noncommercial in Form.....	442,757	18.5	693,314	23.8	500,547	22.0	339,207	9.1	374,365	9.7
Real Estate Loans.....	69,851	2.9	131,635	4.5	334,534	14.7	178,261	4.7	239,530	6.2
Subtotal.....	\$1,727,830	72.3%	\$2,068,063	70.9%	\$1,446,811	63.8%	\$1,295,699	34.6%	\$1,256,915	32.7%
Investments:										
U. S. Government.....	\$323,047	13.5%	\$333,282	11.4%	\$410,796	18.1%	\$1,806,125	48.3%	\$1,976,335	51.4%
State, etc., Bonds.....	112,009	4.7	139,302	4.8	111,592	4.9	260,184	6.9	267,157	6.9
Railroad Bonds.....	36,267	1.5	50,387	1.8	49,528	2.2	81,214	2.2	67,008	1.7
Public Utility Bonds.....	39,594	1.7	82,787	2.8	67,848	3.0	88,490	2.4	76,096	2.0
Other.....	149,575	6.3	243,717	8.3	181,088	8.0	210,314	5.6	202,722	5.3
Subtotal.....	\$660,402	27.7%	\$849,475	29.1%	\$820,852	36.2%	\$2,446,327	65.4%	\$2,589,318	67.3%
Total.....	\$2,388,232	100.0%	\$2,917,538	100.0%	\$2,267,663	100.0%	\$3,742,026	100.0%	\$3,846,233	100.0%

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SOUTHERN	1922		1927		1932		1937		1939	
	1676 Banks		1723 Banks		1265 Banks		1184 Banks		1157 Banks	
	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total
Loans and Discounts:										
Commercial in Form.....	\$1,271,531	61.1%	\$1,500,045	54.0%	\$811,706	41.1%	\$817,989	32.5%	\$776,574	29.3%
Noncommercial in Form.....	295,740	14.2	489,756	17.9	310,250	15.7	225,955	8.9	444,026	16.8
Real Estate Loans.....	75,585	3.7	137,312	5.0	144,805	7.3	175,397	6.9	204,985	7.7
Subtotal.....	\$1,642,856	79.0%	\$2,127,113	77.8%	\$1,266,761	64.1%	\$1,219,341	48.3%	\$1,425,585	53.8%
Investments:										
U. S. Government.....	\$310,796	15.0%	\$347,056	12.7%	\$391,654	19.8%	\$884,724	35.0%	\$782,731	29.6%
State, etc., Bonds.....	28,872	1.4	81,988	3.0	117,575	6.0	253,062	10.0	298,726	11.3
Railroad Bonds.....	15,448	0.7	23,284	0.8	27,213	1.4	30,872	1.2	27,016	1.0
Public Utility Bonds.....	10,830	0.5	21,602	0.8	33,224	1.7	29,389	1.2	22,570	0.9
Other.....	71,392	3.4	134,035	4.9	140,155	7.0	108,918	4.3	90,930	3.4
Subtotal.....	\$437,338	21.0%	\$607,965	22.2%	\$709,821	35.9%	\$1,306,965	51.7%	\$1,221,973	46.2%
Total.....	\$2,080,194	100.0%	\$2,735,078	100.0%	\$1,976,582	100.0%	\$2,526,306	100.0%	\$2,647,558	100.0%

Exhibit E (continued)

MIDDLE WESTERN — AGRICULTURAL	1922		1927		1932		1937		1939	
	981 Banks		855 Banks		650 Banks		500 Banks		493 Banks	
	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total
Loans and Discounts:										
Commercial in Form	\$859,727	61.8%	\$755,131	45.9%	\$455,061	35.1	\$367,299	25.2%	\$326,533	22.3%
Noncommercial in Form	188,973	13.6	295,522	18.0	217,676	16.7	120,333	8.3	167,649	11.5
Real Estate Loans	60,635	4.3	78,463	4.8	71,937	5.5	63,362	4.3	84,243	5.7
Subtotal	\$1,109,335	79.7%	\$1,129,116	68.7%	\$744,674	57.3%	\$550,994	37.8%	\$578,425	39.5%
Investments:										
U. S. Government	\$164,825	11.8%	\$213,575	12.9%	\$227,977	17.5%	\$651,978	44.8%	\$609,758	41.8%
State, etc., Bonds	36,192	2.6	66,601	4.1	97,318	7.5	106,252	7.3	128,851	8.8
Railroad Bonds	14,261	1.0	42,816	2.6	39,866	3.1	33,467	2.3	29,402	2.0
Public Utility Bonds	13,484	1.0	49,337	3.0	53,172	4.1	36,858	2.5	37,113	2.5
Other	54,742	3.9	142,720	8.7	136,216	10.5	77,181	5.3	79,011	5.4
Subtotal	\$283,504	20.3%	\$515,949	31.3%	\$554,549	42.7%	\$905,736	62.2%	\$884,135	60.5%
Total	\$1,392,839	100.0%	\$1,644,165	100.0%	\$1,299,223	100.0%	\$1,456,730	100.0%	\$1,462,560	100.0%

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WEST	1922		1927		1932		1937		1939	
	1577 Banks		1256 Banks		983 Banks		810 Banks		793 Banks	
	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total
Loans and Discounts:										
Commercial in Form	\$720,472	66.7%	\$544,880	49.2%	\$321,518	36.0%	\$300,174	32.3%	\$280,444	30.3%
Noncommercial in Form	91,634	8.5	138,216	12.5	84,106	9.6	42,253	4.5	91,573	9.9
Real Estate Loans	59,671	5.5	56,502	5.2	49,345	5.6	40,313	4.3	54,626	5.9
Subtotal	\$871,777	80.7%	\$739,598	66.9%	\$454,969	52.1%	\$382,740	41.1%	\$426,643	46.1%
Investments:										
U. S. Government	\$118,506	11.0%	\$174,413	15.7%	\$183,061	21.0%	\$366,478	39.3%	\$315,204	34.1%
State, etc., Bonds	31,529	2.9	75,408	6.8	101,313	11.6	117,287	12.6	127,849	13.9
Railroad Bonds	5,404	0.5	14,385	1.3	14,866	1.7	14,064	1.5	10,500	1.1
Public Utility Bonds	5,727	0.5	17,105	1.5	19,752	2.3	19,071	1.2	8,980	1.0
Other	47,485	4.4	86,550	7.8	98,636	11.3	40,265	4.3	35,246	3.8
Subtotal	\$208,651	19.3%	\$367,861	33.1%	\$417,628	47.9%	\$549,065	58.9%	\$497,788	53.9%
Total	\$1,080,428	100.0%	\$1,107,459	100.0%	\$872,597	100.0%	\$931,805	100.0%	\$924,431	100.0%

Exhibit E (continued)

PACIFIC	1922		1927		1932		1937		1939	
	636 Banks		541 Banks		368 Banks		232 Banks		216 Banks	
Items	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total
Loans and Discounts:										
Commercial in Form	\$663,138	56.8%	\$779,988	40.4%	\$620,026	26.9%	\$656,311	22.4%	\$513,566	16.8%
Noncommercial in Form	155,028	13.3	276,410	14.1	274,587	11.9	213,769	7.3	365,220	11.9
Real Estate Loans	39,808	3.4	307,827	15.7	518,278	22.5	568,150	19.3	673,628	22.1
Subtotal	\$857,974	73.5%	\$1,364,225	70.2%	\$1,412,891	61.3%	\$1,438,230	49.0%	\$1,552,414	50.8%
Investments:										
U. S. Government	\$174,888	14.9%	\$312,555	16.0%	\$447,923	19.5%	\$1,082,621	36.9%	\$1,098,068	35.9%
State, etc., Bonds	55,768	4.8	129,652	6.6	259,484	11.3	249,811	8.5	299,636	9.8
Railroad Bonds	8,768	0.8	18,285	0.9	28,386	1.2	31,781	1.1	20,587	0.7
Public Utility Bonds	11,359	1.0	29,108	1.4	30,479	1.3	33,886	1.2	21,581	0.7
Other	58,438	5.0	98,389	4.9	124,686	5.4	95,561	3.3	63,557	2.1
Subtotal	\$309,221	26.5%	\$587,989	29.8%	\$890,958	38.7%	\$1,493,660	51.0%	\$1,503,429	49.2%
Total	\$1,167,195	100.0%	\$1,952,214	100.0%	\$2,303,849	100.0%	\$2,931,890	100.0%	\$3,055,843	100.0%

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UNITED STATES	1922		1927		1932		1937		1939	
	8241 Banks		7700 Banks		6145 Banks		5293 Banks		5293 Banks	
Items	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total	Thousands of Dollars	Percentage of Total
Loans and Discounts:										
Commercial in Form	\$7,968,417	50.4%	\$8,451,993	41.6%	\$5,144,937	30.1%	\$4,923,337	23.7%	\$4,090,307	19.4%
Noncommercial in Form	2,906,439	18.4	4,436,048	21.8	3,172,611	18.5	2,291,292	11.0	2,616,695	12.4
Real Estate Loans	371,773	2.4	1,061,970	5.2	1,612,264	9.4	1,502,979	7.2	1,821,575	8.7
Subtotal	\$11,246,629	71.2%	\$13,950,011	68.6%	\$9,929,812	58.0%	\$8,717,608	41.9%	\$8,528,577	40.5%
Investments:										
U. S. Government	\$2,282,301	14.4%	\$2,593,114	12.7%	\$3,347,266	19.6%	\$8,206,423	39.4%	\$8,753,637	41.6%
State, etc., Bonds	413,865	2.6	742,564	3.7	1,028,732	6.0	1,448,613	7.0	1,690,667	8.0
Railroad Bonds	480,424	3.1	656,000	3.2	652,283	3.8	670,521	3.2	533,167	2.5
Public Utility Bonds	318,437	2.0	648,698	3.2	683,421	4.0	636,280	3.1	477,111	2.3
Other	1,058,326	6.7	1,747,064	8.6	1,471,379	8.6	1,135,157	5.4	1,073,645	5.1
Subtotal	\$4,559,353	28.8%	\$6,388,040	31.4%	\$7,183,081	42.0%	\$12,006,994	58.1%	\$12,528,227	59.5%
Total	\$15,805,982	100.0%	\$20,338,051	100.0%	\$17,112,893	100.0%	\$20,814,602	100.0%	\$21,056,804	100.0%

Source: Comptroller of the Currency, *Annual Report 1922-1937*, e.g., 1937, pp. 80-83; Abstract of Reports of Condition of National Banks, June 30, 1939.
 Note: Since the figures in this table exclude data for Alaska and Hawaii, the totals given in this exhibit will not agree with those in Exhibit C.

Exhibit F. Gross Earnings, Charge-offs, and Recoveries on Loans and Investments, for All National Banks: Years Ending June 30, 1927-1939

Items	1927		1928		1929		1930		1931		1932		1933	
	Thousands of Dollars	Percentage of Income	Thousands of Dollars	Percentage of Income	Thousands of Dollars	Percentage of Income	Thousands of Dollars	Percentage of Income	Thousands of Dollars	Percentage of Income	Thousands of Dollars	Percentage of Income	Thousands of Dollars	Percentage of Income
Charge-offs on Investments.....	\$27,579	10.11%	\$29,101	9.38%	\$43,458	13.56%	\$61,371	20.52%	\$119,294	37.27%	\$201,848	67.55%	\$236,557	83.42%
Recoveries on Investments ¹	8,884	3.26	7,329	2.36	7,828	2.44	7,195	2.41	9,350	2.92	9,521	3.19	51,515	18.17
Net Charge-offs after Recoveries.....	18,695	6.85	21,862	7.02	35,630	11.12	54,176	18.11	109,944	34.35	192,327	64.36	185,042	65.25
Profits on Sale of Securities ¹	52,660	19.30	59,328	19.06	35,085	10.95	41,733	13.96	50,342	15.73	24,869	8.32		
Gross Income from Investments.....	\$27,886	100.00%	\$311,338	100.00%	\$320,416	100.00%	\$299,042	100.00%	\$320,076	100.00%	\$298,841	100.00%	\$283,568	100.00%
Charge-offs on Loans and Discounts	\$86,512	11.13%	\$92,106	11.27%	\$86,815	9.71%	\$103,817	11.49%	\$186,864	24.53%	\$259,478	42.17%	\$231,420	48.86%
Recoveries on Loans and Discounts	18,883	2.43	19,519	2.39	18,149	2.03	15,680	1.74	16,606	2.18	16,753	2.72	17,129	3.62
Net Charge-offs on Loans and Discounts.....	67,629	8.70	72,587	8.88	68,666	7.68	88,137	9.75	170,258	22.35	242,725	39.45	214,291	45.24
Gross Income from Loans and Discounts.....	\$776,951	100.00%	\$817,231	100.00%	\$894,032	100.00%	\$903,858	100.00%	\$761,889	100.00%	\$615,357	100.00%	\$473,696	100.00%

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Items	1934		1935		1936		1937		1938		1939		Total	
	Thousands of Dollars	Percentage of Income	Thousands of Dollars	Percentage of Income	Thousands of Dollars	Percentage of Income	Thousands of Dollars	Percentage of Income	Thousands of Dollars	Percentage of Income	Thousands of Dollars	Percentage of Income	Thousands of Dollars	Percentage of Income
Charge-offs on Investments.....	\$241,789	82.83%	\$136,743	42.27%	\$93,339	29.76%	\$94,069	28.36%	\$103,009	32.87%	\$116,323	38.30%	\$1,504,570	37.77%
Recoveries on Investments ¹	93,580	32.06	136,743	42.27	64,330	20.51	73,208	22.07	29,382	9.38	35,217	11.60	534,082	13.41
Net Charge-offs after Recoveries.....	148,209	50.77	0	0.00	29,009	9.25	20,861	6.29	73,627	23.49	81,106	26.70	970,488	24.36
Profits on Sale of Securities ¹			19,902	6.15	157,616	50.25	124,858	37.65	76,620	24.45	129,790	42.74		
Gross Income from Investments.....	\$291,901	100.00%	\$323,491	100.00%	\$313,661	100.00%	\$331,666	100.00%	\$313,403	100.00%	\$303,699	100.00%	\$3,083,088	100.00%
Charge-offs on Loans and Discounts	\$379,294	97.74%	\$188,237	54.25%	\$154,964	45.22%	\$111,000	31.12%	\$66,203	17.56%	\$84,897	22.51%	\$2,031,607	27.34%
Recoveries on Loans and Discounts	20,304	6.78	32,341	9.32	64,082	18.70	64,243	18.01	38,708	10.28	33,412	8.86	381,869	5.14
Net Charge-offs on Loans and Discounts.....	352,990	90.96	155,896	44.93	90,882	26.52	46,757	13.11	27,435	7.28	51,485	13.65	1,649,738	22.20
Gross Income from Loans and Discounts.....	\$388,064	100.00%	\$346,995	100.00%	\$342,673	100.00%	\$356,732	100.00%	\$377,076	100.00%	\$377,149	100.00%	\$7,431,703	100.00%

Source: Comptroller of the Currency, *Annual Report, 1937*, pp. 103-107, and *1939*, pp. 18-19.

¹ Combined for 1933-1935 and first 6 months of year ending June 30, 1936. As given above, 1936 figures are estimates based on doubling the reported profits figure for the last half of the year, and the 1933-1935 figures for recoveries were arbitrarily set to equal the charge-offs, leaving any balance under Profits.

BUREAU OF BUSINESS RESEARCH: EARLIER BULLETINS IN PRINT

BUILDING MATERIALS

- No. 81. Operating Expenses of Building Material Dealers in 1928 \$1.00
Operating Expenses of Building Material Dealers: 1927, No. 75; 1926, No. 64 50 cents each

GROCERY—RETAIL (See also CHAIN STORES)

- Operating Expenses in Retail Grocery Stores: 1924, No. 52; 1923, No. 41; 1919, No. 18; 1914, No. 5 50 cents each
No. 13. Management Problems in Retail Grocery Stores (1918) 50 cents

GROCERY—WHOLESALE (See also CHAIN STORES)

- Operating Expenses in the Wholesale Grocery Business: 1923, No. 40; 1919, No. 19; 1916, No. 9..... 50 cents each
No. 8. Operating Accounts for Wholesale Grocers (revised edition—1920) 50 cents

GROCERY—MANUFACTURERS

- No. 79. Marketing Expenses of Grocery Manufacturers for 1927 and 1928 \$1.00
No. 77. Marketing Expenses of Grocery Manufacturers for 1927 50 cents
No. 69. Marketing Expense Classification for Grocery Manufacturers (1928) 50 cents

JEWELRY—RETAIL

- Operating Results of Retail Jewelry Stores: 1927, No. 76; 1926, No. 65; 1925, No. 58; 1923, No. 47; 1922, No. 38;
1919, No. 23 50 cents each

PAINT AND VARNISH—WHOLESALE

- No. 66. Operating Expenses in the Wholesale Paint and Varnish Business in 1926 50 cents
No. 60. Preliminary Report on Operating Expenses in the Wholesale Paint and Varnish Business in 1925 50 cents

PLUMBING AND HEATING SUPPLY—WHOLESALE

- No. 72. Departmentizing Merchandise and Expense Figures for Plumbing and Heating Supply Wholesalers (1928) 50 cents
No. 71. Operating Expenses of Plumbing and Heating Supply Wholesalers in the Central States in 1927 50 cents

PUBLIC UTILITIES

- No. 68. Interstate Transmission of Power by Electric Light and Power Companies in 1926 50 cents

SHOE—RETAIL (See also CHAIN STORES)

- Operating Expenses in Retail Shoe Stores: 1922, No. 36; 1921, No. 31; 1919, No. 20 50 cents each
No. 10. Management Problems in Retail Shoe Stores (1913-1917) 50 cents

SHOE—WHOLESALE

- No. 6. System of Accounts for Shoe Wholesalers (1916) 50 cents

STATIONERY AND OFFICE OUTFITTING—RETAIL

- No. 80. Operating Results of Retail Stationers and Office Outfitters in 1928 50 cents

TEXTILES

- No. 17. International Comparisons of Prices of Cotton Cloth—January, 1919-March, 1920 50 cents

MISCELLANEOUS

- No. 82. Distribution of Hard Fibre Cordage (1927), by Howard T. Lewis 50 cents
No. 73. Operating Expenses of Wall Paper Wholesalers in 1927 50 cents
No. 62. Operating Expenses of Private Schools for the Year 1925-26 50 cents
Operating Expenses in the Wholesale Automotive Equipment Business: 1924, No. 51; 1923, No. 42 50 cents each
No. 25. Labor Terminology (1921) (In cloth) 50 cents