

# Member Bank Reserves



Fed. Res.  
Board  
HG  
2562.R4  
S637  
1931

**Report of Federal Reserve System  
Committee on Bank Reserves**





November 11, 1931

Mr. John U. Calkins, Chairman  
Conference of Governors of Federal Reserve Banks

Dear Sir:

I am pleased to submit herewith the report of the Committee on Bank Reserves of the Federal Reserve System covering the reserve requirements of member banks. In this report the Committee discusses in full its findings with respect to the operation of the present system of reserve requirements and presents definite recommendations for their improvement. There is presented at the end of the report a draft of an amendment to Section 19 of the Federal Reserve Act embodying the plan for reserve requirements proposed by the Committee. Recommendations of the Committee for necessary changes in the Board's regulations are presented in the body of the report. The proposals contained in this report were unanimously adopted with the single exception that one vote was cast in favor of 13 per cent of gross deposits and against 15 per cent of gross deposits as the maximum reserve which any member bank might be required to carry under the proposed reserve requirements.

The Committee's terms of reference were incorporated in the following resolution passed by the Governors' Conference, on December 12, 1929.

"That it is the sense of the conference that the subject of bank reserves is one of the utmost significance, requiring the most careful scientific study by experts devoting their entire time to the matter with a view of drafting a report to the Federal Reserve Board, proposing such amendments to the law or regulations as in their judgment may be necessary to remove any present inequalities or defects and to establish bank reserves throughout the country on a more logical or effective basis than now appears to be possible under present laws, State and Federal."

Following the adoption of this resolution, you, as Chairman of the Governors' Conference, after consultation with Governor Young of the Federal Reserve Board, appointed the following committee:

Mr. Ira Clerk, Deputy Governor, Federal Reserve Bank of San Francisco  
Mr. M. J. Fleming, Deputy Governor, Federal Reserve Bank of Cleveland  
Mr. L. R. Rounds, Deputy Governor, Federal Reserve Bank of New York  
Mr. E. A. Goldenweiser, Director of the Division of Research and Statistics, Federal Reserve Board

Mr. E. L. Smead, Chief, Division of Bank Operations,  
Federal Reserve Board

The Committee held its first meeting in Washington, on February 26, 1930. At that time it chose Mr. E. L. Smead to act as chairman, Messrs. E. L. Smead, E. A. Goldenweiser, and L. R. Rounds as an Executive Committee to act on matters of administration in the absence of the full committee, and Mr. W. W. Riefler of the Board's Division of Research and Statistics to act as Executive Secretary of the Committee.

The report here submitted concludes the major work of the Committee under its terms of reference. In addition, the Committee has under investigation the operation of reserve requirements of nonmember banks, and the feasibility of placing the same reserve requirements on all banks, both member and nonmember. This might be done by a specific Federal law setting minimum standards for reserve requirements at all banks or by a law requiring all banks to take out Federal charters. It has also contemplated taking up the reserve requirements of the Federal reserve banks. Under this latter head, the Committee might study several problems before the system, such as the relation of reserve requirements to the gold supply, the advisability of simplifying the currency of the country, and the advisability of changes in the present collateral requirements for Federal reserve notes. These subjects the Committee stands ready to consider if so directed by the Federal Reserve Board. Inasmuch as this report completes the major part of the Committee's work, however, and complies with the more direct terms of its reference, the Committee may be discharged at this time if it is deemed advisable.

In making the recommendations submitted in this report, the Committee respectfully calls attention to a special report which it submitted on May 27, 1931, carrying the following recommendation:

"That it should be the duty of a National bank examiner to include in his examination report of a bank, its time and its net demand deposit liabilities on which reserves are required for one day of each month since its previous examination, the day of the month being selected at random."

This recommendation was made in response to a specific request of the Federal Reserve Board, and applies to present requirements. The Committee wishes it understood, however, that the spirit of this recommendation applies to the reserve requirements proposed by the Committee as well as those at present in effect.

Prior to the submission of these recommendations, the Committee considered the subject in detail at four separate meetings lasting

several days each. These were held in February 1930, in December 1930, in May 1931, and in October 1931. It also discussed its proposals informally and confidentially with the Federal Reserve Board, with officers of each Federal reserve bank, and with a special committee on reserves representing the American Bankers Association and the Reserve City Bankers Association. In these discussions, the principal recommendations which the Committee now makes met with a cordial and frequently enthusiastic reception, with the single exception that the proposal to count vault cash as reserve met objection at one Federal reserve bank. This general approval was given, however, with the understanding that the persons consulted would be free to change their position on any part of the Committee's report after they had time to study it in detail.

In conclusion, the Committee wishes to express its gratitude for the cordial cooperation which it has received in preparing material for its report, both from the Board's organizations, and from the Federal reserve banks. Particular mention is due to Mr. Walter Wyatt, Counsel of the Federal Reserve Board, for help in drafting the proposed amendment to Section 19 and in gathering information on reserve requirements under State laws; to Messrs. J. E. Horbett and J. R. Van Fossen, of the Board's Division of Bank Operations, for aid in compiling numerous statistics relating to reserve requirements; to Miss Aryness Joy of the Board's Division of Research and Statistics for the collection, compilation, and interpretation of statistics relating to changes in the volume of currency held by banks as vault cash, and to changes in the demand for currency due to the growing use of checks for payroll purposes; and, finally, to Miss Eleanor Hanford, also of the Board's Division of Research and Statistics, for general supervision of studies of nonmember bank reserve requirements, and, also, for supervision of investigations of the effects which the proposals here presented will have on the reserves carried by individual member banks.

This report is also being submitted to the Federal Reserve Board.

Very truly yours,

E. L. Smead, Chairman  
Federal Reserve System Committee on Bank Reserves



REPORT OF THE COMMITTEE ON BANK RESERVES  
OF THE FEDERAL RESERVE SYSTEM

Members of the Committee

E. L. Smead, Chief, Division of Bank Operations, Federal Reserve Board, Chairman

Ira Clerk, Deputy Governor, Federal Reserve Bank of San Francisco

M. J. Fleming, Deputy Governor, Federal Reserve Bank of Cleveland

E. A. Goldenweiser, Director, Division of Research and Statistics, Federal Reserve Board

L. R. Rounds, Deputy Governor, Federal Reserve Bank of New York

---

W. W. Riefler, Division of Research and Statistics,  
Federal Reserve Board, Executive Secretary

Terms of Reference

The subject of bank reserves is one of the utmost importance, requiring the most careful scientific study by experts devoting their entire time to the matter with a view of drafting a report to the Federal Reserve Board, proposing such amendments to the law or regulations as in their judgment may be necessary to remove any present inequalities or defects and to establish bank reserves throughout the country on a more logical or effective basis than now appears to be possible under present laws, State and Federal. (Resolution adopted at the conference of Governors of the Federal reserve banks, December 12, 1929.)

## SUMMARY OF COMMITTEE RECOMMENDATIONS

In accordance with its terms of reference, the Committee has examined the operation of present legal requirements governing the reserves held by member banks and submits herewith definite recommendations for their improvement. These requirements are established by the Federal Reserve Act and apply to all banks, both State and national, which are members of the Federal reserve system. Changes in the law recommended by the Committee are submitted at the end of this report in the form of a proposed amendment to Section 19 of the Federal Reserve Act. In the event this amendment is adopted, Regulation D of the Federal Reserve Board will have to be modified to meet the changes proposed in the law. Modifications recommended by the Committee are discussed in the body of the report.

### Defects of present reserve requirements

In the opinion of the Committee, our present system of legal requirements for member bank reserves has never functioned effectively since its inception in 1914. It has not operated to relate the expansion of member bank credit to the needs of trade and industry, nor has it adequately reflected changes in the volume and activity of member bank credit. Furthermore, the Committee also finds that present requirements for reserves are inequitable and unfair as between individual member banks and groups of member banks and do not adequately take into account genuine differences in the character of banking in which a member bank may be engaged.

The Committee takes the position that it is no longer the primary function of legal reserve requirements to assure or preserve the liquidity of the individual member bank. The maintenance of liquidity is necessarily the responsibility of bank management and is achieved by the individual bank when an adequate proportion of its portfolio consists of assets that can be readily converted into cash. Since the establishment of the Federal reserve system, the

liquidity of an individual bank is more adequately safeguarded by the presence of the Federal reserve banks, which were organized for the purpose, among others, of increasing the liquidity of member banks by providing for the re-discount of their eligible paper, than by the possession of legal reserves. The two main functions of legal requirements for member bank reserves under our present banking structure are, first, to operate in the direction of sound credit conditions by exerting an influence on changes in the volume of bank credit, and, secondly, to provide the Federal reserve banks with sufficient resources to enable them to pursue an effective banking and credit policy. Since the volume of member bank credit needed to meet the legitimate needs of trade and industry depends on the rate at which credit is being used as well as on its aggregate amount, it is essential for the exercise of a sound control that legal requirements differentiate in operation between highly active deposits and deposits of a less active character. Requirements for reserves should also be equitable in their incidence, simple in administration, and, so far as possible, not susceptible of abuse.

Similar principles underlie the present reserve law, which in requiring lower reserves against time deposits than against demand deposits, and lower reserves against the demand deposits of country banks than against the demand deposits of reserve and central reserve city banks may have been expected to impose higher reserves on more active deposits than on less active deposits. Notwithstanding the fact, however, that existing requirements would appear to be so arranged as to make reserve requirements vary with the volume and activity of deposits, experience shows that since 1914 and especially since 1922 the proportion of primary reserves held by member banks has steadily declined in relation to the volume of member bank deposits and to their activity.

This outcome has been the result of defects in the definition of reserves, in the method of determining liabilities against which reserves must

be carried, and in the classification of banks and of deposits for reserve purposes. The exclusion of vault cash from required reserves of member banks in 1917 has been followed by a reduction in the vault cash holdings of some city banks to a minimum; the rule that amounts due from banks may be deducted only from amounts due to banks has tended to decrease reserves in times of business activity and to increase reserves in times of depression, and the establishment of a low reserve against time deposits in 1914 has facilitated the growth of bank credit without a corresponding growth in reserves. Even if these particular defects in the present system of reserves had not existed, however, the rapid increase in the turnover of demand deposits which has occurred in recent years would still have tended to prevent reserve requirements from increasing in proportion to the growth in the effective use of credit by the customers of member banks.

#### Proposals of the Committee

Before deciding to recommend fundamental changes looking toward the establishment of a new basis for calculating required reserves, the Committee made every effort to frame provisions designed to correct the existing situation through modifications in the classification of cities for reserve purposes and in the classification of deposits subject to reserve, including a more stringent definition of time deposits. As these proposals were studied, however, it became more and more evident that they would not be effective and that an entirely new approach to the reserve problem was necessary.

The Committee proposes, consequently, to abolish completely the classification of deposits into time and demand deposits, and the classification of member banks according to their location, into central reserve city banks, reserve city banks, and country banks. Instead, the Committee recommends that all member banks and all deposits be treated alike for reserve purposes, and that the formula used in calculating reserve requirements take into account

directly, instead of indirectly as in the existing law, the activity as well as the volume of the deposits held by each individual member bank, without regard to the location of the bank or the terms of withdrawal on which the deposits are technically held. To accomplish this, the Committee proposes that each member bank be required to hold a reserve equivalent to (a) 5 per cent of its total net deposits, plus (b) 50 per cent of the average daily withdrawals actually made from all of its deposit accounts. These withdrawals, which are shown by debit entries on the books of member banks, are the only real test of the activity of a deposit account and furnish the only basis by which that activity can be equitably and effectively reflected in requirements for reserves. Under this proposal, therefore, each deposit will carry a total reserve based on its activity as well as on its amount. A totally inactive deposit will carry a total reserve of only 5 per cent, while a deposit balance which is checked out on the average once a week will carry a total reserve equivalent to 12 per cent of its amount. For the average member bank the total reserve under the proposed formula will be equivalent to about 8 per cent of its deposits. To prevent this formula from imposing too great a burden in extreme cases, the recommendations of the Committee also provide that in no case shall the aggregate reserve required of a bank exceed 15 per cent of its gross deposits.

The Committee proposes to include in legal reserves, in addition to the funds which member banks have on deposit with their Federal reserve bank, their vault cash, with certain limitations, as both classes of funds contribute to the strength of the reserve banks and have a direct effect on the reserve system's control of changes in member bank credit. It proposes, also, to place country member banks on a parity with city banks with respect to deductions from deposit accounts by permitting banks in calculating net deposits subject to reserve to deduct balances due from member banks and items in process of collection from total deposits instead of from balances due to banks alone as

is the practice at present.

Volume of reserves

The Committee feels that the existing volume of reserves is sufficient at the present time to provide the reserve banks with the funds they require to perform their functions. Its proposals, consequently, do not contemplate a change in the total amount of reserves. They are intended rather to change the nature of fluctuations in the volume of reserves and to iron out inequitable features in their distribution among the member banks.

A comparison of the reserve requirements proposed by the Committee with present and past requirements is presented in the following table:

## SUMMARY OF PAST, PRESENT, AND PROPOSED RESERVE REQUIREMENTS FOR MEMBER BANKS

Classification of banks	Reserve required against		Reserve held in the form of--		
A. Reserve requirements of national banks prior to the enactment of the Federal Reserve Act					
	total net deposits		in vault	in vault or on deposit with designated correspondent banks	
Central reserve city banks	25%		all	none	
Reserve city banks	25%		1/2	1/2	
Country banks	15%		2/5	3/5	
B. Reserve requirements of member banks under original Federal Reserve Act (This distribution of reserves was to become effective in November 1917.)					
	net demand deposits	time deposits	on deposit with F. R. bank	in vault	in vault or on deposit with F. R. bank
Central reserve city banks	18%	5%	7/18	6/18	5/18
Reserve city banks	15%	5%	6/15	5/15	4/15
Country banks	12%	5%	5/12	4/12	3/12
C. Reserve requirements of member banks at present					
	net demand deposits	time deposits	on deposit with F. R. bank		
Central reserve city banks	13%	3%	all		
Reserve city banks	10%	3%	all		
Country banks	7%	3%	all		
D. Reserve requirements proposed by the Committee on Bank Reserves					
	total net deposits both demand and time	daily average debits to deposit accounts	on deposit with F. R. bank	in vault or on deposit with F. R. bank	
Member banks in vicinity of F. R. banks or branches	5%	50%	4/5	1/5	
All other member banks	5%	50%	2/5	3/5	

The calculation of net deposits subject to reserve has varied from time to time. At present, net demand deposits include total demand deposits of individuals, corporations, etc., plus the excess, if any, of demand deposits due other banks over items in process of collection and funds held on deposit with other banks. Under the proposed plan, net deposits subject to reserve would include total deposits, both demand and time, less items in process of collection and deposits with other member banks in the United States.

U. S. Government deposits, which have been exempted from reserve requirements since 1917, would require reserve under the proposed formula the same as all other deposits.

Vault cash eligible for reserve excluded national bank notes, Federal reserve notes, and Federal reserve bank notes prior to 1917. Since 1917, no vault cash has been eligible as reserve. Under the proposed plan all kinds of currency and cash issued or coined under authority of the laws of the United States which are held in the vaults of member banks would be eligible to count as reserve.

Failure of Existing Reserve Requirements

In the opinion of the Committee, the principal purposes served by legal requirements for member bank reserves are, first, to help to regulate the volume of credit at member banks in accordance with the legitimate credit needs of trade and industry, and, secondly, to insure that the Federal reserve banks at all times have resources adequate to their responsibilities. The Committee does not believe that it is the purpose of legal requirements for reserves to insure the liquidity of individual member banks, nor that it is possible for legal reserve requirements to accomplish this purpose.

Liquidity

For many years, the maintenance of liquid assets available to meet withdrawals was regarded as the principal function of commercial bank reserves. Nevertheless, prior to 1914, when central reserve city national banks in this country were required to hold vault cash reserves as large as 25 per cent of both time and demand deposits they were forced to suspend payments at times of banking strain. The inauguration of the Federal Reserve System with its provisions for the mobilization of banking reserves and for the rediscount of member bank paper was a recognition of the fact that a commercial bank does not guarantee its liquidity by maintaining its legal reserves. To the extent that the member banks since 1914 have remained liquid through periods of unprecedented banking strain, they have been able to do so not because of the legal reserves that they have carried, but largely because they have been able by borrowing at the reserve banks to convert their eligible assets into cash.

The effect of this borrowing, furthermore, has not been confined to paper which is eligible for rediscount at the reserve banks. The mere fact that the reserve banks stand ready to lend on eligible paper has helped to maintain a ready market for all types of sound bank assets. Under present conditions, therefore, in which member bank reserve balances cover only 7 per cent of their

deposit liabilities, it is clear that the liquidity of the average individual member bank can be more adequately guaranteed by the possession of a substantial portfolio of eligible paper or of other assets readily convertible into cash in the market than by any practicable increase in its requirements for legal reserves.

As our banking system is now organized, legal requirements for member bank reserves contribute to the security of bank depositors by providing the reserve banks with funds available for assisting banks in emergencies and by adding strength to the whole banking system through the exercise of credit control rather than through determining the volume of reserves held by individual member banks. In order to be able to utilize the strength of the reserve banks in emergencies, however, it is essential that the individual member bank maintain an adequate portfolio of sound assets readily convertible into cash, and, particularly, of assets eligible for rediscount at the reserve banks.

#### Control of credit

The most important function served by member bank reserve requirements is the control of credit. This function has a bearing on the liquidity of bank credit, for, in the nature of things, bank credit is most liquid when credit conditions are sound, and unsound credit conditions do not usually develop unless the banking community in general has expanded its credit beyond the needs of trade and industry. The overexpansion of credit may take a particular form, such as excessive loans on farm lands, on urban real estate, or on securities, or it may be more general applying to a wide range of bankable assets. Whatever its form, it has the effect of temporarily inflating the general purchasing power of the community and also of raising for a time the market value of bank assets beyond their intrinsic worth. It is the function of reserve requirements to restrain such overexpansion by making it necessary for banks to provide for additional reserves before they expand their credit. To perform this function adequately, however, it is essential that reserve requirements reflect both the

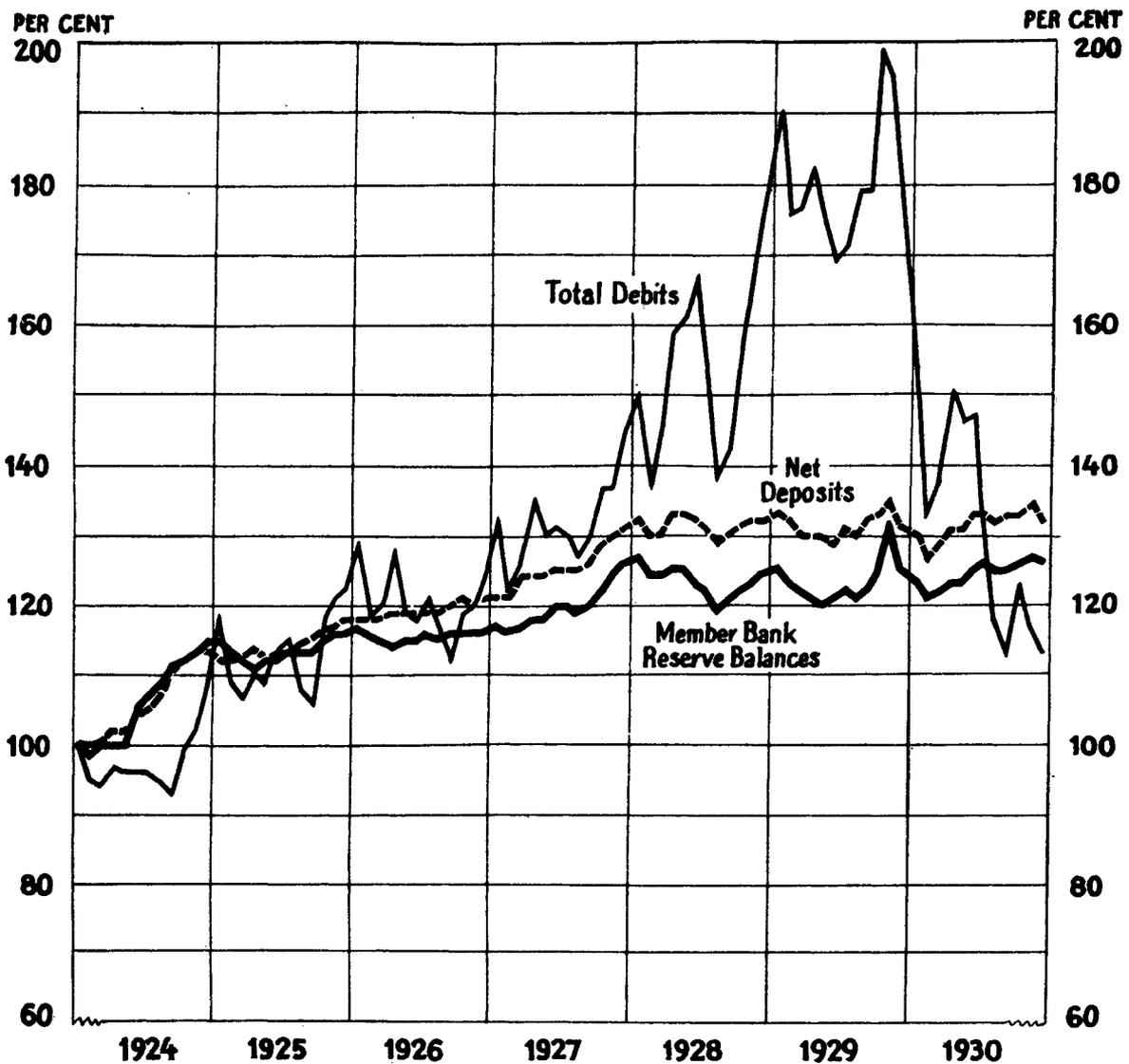
volume and the activity of credit outstanding, for unsound credit conditions can develop either out of an excessive volume of bank credit in relation to the needs of trade and industry or out of an excessive use of a given amount of credit. Credit could be expanded indefinitely, for example, without any inflationary effect whatever, provided the bank deposits thus created were never drawn upon to effect an exchange of goods or services. Conversely, it is possible for an unsound credit situation to develop without an increase in the volume of deposits, but merely out of an increase in their activity. Usually, unsound credit conditions are accompanied by an increase both in the volume and in the activity of deposits. In 1928 and 1929, however, during the most extravagant phases of the stock market boom, excessive credit demands were reflected in an increase in borrowings from non-banking lenders, and an unprecedented increase in the activity of bank deposits, without an increase in their total volume. Reserve requirements, consequently, failed completely during those crucial years to act as a brake on the unsound use of credit.

Progressive diminution of member bank reserves under present requirements

Between 1914 and 1931, the period covered by our present system of reserve requirements, total net deposits of member banks increased from \$7,500 million to \$32,000 million, or more than 300 per cent in less than two decades. Some of this increase reflects the accession of State banks to membership in the Federal Reserve System, but the greater part reflects the expansion of member bank credit. While war financing and the huge inflow of gold which followed the war constituted the immediate driving force back of much of this expansion, it was facilitated by a progressive reduction in effective member bank requirements for reserves. Thus, member banks actually hold at the present time about \$2,900 million of reserves against \$32,000 million of net deposits. This includes both the legal reserves which they hold with the Federal reserve banks and cash which they hold in their vaults. If the vault cash reserve require-

ments of national banks prior to 1914 had been retained in the Federal Reserve Act up to the present time, member banks would now be required to hold about \$4,400 million in reserves instead of \$2,900 million. This means that in the aggregate total reserve requirements of member banks are now about 34 per cent less in proportion to their deposits than they were before the Federal Reserve Act was passed. It is clear, consequently, that the large expansion of member bank credit since 1914 has been facilitated by a progressive diminution in reserve requirements as well as by large imports of gold. Without this diminution member banks would have needed in order to expand their credit to its present volume additional Federal reserve bank credit to the extent of \$1,500 million. By applying to the reserve banks for this additional credit, the member banks would have correspondingly increased the effectiveness of reserve bank credit policy.

Of the total decrease of \$1,500 million in present requirements as compared with prewar requirements, about one-half reflects the effect of the amendment which removed vault cash from required reserves in 1917, while the remainder reflects in part the lowering of reserve requirements by the original Federal Reserve Act, and in part, the rapidly decreasing proportion of member bank deposits which have been classified as demand deposits since the inauguration of a lower reserve on time deposits in 1914. This decrease has occurred, moreover, during a time when the average turnover of all deposits has increased, indicating that differentials in reserves as between time and demand deposits and as between demand deposits at city and country banks have not effectively registered changes in the activity of deposits or in the use of member bank credit by the community. Such figures as are available for earlier years indicate that the average turnover of bank deposits in this country increased steadily from 1914 up to 1929. Between 1925 and 1929, alone, estimates made for the Committee indicate that the rate of turnover of the average dollar



deposited in member banks increased from 24 times a year to 33 times a year, notwithstanding the fact that 64 cents of this dollar was classified as a demand deposit in 1925 as against 59 cents in 1929.

Failure of existing requirements to reflect credit developments

In the accompanying chart there is portrayed the extent to which existing legal requirements for reserves have failed to reflect credit developments at member banks in recent years. The upper line reflects movements in the total dollar volume of transactions which pass through the deposit accounts of customers of member banks. The middle line shows member bank time and net demand deposits combined and reflects movements in the total volume of member bank deposit liabilities. The bottom line shows the reserve balances which member banks have maintained with the Federal reserve banks. During the period covered by the chart all the legal reserves have been held in this form. The lines are plotted as index numbers with January 1924 equal to 100.

This chart brings out the failure of member bank reserve balances under our present reserve requirements to reflect fundamental changes in the demand for credit. In the first year shown on the chart, 1924, the total volume of debits or check payments made through member bank accounts was low reflecting a relatively inactive business situation. Member bank requirements for reserves, however, increased in 1924 more rapidly than in any other year shown on the chart because the inactive local demand for funds throughout the country caused banks to redeposit funds with their correspondent banks in the larger cities, which were required to hold reserves of 10 or 13 per cent against these funds. As a consequence, an inactive demand for funds from trade and industry in 1924 was reflected in a sharp increase both in member bank deposits and in member bank requirements for reserves. During 1925 and 1926, on the contrary, when business became more active, these redeposited funds were withdrawn from correspondent banks and loaned directly in the

market, with the result that aggregate requirements for reserves remained for two years at about the level of December 1924 failing completely to reflect an increase in the market demand for funds.

The failure of reserve requirements to reflect fundamental changes in the demand for funds and to operate in such a manner as to bring these changes under control became a major factor in the credit situation in 1928 and 1929 when an extraordinary demand for funds from the stock market was met without an increase in reserve requirements of member banks. In fact, the aggregate legal requirements of member banks for reserves were about \$75 million lower in September 1929 at the very peak of the stock market boom than in December 1927, despite a situation in intervening months in which the demand for stock exchange loans was sufficient to require brokers to increase their borrowing by over \$4,000 million at rates which in some months averaged nearly 10 per cent. This situation arose because corporations and other non-banking lenders, seeking to profit by high rates, drew upon their balances with member banks and loaned funds in huge volume directly to brokers, permitting an extraordinary demand for credit to be met without any increase in the deposits against which member banks were required to maintain reserves. The activity of these deposits increased rapidly, however, as is shown by the chart. Had reserve requirements reflected the activity of deposits, this sharp increase in turnover of deposit accounts, which helped materially to finance speculative developments in 1928 and 1929, would have caused an equally sharp increase in member bank requirements for reserves, and this increase in turn would have acted as a powerful restraint against unsound credit developments.

#### Vault cash

After reviewing member bank operations during recent years, the Committee is convinced that the removal of vault cash from required reserves in 1917 has had undesirable consequences that were not foreseen at the time. Prior to 1917,

member banks in central reserve cities were required to hold aggregate reserves equal to 18 per cent of their demand deposits, the corresponding percentages for reserve city and country member banks being 15 and 12 per cent respectively. At the same time, the requirement against time deposits was 5 per cent at all classes of member banks. Part of these reserves were held as balances with the reserve banks and part as cash in the vaults of the member banks. Federal reserve notes and national bank notes held by member banks, however, could not be counted as legal reserves. Under the 1917 amendment, reserve requirements against demand deposits were reduced by 5 per cent and against time deposits by 2 per cent at all classes of banks, and at the same time member banks were required to hold all of their legal reserves on deposit with the Federal reserve banks.

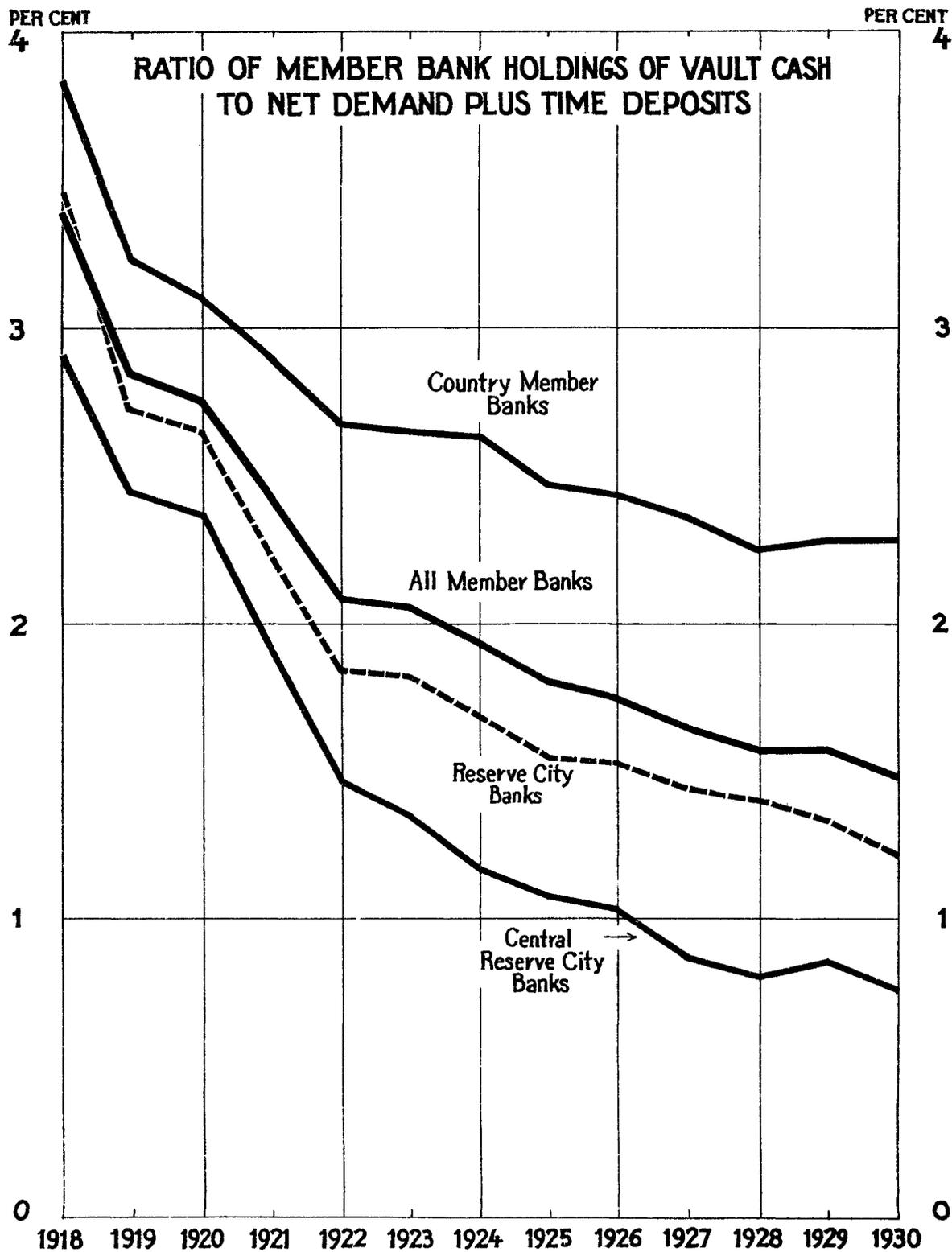
The main purpose of the 1917 vault cash amendment was to concentrate the gold holdings of the country in the Federal reserve banks. Up to that time, member banks had been required to hold their vault cash reserves in gold or lawful money, with the result that the monetary gold resources of the country were only partially mobilized in the Federal reserve banks, a large proportion being absorbed in the form of circulating notes held by the member banks and the public. The 1917 amendment corrected this situation by removing the inducement for member banks to hold their vault cash in the form of gold rather than Federal reserve notes and so permitted the mobilization of gold in the Federal reserve banks.

In addition to concentrating the gold resources of the country in the Federal reserve banks, however, the 1917 vault cash amendment incidentally opened the door for a gradual diminution in the actual reserves of the member banks. In the last 14 years, the amendment has permitted a reduction in aggregate reserves, amounting at the present time to over \$700 million. Had this amendment not been passed, consequently, member banks today would be required,

other things being equal, to hold aggregate reserves more than \$700 million larger than their present legal reserves plus their holdings of vault cash. These additional reserve requirements would have exercised a wholesome restraint during the boom period which culminated in 1929 and the policy pursued by the Federal Reserve System would have been much more effective had the member banks at that time been forced to borrow this additional \$700 million from the Federal reserve banks.

Between June 1917, before the new requirements went into effect, and June 1930, net demand plus time deposits of member banks increased from \$12,000 million to \$32,000 million, but holdings of vault cash at the same time decreased from about \$800 million to less than \$500 million. By making progressive economies in their use of vault cash at a time of rapid increase in their deposit liabilities, member banks were able to reduce their cash holdings to less than 3 per cent of their net demand plus time deposits by 1919, to less than 2 per cent by 1924, and to less than  $1\frac{1}{2}$  per cent by 1930. The chart shows that this reduction has been especially marked at large city banks. In New York City member bank holdings of vault cash in June 1930 were equal to  $\frac{3}{4}$  of one per cent of their net demand plus time deposits and to less than one per cent of their net demand deposits alone.

Part of this decline reflects a reduction in the operating requirements of banks for vault cash. The American public has widespread banking facilities and is thoroughly educated in the use of checks. Their demand for pocket currency, consequently, is relatively small since its use is limited largely to transactions in which currency is the only convenient method of payment. In recent years there has also taken place a rapid increase in the use of checks for wage payments which has materially reduced the demand for cash for industrial payrolls. While this substitution of checks for currency may reflect a socially desirable development, it does not constitute a logical or valid



reason for a reduction in the reserve requirements of member banks since the effect upon business activity and upon the position of the individual member bank is the same whether a depositor's account is drawn upon to make payments by check or by currency.

By no means all of the economies in the use of cash which member banks have been able to effect since 1917, however, reflect the substitution of checks for currency in making payments. On the contrary, a special study of the daily vault cash holdings of member banks has shown definitely that location in the vicinity of a Federal reserve bank or branch is the largest single factor accounting for the reduction in member bank holdings of cash. This investigation showed that member banks situated close enough to Federal reserve banks or their branches to be able to deposit surplus currency at the reserve banks or to obtain additional currency supplies from the reserve banks within a few minutes, maintained vault cash holdings equal on the average to only 1.38 per cent of their net demand deposits. This group of member banks holds about sixty per cent of the total deposits of all member banks.

During the same period, the remaining member banks held vault cash equivalent to 4.64 per cent of their net demand deposits, or more than three times the proportion that was held by member banks close to the reserve banks. The investigation also showed that member banks located within short distances of cities where Federal reserve banks or branches are located held as high a proportion of vault cash, on the average, as country member banks, which because of their inaccessible location ordinarily cannot receive additional supplies of currency until one or two days after it has been ordered. The amount of vault cash reserves which member banks find it necessary to hold at the present time, therefore, depends mainly on whether or not they are located in the immediate vicinity of the reserve banks. If they are close enough, they can deposit with the reserve banks for credit to their reserve balance a

large proportion of the vault cash which their business would otherwise require them to hold.

The 1917 amendment eliminating vault cash from legal reserves, consequently, has had two unfortunate effects. First, it has materially reduced the total reserve requirements of member banks and thus further facilitated expansion of bank credit at a time when huge gold imports arising out of war and postwar disturbances were already placing difficulties in the way of the effective administration of the country's credit resources. Second, these reductions in aggregate reserve requirements have not been equally available to all member banks but have particularly favored those banks which are located in close geographical proximity to the Federal reserve banks. As these member banks are classified as reserve or central reserve city banks, the amendment has had the practical effect of reducing or eliminating differentials in reserve requirements between different types of banks which are justified by the character of their business. Up to 1917, time deposits required the same reserve of 5 per cent at all types of banks, while net demand deposits required a reserve of 12 per cent at country banks as compared with 15 per cent at reserve city banks and 18 per cent at central reserve city banks. These differentials were maintained after the 1917 amendment in the form of a 3 per cent reserve against time deposits at all classes of banks and a required reserve excluding vault cash against net demand deposits of 7 per cent, 10 per cent, and 13 per cent at the different classes of banks. However, when the amount of vault cash which member banks find they must actually hold under normal conditions is taken into account, and a 3 per cent reserve against their time deposits is allowed, it appears that central reserve city member banks now hold 14 per cent in reserve against their net demand deposits in contrast to 12 per cent at both reserve city and country member banks. In other words, in its

practical effect, the 1917 amendment in addition to reducing reserves against time deposits from 5 to 3 per cent at all member banks reduced reserves against net demand deposits from 18 to 14 per cent at central reserve city banks, and from 15 to 12 per cent at reserve city banks, while country banks received no reduction whatever in their requirement against demand deposits. The present classification of cities for reserve purposes, therefore, does not function equitably.

The purpose of the 1917 amendment to mobilize reserves could have been accomplished without this diminution in total reserve requirements of member banks by retaining the reserve ratios of the original Federal Reserve Act and at the same time permitting member banks to count Federal reserve notes as part of their legal vault reserve. Federal reserve notes are a liability of the Federal reserve banks, just as the present legal reserve balances of member banks are a liability of the Federal reserve banks. Of the two types of liabilities, furthermore, those evidenced by Federal reserve notes which are a first lien on all assets of the Federal reserve banks and in addition are an obligation of the United States Government are the more strongly secured. In recommending, consequently, that the legal reserves of member banks include all kinds of currency and coin as well as balances on deposit with the Federal reserve banks, the Committee provides a plan which retains the advantages of a mobilized reserve and also avoids the possibility that member bank reserves will be further diminished through economies in the use of vault cash.

#### Time deposits

The Committee is also convinced on the basis of the system's experience that there is no practicable way of defining time deposits and demand deposits without opening the doors to evasions of the intent of the law. The general principle underlying the existing classification, namely, that more active deposits should carry higher reserves, the Committee believes to be sound.

Experience has shown, however, that the methods by which this principle is now applied have permitted evasions, which cannot in practice be remedied so long as lower requirements for reserves on time deposits furnish a constant incentive to member banks to classify as time deposits accounts which are essentially of an active character.

Deposits classified as time deposits have grown rapidly at member banks since 1914. In that year, when national banks were required to maintain the same reserve against all of their deposits, they held only about \$1,200 million in time deposits. Following the lowering of reserve requirements against these deposits, time deposits increased steadily and amounted to about \$8,700 million at national banks alone in 1930. During the same period, time deposits of non-national commercial banks, including both State member and nonmember banks, increased from about \$2,800 million to \$10,200 million and savings deposits of mutual and stock savings banks from \$4,800 million to \$10,500 million. The percentage increase in time or savings deposits for national banks during the period was over 600 per cent, for non-national commercial banks over 250 per cent, and for savings banks 120 per cent. Considering all of our commercial banks together, both State and national, time and savings deposits have increased from less than one-fourth of total deposits in 1914 to nearly 40 per cent in 1930. In 1914, furthermore, these commercial banks held about 45 per cent of the total time deposits of the country; while by 1930 that proportion had grown to about 65 per cent. Of the total increase in time deposits in the interval more than 70 per cent was concentrated at commercial banks. By 1930 more than one-third of all member bank deposits consisted of time deposits and nearly one-half of the time deposits of the country were held by member banks.

While there have been other factors in the growth of time deposits, it is clear that the introduction of a lower reserve on such deposits has

encouraged the growth of savings deposits at commercial banks, in part at the expense of the growth of deposits at specialized savings institutions, with the result that some of our so-called commercial member banks now operate largely with funds that are classified as time or savings deposits. From the point of view of bank reserves, however, the problem to determine is not the extent to which member banks have competed more effectively with other banks for the savings deposit business of the country, but the extent to which member banks, because of the low reserve against time deposits, have been induced to classify as time deposits, deposits that are essentially demand in character. It has been repeatedly asserted in recent years that this reclassification of deposits rather than effective competition on the part of member banks for savings deposits, has been responsible for a substantial part of the growth in time deposits at member banks.

While it is the opinion of the Committee that the greater portion of time deposits held by member banks, particularly country member banks, represent funds which are genuine savings deposits, the Committee is convinced that a significant part of these deposits, especially in metropolitan centers, are not in the nature of savings, but have a considerable velocity of turnover, and should be classified as demand deposits and carry correspondingly larger reserves. The volume of such deposits is sufficient to constitute a major departure from the principles underlying present reserve requirements. A special investigation conducted in May 1931 revealed the fact that out of \$13,000 million of time deposits held by member banks at that time, \$3,000 million consisted of individual accounts with balances in excess of \$25,000. Even though these accounts may consist of inactive deposits with a low turnover, they are not the typical small savings accounts for the accommodation of which the low reserve against time deposits was primarily instituted. Of the \$3,000 million held

in these large individual accounts, 27 per cent were held in accounts evidenced by savings passbooks, 24 per cent in accounts evidenced by certificates of deposit, and 49 per cent in other types of time accounts, chiefly open book accounts payable in more than 30 days or subject to an agreement by the depositor at the time of deposit to give 30 days notice before withdrawal.

A further violation of the intent of the law has grown up in certain localities where, to meet the competition of State savings banks, some member banks have devised a special savings account on which checks may be drawn without the presence of the depositor at the bank. These accounts are evidenced by savings passbooks in which the bank reserves the right to require thirty days' notice before making payment on a withdrawal. When the account is opened, a duplicate savings passbook is issued, the original being held by the depositor and brought up to date from time to time, while the duplicate is left with the bank, which enters therein the amount of each withdrawal at the time checks on these accounts are presented for payment. So far as the Committee can ascertain, this practice of permitting withdrawals from savings accounts by check without presentation of the passbook has not, as yet, spread widely. An investigation of the turnover of these so-called savings accounts indicates that they are less active on the whole than demand accounts in the same banks, but much more active than other time accounts. They are, furthermore, no less active than accounts classified as demand deposits in many sections of the country.

In the opinion of the Committee even the existence of a low rate of turnover in time deposit accounts would not necessarily mean that the present system of reserves is functioning in accordance with the intent of the law. It is not necessary to classify deposits incorrectly in order to reduce reserve requirements under existing conditions. With only a three

per cent reserve required against time deposits, there is an inducement for member banks to persuade or permit commercial customers to classify a large part of their working accounts as time deposits and then to permit a very rapid turnover on that small part of these accounts that remain in the demand deposit classification. In such cases, the customers' aggregate deposits constitute the working balance, but all of the checks are cleared through the demand accounts, with the consequence that relative inactivity in time accounts is balanced by a corresponding increase in the activity of the demand balances. While it is impossible to ascertain the extent to which this practice has influenced the growth of time deposits at member banks in recent years, it is known that the turnover of demand accounts has increased rapidly. There has also been a growth in the volume and number of time deposit accounts maintained by corporations. While both of these developments have reflected, in part at least, other factors than the effect of the three per cent reserve on time deposits, this reserve requirement has facilitated the movement and has undoubtedly been a factor in the decrease of the ratio between total bank reserves and the outstanding volume of bank credit.

These conditions the Committee is convinced cannot be effectively remedied so long as lower reserve requirements on time deposits offer an inducement for evasion. Some improvement might be effected by limiting the total amount of time deposits which a bank could hold for the account of any one depositor to a fixed amount, but the net effect of the limitation would probably be small. It would not prevent depositors from splitting up larger time accounts among several member banks, and might also encourage further abuses by inducing large depositors to open accounts in the names of employees and others, the passbooks or certificates of deposit evidencing such accounts being assigned to the real

owner of the funds after the deposits are made. Such devices would go far to nullify as well the effects of another suggested restriction which the Committee has had under consideration, namely, that the number or amount of withdrawals permitted from a single time deposit account be limited during a stated period. Limitation on the number of checks drawn might reduce the apparent activity of a single account, but would be completely ineffective to the extent that it induced depositors to split their existing time deposit accounts into several accounts and thereby multiply the number of checks which could be legally drawn each month. It has also been suggested that the definition of time deposits carried in the Federal Reserve Act be made more stringent so as to require the presence of the depositor at the bank each time a withdrawal is permitted or to prohibit in all cases withdrawals from these accounts except after thirty days' notice. Entirely apart from the annoyance and inconvenience which such restrictions would entail to many time depositors, they could be effectively nullified if banks adopted more generally the practice of making loans on savings passbooks to depositors wishing to make an immediate withdrawal. Such loans, which can be made to the depositor either in person or through an agent, are secured by the time deposit account, and entail no loss to the depositor unless the rate of interest charged on the loan is in excess of that paid by the bank on the deposit. None of these suggestions, furthermore, offers a remedy for the situation which arises when a depositor splits his balance into a small and extremely active demand deposit account and into a time deposit account which is theoretically inactive but which in practice constitutes the balance that justifies the bank in carrying the companion demand deposit.

#### Activity of demand deposits

Studies by the Committee of the effectiveness, from the reserve point of view, of the present grouping of member banks into central reserve city

banks, reserve city banks, and country banks, have convinced it that this classification does not, in actual operation, result in an equitable and economically sound distribution of reserves. While it is true that, on the average, the activity of deposits is much higher in New York City than elsewhere in the country, and also that the activity of deposits at reserve city banks is higher on the average than at country banks, there remains within these general averages a great diversity in deposit activity both between cities and between banks in the same city. In numerous small cities, where reserve requirements are those of country banks, deposit activity is materially higher than in many reserve bank cities, while in some country towns the activity of demand deposits is apparently as low or lower than the activity of time deposits at many city banks. Within cities, moreover, the same divergence occurs between the activity of deposits at neighboring banks. There are individual member banks in New York City carrying 13 per cent reserves against deposits that are less active than those of many country banks carrying a 7 per cent reserve. It is not possible, in fact, to arrive at any classification of banks based on size of cities or their location which will reflect with accuracy the average activity of demand deposits at individual member banks. Since it is the Committee's conviction that the reserve of an individual bank should fluctuate with changes in the volume of transactions financed by its deposits and that in the country as a whole aggregate reserves should change with the volume of business done, it is necessary in order to accomplish this purpose to discard completely the present system of basing reserve requirements on the location of banks and to adopt instead a reserve formula which will take direct account of the activity of each individual bank's deposits.

Committee Recommendations

The Committee recommends, therefore, that the reserves required to be carried by each individual member bank be determined, first, on the basis of the total volume of deposits held by the bank irrespective of whether they are held by city or country banks or whether they are classified as time deposits or demand deposits, and, secondly, on the basis of the actual activity of these deposits, that is, the actual dollar volume of charges which are made to these accounts. More specifically, the Committee proposes that each bank be required to hold a reserve equivalent to 5 per cent of its net deposits plus 50 per cent of the average daily debits or charges made to these deposit accounts on the books of the bank. As already indicated the reserves thus determined are to include both cash in vault and collected balances with the Federal reserve bank. For a bank with stationary deposits, this is equivalent to a total reserve of 5 per cent; for a bank with deposits which turn over once a month, it is equivalent to a reserve slightly under 7 per cent of total net deposits; while for a bank with an average turnover of once a week, the total reserve is about 12 per cent of total net deposits.

This formula will eliminate all of the classifications of deposits at present used to determine required reserves. It makes no distinction between a deposit classified as a time deposit and a deposit classified as a demand deposit and so avoids all of the complications which have accompanied the attempts of the Federal Reserve Board to define time deposits. The formula, furthermore, eliminates the distinction between demand deposits held by banks classified as central reserve city banks, reserve city banks, and country banks, and so avoids the problem of determining which cities should properly be classified as central reserve or reserve cities for reserve purposes. The formula automatically distinguishes between these

cities, nevertheless, since the average member bank in a central reserve city, where the turnover of deposits is higher, will be required to carry larger reserves than the average bank in a reserve city or the average country member bank which has a low rate of turnover. The proposed formula also distributes the total volume of reserves more effectively and more equitably among member banks, because in the central reserve cities high reserves will be carried only by such banks as have active deposits, while banks in these cities having less active deposits, that is, banks whose business resembles more closely that of a country bank, will be required to carry reserves equivalent to those of a country bank. At the same time, the active country bank engaged in business different from its neighbors and more nearly resembling that of a city bank will be required to carry reserves equivalent to those carried by a city bank.

This formula, therefore, by basing reserve requirements directly on the volume and activity of the deposits of the individual member bank, places each member bank on an effective parity with respect to the type of banking business in which it is engaged, and achieves in practice those distinctions which theoretically should but actually do not result from the present classification of cities and deposits for reserve purposes.

#### Deductions from deposit accounts

The Committee recommends that net deposits subject to a five per cent reserve be determined by subtracting from gross deposits the sum of all balances due from member banks in the United States and their domestic branches and all checks in process of collection and other cash items payable upon presentation in the United States. This recommendation differs from present practice with respect both to the deposits from which deductions are permitted and the items which member banks are permitted to deduct.

At the present time, the law states that deductions may only be made from "balances due to other banks," that is, deposits held by one member bank to the credit of another bank. These balances include, according to the present Regulations of the Federal Reserve Board, all amounts due to banks, bankers and trust companies, and certified, cashiers' and treasurers' checks outstanding.

This provision has given rise to widespread protest, especially from country banks which are not in a position to take advantage of deductible items because they hold little or no amounts due to banks from which to subtract them. The city banks, on the other hand, holding, because of their correspondent relationships, large balances due to other banks, have been able to decrease their deposits subject to reserve by the full amount of their deductible items. At the present time, this factor is equivalent to about one per cent on the average in the required reserves against net demand deposits of country banks, that is, the aggregate reserves held by country member banks against net demand deposits are in effect equal to 8 per cent, rather than 7 per cent, if an adjustment is made for their inability to utilize items now deducted from deposits by banks in large cities.

In making its recommendation the Committee also noted the fact that the present provision governing deductions permits many city member banks to carry bankers' balances without thereby increasing their requirements for reserves, since a bank with deductible items normally in excess of its balances due to banks can accept bankers' deposits up to the point where this excess no longer exists without increasing the reserves which it must hold. In recommending that deductions be made from gross deposits, consequently, the Committee provides for a more equitable treatment of country member banks and also provides a formula by which any bank which increases its balances due to other banks will thereby increase its reserve require-

ments.

The Committee also recommends a new definition of items which may be deducted from gross deposits. At present, these items are defined in the law as balances due "from other banks." This phrase has been construed by the Federal Reserve Board to include items with Federal reserve banks in process of collection, amounts due from banks and trust companies in the United States, balances payable in dollars due from foreign branches of other American banks, and exchanges for clearing house and other checks on local banks. In effect, consequently, deductible items now include all funds deposited with other banks in this country, dollar balances deposited with branches of other American banks abroad, and the bulk of checks and other items in process of collection.

The Committee recommends that this definition of deductible items be changed to include only "balances due from other member banks and their branches in the United States" and "all checks in process of collection and other cash items payable upon presentation in the United States." The principle which the Committee has followed in making these recommendations is that, insofar as it is administratively practicable, the aggregate body of reserves maintained by member banks should reflect changes in the volume and use of member bank credit by the public, since it is the public's use of credit which has a direct relationship to the volume of the country's business. Aggregate reserves should not, as a matter of principle, be affected by purely interbank transactions which do not directly reflect the public use of credit, but, instead, changes in transactions between banks which are on a large scale in our banking system because of the large number of unit banks. A system of reserve requirements would not be sound under which aggregate reserves might decrease during the next decade solely as a result of some change in our bank relationships which would materially

reduce the volume or proportion of interbank deposits now held by member banks. The proposal advanced by the Committee avoids this contingency since the aggregate net deposits of member banks subject to reserve will not be affected by changes in the volume of balances kept by one member bank with another. Under this recommendation, also, the individual member bank which is responsible for the maintenance of reserves against a member bank deposit will be that bank which lends it to the public, i.e., an interior member bank will only hold reserves against those deposits on its books which it lends or invests directly with the public. If it passes the deposit on to another member bank in the form of an interbank deposit, it will hold no reserve against it since it will be able to deduct this amount from its gross deposits. The bank which will receive this interbank deposit and loan the funds involved back to the public, however, will be the one that will be responsible for the reserve which must be maintained against it.

#### Reserves on U. S. Government deposits

The recommendations of the Committee make no exceptions with respect to deposits of the U. S. Government, but treat these deposits for reserve purposes the same as any other deposits. The Committee recommends the repeal of the 1917 amendments which relieved these deposits from reserves as an inducement to member banks to participate to the fullest extent in war financing. The fact that deposits are secured by the pledge of government or other securities does not constitute a valid reason for their exemption from reserve requirements. A bank as a matter of necessity must have assets to cover and secure all of its deposit liabilities, but this fact does not relieve a bank from its responsibility to maintain adequate reserves. The security of a deposit has nothing to do with the reserve that should be carried against it. The banks have the use of their U. S.

Government deposits the same as of any other deposits and it is equitable, therefore, that these deposits should contribute to the reserve fund in the same relative proportion.

Operation of proposed formula in recent years

This resumé of the principles and evidence upon which the Committee has proceeded in formulating its recommendations indicates that under the system of reserves proposed requirements for reserves will be more equitably apportioned among the member banks. It is even more important, however, that the proposed formula exert a constructive influence toward the preservation of sound credit conditions. Unsound credit developments arise usually during periods of prosperity when the public is optimistic and both bankers and borrowers are likely to overestimate the value of collateral which is offered to banks as a basis for loans. Such conditions are reflected usually both by an increased demand for bank credit and by increased activity in the deposit balances of those individuals or corporations which deal in the commodities, securities, or services that are acquiring a speculative value. Thus, the speculative value of farm lands, which accompanied the prosperity of agriculture during the war, was reflected both in a sharp increase in the activity of deposit accounts at agricultural banks and in a heavy demand for credit secured by farm mortgages at inflated values. So, also, the prosperity which prevailed in this country during recent years, was accompanied by a widespread boom in urban real estate, by speculation in Florida real estate, and finally by an inflation in common stock prices, each of which was reflected in unsound demands for bank credit at inflated speculative values and in a larger than average increase in the activity of deposits at those banks whose customers were becoming heavily involved in these speculative situations. In the boom which ended in 1920, the increase in deposit

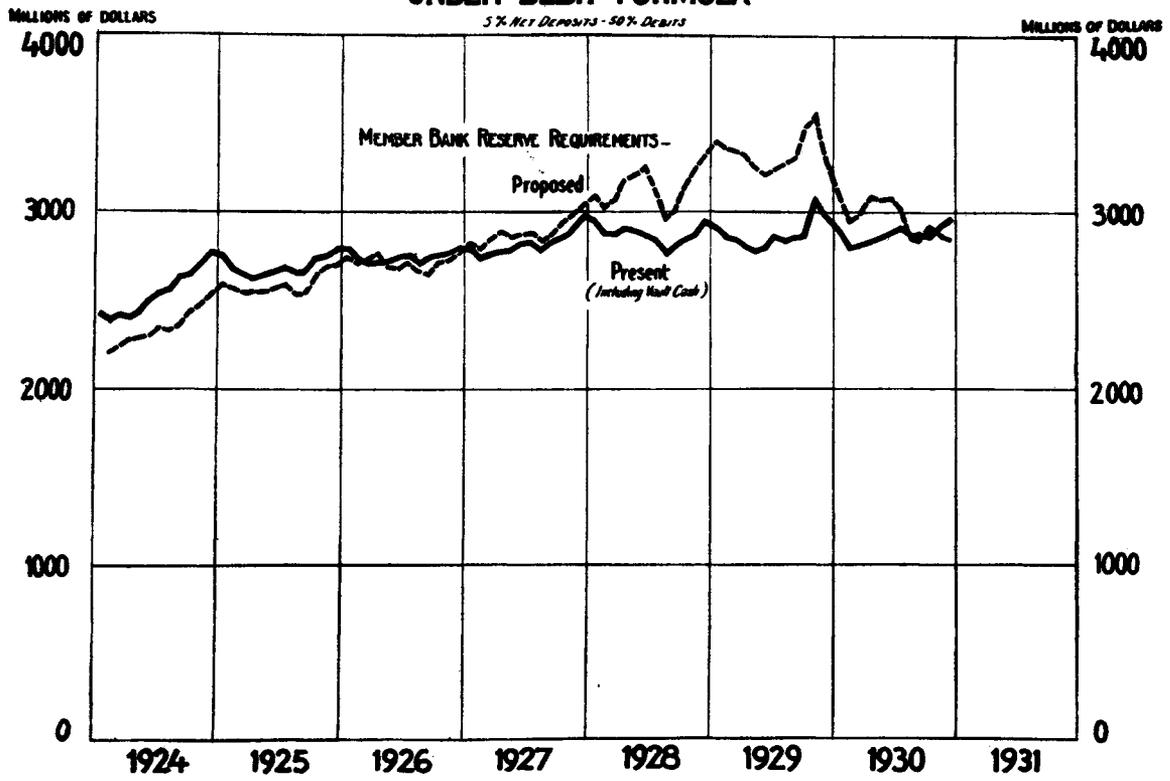
activity was widespread, but the greatest relative increase occurred at the center of farm land and commodity speculation in the Middle West. In the boom, which ended in 1929, on the other hand, the greatest increases in deposit activity occurred in New York City and other large Eastern cities, where speculation in common stocks was most active.

No formula for determining member bank reserves can prevent these speculative situations from recurring, but the proposed formula will operate to check their growth and help to bring them under control. It will increase requirements for reserves sharply at those individual member banks whose customers are at the center of an incipient speculative movement, and so set in motion forces of a restraining nature at the focal point of disturbance. These forces will probably take different forms. Bankers whose requirements for reserves increase sharply as a result of these activities will find their lending power reduced somewhat and so will be less inclined to finance speculative developments. Customers with highly active accounts will probably be expected to maintain larger deposit balances, or else the member banks will institute service charges based on the activity of accounts. The forces set in motion by the proposed formula, consequently, will make it more difficult for an unsound development to obtain credit, will increase the amount of credit needed to finance the development, or will increase its cost of operation. The restraining effect of these forces, moreover, will be concentrated almost wholly on speculative credit developments, since the reserves required under the proposed formula will not be such as to affect adversely banks holding the working balances of soundly financed commercial enterprises. Very few ordinary business accounts turn over more rapidly than once a week, in which case the effective required reserve under the proposed formula will equal no more than 12 per

cent. This is no larger than the average amount now held in cash and at the reserve banks on all net demand deposit balances at reserve city and country member banks.

In the banking situation as a whole, the effect of the proposed formula on the demand for loans at the reserve banks will be to strengthen Federal reserve policy and thus to exert an influence toward sounder credit conditions. This is illustrated in the chart which compares aggregate member bank holdings of reserves and vault cash under present requirements during the past seven years with an estimate of the aggregate reserves which the formula proposed by the Committee would have produced. It will be noted that, while under the present formula aggregate reserves did not increase between December 1924 and the summer of 1927, under the proposed formula they would have increased by nearly \$300 million during the same period. The greatest contrast between the effect of the two formulas on general credit conditions, however, would have appeared during the years 1928, 1929, and 1930. The failure of present requirements for reserves to exert any influence of restraint in the presence of abnormal credit demands in 1928 and 1929 has been discussed earlier in this report. There it was pointed out that aggregate reserves did not reflect the increased use of credit in 1928 and 1929, or exercise a restraint over its growth because no increase in reserve requirements accompanied the large increase in brokers' loans which, owing to high call money rates, were supplied by interior banks, corporations, and others out of funds previously held on deposit with the larger city banks. Our present system of reserve requirements thus facilitated an expansion of credit at a time when the situation called for strong restraint. It was also pointed out that in 1930, after the break in the stock market boom, these same factors acted to increase reserve requirements. At that time rates on security loans fell below

### MEMBER BANK RESERVE REQUIREMENTS UNDER DEBIT FORMULA



rates on deposits in consequence of a diminished demand for credit in the market, and both corporations and interior banks converted funds previously loaned to brokers into deposits at city banks against which reserves were required.

The chart shows that requirements based directly on the activity of member bank accounts as well as on their volume, in accordance with the proposed formula, would have acted in the direction of sounder credit conditions during these years. In 1928 and 1929, an increase in aggregate reserves under this formula would have acted to check sharply an excessive use of credit for stock market trading, while in 1930 a corresponding decrease in requirements for reserves would have acted to ease credit conditions. In all three years, consequently, changes in required reserves would have supplemented the open market policy of the Federal Reserve System, since, in 1928 and 1929, restraint would have been exerted on the market by increased member bank requirements for reserves, as well as by sales of securities by the Federal reserve banks, and in 1930, the easing effect of purchases of securities by the reserve banks would have been supported by a decrease in member bank requirements for reserves.

#### Practicability of proposed requirements

The Committee believes that the proposed system of reserve requirements is not only sound in principle, equitable as between the member banks, and constructive in its influence on credit conditions, but that it is also simple to administer and not susceptible of abuses such as those which have grown up around the existing provisions granting a low reserve for time deposits. The Committee has canvassed the administrative difficulties which may arise under the proposed system and also the possibility that once introduced it will not operate in the manner expected.

Inauguration of any new system of reserves such as that proposed will require the careful preparation of report forms and of instructions governing their use for the guidance of member banks. Once placed in operation, however, there should be fewer opportunities for administrative difficulties to arise under the proposed system of reserves than under present requirements. In the first place, there are avoided all of the problems attending the classification of member banks for reserve purposes into central reserve city, reserve city, and country banks, and also the classification by member banks of their deposits into time deposits and demand deposits.

Under the Committee's proposals, the reserves required of a member bank will depend, first, on its net deposits which are to be determined by subtracting from its gross deposits its balances with other member banks and its items in process of collection, and, secondly, on its total debits to deposit accounts. None of the items used in determining these amounts is difficult for the member banks to obtain from their books or for the bank examiner to check. Determination of daily requirements for reserves, consequently, should be greatly simplified as compared with present requirements.

The Committee proposes, moreover, to simplify the problem of maintaining reserves by establishing a system of averaging, by which member banks will know definitely in advance their requirements for reserves and thus be in a position to provide the reserves called for under the requirements.

Since the activity of a bank's deposits on any given day or in any given week is not a reliable indicator of the real activity of its accounts or of the reserves which should be held against them, the Committee recommends that in the event the proposed formula is adopted the Federal Reserve Board issue a regulation providing that that part of a bank's

reserve which is based on the activity of its deposits, shall represent 50 per cent of its average daily debits to deposit accounts during the eight weeks preceding its current reserve computation period. In other words, the reserve against deposit activity would not be based on current operations, but on the activity which a member bank might properly expect on the basis of its past eight weeks' experience. While there will be individual cases when this experience is not borne out, investigation has indicated that a period of eight weeks is sufficiently long on the average to give a satisfactory record of the activity to be expected from a deposit account without at the same time removing requirements for reserves too far from current banking developments. On the basis of this eight weeks' daily average, each member bank would know at the beginning of each reserve computation period the exact amount of reserves against activity which it would be required to hold during that period. The Committee recommends that the 5 per cent reserve required on net deposits be computed against net deposits held at the close of the preceding day as at present. The actual volume of reserves held would not have to equal these requirements each day, however, since member banks would have complied with the law if their reserves during a given reserve computation period were substantially maintained and were equal on the average to their average reserve requirements. Changes recommended by the Committee in the length of reserve computation periods are discussed later in this report.

The proposed requirements, consequently, should be more simple to administer than present requirements. They should also prove less susceptible of abuse. The Committee is aware that banks, when their requirements for reserves will depend directly on their activity, will make an effort to hold down the turnover of their accounts, and the Committee

expects some resultant decrease in total debits to deposit accounts. There is likely to be some decrease in the turnover of correspondent bank accounts, for example, and a corresponding increase in the use of the check collection facilities of the reserve banks since correspondent banks will find extremely active balances of other banks less attractive to hold than at the present time. There may also be some increase in the use that brokers make of the clearing facilities of the organized security exchanges which will be reflected in a corresponding decrease in the volume of transactions cleared through member bank accounts. Both of these developments will probably reduce somewhat the volume of debits to deposit accounts on which the calculations of the Committee are based. On the other hand, the effect of this reduction in total required reserves will probably be offset somewhat by an increase in reserves held against member bank deposits since under the proposed formula member banks will probably require customers having highly active accounts to increase their deposit balances. Any net change in aggregate reserves resulting from these operations should not, therefore, be sufficient in volume to affect seriously the functioning of the proposed system once it is effectively placed in operation.

Distribution of reserves under proposed system

To check its calculations of the distribution of reserves under the proposed reserve formula, the Committee requested all member banks to report for each day of May 1931 the items on their books which are necessary to calculate their legal requirements for reserves under the plan recommended by the Committee. The following computations based on these reports include figures for eighty per cent of the member banks holding ninety-six per cent of total member bank reserves.

For these banks as a whole, the proposed formula would have produced during May 1931 reserves in vault and in the reserve banks equivalent to 99.7 per cent of their actual required reserves plus vault cash under present requirements, i.e., for the member banks as a whole, the total body of reserves would be the same under either formula. This is in keeping with the intent of the Committee, as previously stated, of selecting a formula which would produce at the time of transition the same aggregate body of reserves as is now held under the present law.

Of the total reserves produced under the proposed law, 56 per cent would represent the 5 per cent reserve which would be required to be held against total net deposits, and 44 per cent the reserve required against activity of deposit accounts at the rate of 50 per cent of average daily debits. For member banks as a whole, total reserves including vault cash would be 7.8 per cent of their gross deposits, and 8.9 per cent of their net deposits. The average turnover of net deposits in May was at a rate of a little over twice a month.

Of the 6,308 member banks included in the tabulation, the aggregate reserves held by 5,303, or 84.1 per cent of the total, would be reduced under the proposed formula, while those of 349 banks, or 5.5 per cent of the total, would be essentially unchanged, and those of 656 banks, or 10.4 per cent of the total, would be increased. Most of the banks whose reserves would be reduced are small country banks which now find it necessary to carry a relatively large volume of vault cash, but this group also includes a number of banks in central reserve and reserve cities which are now required to hold high reserves against demand deposits, the turnover of which is relatively low. Of this group of 5,303 member banks, 808 on the basis of May 1931 figures would receive a reduction of 10 per cent or less in required reserves under the new formula,

1,247 a reduction of between 11 and 20 per cent, 1,537 a reduction of between 21 and 30 per cent, 1,168 a reduction of between 31 and 40 per cent, and 443 a reduction of more than 40 per cent. More than 90 per cent of the member banks in the San Francisco, St. Louis, Atlanta, Kansas City, and Dallas Federal reserve districts would have some reduction in their reserves under the proposed formula. In the Minneapolis, Chicago, and Cleveland districts, reductions would occur at from 80 to 90 per cent of the member banks, and in the Boston, Philadelphia, and Richmond districts at from 73 to 80 per cent. In the New York district only 65 per cent of the member banks would be in a position to reduce their aggregate holdings of reserves. These reductions reflect largely the fact that under present requirements, member banks located at a distance from the reserve banks must hold more vault cash than more conveniently situated banks.

Most of the increased reserves under the new formula would be carried by the large active member banks situated in cities where Federal reserve banks or branches are located. These are the banks where the proportion of aggregate reserves to total credit outstanding has decreased most rapidly in recent years, because their location has permitted them to reduce their holdings of vault cash to a minimum. In addition, this group includes in many instances banks with a large proportion of deposits now classified as time deposits, and, also, the larger money market banks of the country which hold the exceptionally active demand balances of other banks and of brokers and dealers in securities. Of the 656 member banks in this group as a whole, the increase in total required reserves would be less than 10 per cent in the case of 366 banks, between 11 and 20 per cent in the case of 182 banks, between 21 and 30 per cent in the case of 64 banks, and more than 30 per cent in the case

of only 44 banks. About 23 per cent of the member banks in the New York district would have some increase in reserves as compared with less than 2 per cent in the Dallas district.

This test of the formula shows that the reserve plan recommended by the Committee would produce the total volume of reserves expected and would distribute these reserves more equitably among the member banks, by restoring differentials in reserves held to the proportion justified by the activity of deposits, and, by removing advantages now obtained solely from geographical location which enables a member bank to maintain messenger contact with the cash facilities of its Federal reserve bank.

Limitation of . . . reserve to 15 per cent of gross deposits

The Committee has also tested the effect of its proposed limitation of the maximum reserve which a member bank may be required to carry under its formula to 15 per cent of its gross deposits. The purpose of this limitation is to prevent the new requirements from becoming prohibitive in isolated cases where banks have specialized in accounts that turn over at a much higher rate than ordinary business deposits. These accounts consist mostly of brokers' balances and balances at stock yard banks. During May 1931 only two member banks would have been affected by this maximum limitation. In the summer and fall of 1929 when stock market speculation was reflected in an extremely high rate of deposit activity in New York City, it is estimated that the limitation would have been effective in the case of not more than 15 member banks. The number of member banks with sufficient deposit activity to be affected by the maximum limitation, consequently, is small.

This maximum limit is based upon gross deposits rather than net deposits because banks holding highly active accounts necessarily hold also a large volume of uncollected checks. The net deposit in an abnormally

active account is small, since it is computed by subtracting all of the checks on other banks deposited by a customer from his gross deposit. A maximum limitation based upon net deposits, therefore, would not produce anything like adequate reserves and would defeat the whole purpose of the Committee's proposal which is directed toward making active deposit accounts carry the largest reserves.

Limitations on amounts of vault cash included in reserves

In order to assure that each member bank will at all times maintain an adequate deposit balance with its Federal reserve bank, the Committee proposes to limit the amount of vault cash which a member bank may include in its legal reserve. It recommends that member banks located in the vicinity of a Federal reserve bank or branch be required to hold four-fifths of their total legal reserve in the form of a deposit balance with their Federal reserve bank. These are the member banks which do not need to hold a large volume of vault cash since they can obtain quickly additional currency from their Federal reserve banks. In the case of member banks not so situated, the Committee recommends that reserves held as deposit balances with the reserve banks comprise at least two-fifths of total legal requirements for reserves.

A test of the effect of these limitations in May 1931 indicated that they would have permitted about 70 per cent of the member banks to count as legal reserves all of the vault cash which they held at that time. About 30 per cent of the member banks, however, held more currency last May than they would have been permitted to count as legal reserves under the formula recommended. The total amount of this excess vault cash was in the neighborhood of \$40 million for all the member banks affected, and did not constitute an appreciable burden for the great majority of these banks.

Kinds of vault cash eligible for reserves

The Committee recommends that banks be permitted to count as reserves all kinds of cash now in circulation. It also recommends that in computing reserves cash in transit between a member bank and its Federal reserve bank be counted as the equivalent of cash in vault.

Debits subject to reserve

The Committee recommends that debits subject to reserve shall include all debits to all accounts included in gross deposits, except charges resulting from the payment of certified, cashiers' or other officers' checks. The exception of debits resulting from the payment of certified checks is due to the fact that a debit entry is made at the time of certification. The second debit made when these checks are finally paid should not, therefore, also be included in the reserve computation since to do so would involve duplication. Debits resulting from the payment of cashiers' and other officers' checks are also excepted, because they represent either transactions similar to certified check transactions, or else payments made by member banks on their own account. Such payments do not represent the use of member bank credit by the public and should not be subject to reserve.

Administration and enforcement of reserve requirements

At the request of the Committee, the counsel of the Federal Reserve Board has prepared a draft of an amendment to Section 19 of the Federal Reserve Act embodying the recommendations of the Committee for the new system of member bank reserve requirements discussed above. This draft, which appears at the end of this report, repeats certain provisions in the present law which are not concerned directly with member bank reserves but are included in the proposed amendment in order to facilitate the legislative drafting of the bill. These provisions, which are

carried in paragraph (m) of the proposed amendment, have not been considered by the Committee and make no changes in the wording of the present Act.

It is the purpose of the Committee to make the determination and enforcement of the reserve requirements recommended in the draft as simple as possible. The Committee recommends, consequently, that Regulation D of the Federal Reserve Board be changed to permit member banks located in the vicinity of a Federal reserve bank or branch to compute their reserves over a period of one week, and other member banks over a period of four weeks. Within these reserve computation periods, the Committee recommends that member banks be permitted to average their daily holdings of reserves against their daily reserve requirements, provided they are not continuously deficient for three or more consecutive business days if they are located in the vicinity of a Federal reserve bank or branch, or for six or more consecutive business days, if they are not so located. Member banks with consecutive deficiencies for three or six days respectively would lose the privilege of averaging their reserves during the entire reserve computation period in which they were continuously deficient, and pay a penalty to their Federal reserve banks for all actual deficiencies occurring during such period. The Committee also recommends that the Board amend its regulation to permit a Federal reserve bank, with the consent of the Federal Reserve Board, to require any member bank in its district to maintain reserves each day in accordance with requirements for that day. The purpose of this recommendation is to provide a method for dealing with individual member banks which flagrantly abuse the privilege of averaging their reserves against their requirements.

At the present time, a member bank is prohibited from declaring dividends or making new loans while its reserves are deficient and is required

to pay a penalty to its Federal reserve bank on all average deficiencies in its reserves within a reserve computation period. If it declares dividends or makes new loans on any day or at any time when its reserves are deficient, it violates the law and its directors are presumably liable for all losses accruing to the bank therefrom. This provision, the Committee thinks, is too drastic in its present form, since it is almost impossible for a member bank to tell whether its reserves are deficient or not at any given time during the day when a new loan application is under consideration. The Committee would modify this provision, consequently, to read that "if any member bank shall fail for thirty consecutive calendar days to maintain the reserves required by this section, it shall not declare or pay any dividend, or make any new loan or investment until its reserves are restored to the amount required." This means that only a definite failure to maintain reserves over a period will make directors personally liable for losses arising from violation of the law, and not technical deficiencies in reserves that may arise from a variety of circumstances at any time during the ordinary course of bank operations. The Committee also recommends that the Federal Reserve Board provide in its regulation for the notification of the directors of a delinquent member bank in advance of the 30-day period specified in the proposed law, such notification to state that their bank is incurring continued deficiencies and that unless steps are taken to correct the situation the directors will become subject to the penalties prescribed in the Federal Reserve Act for violation of the law.

The Committee would also modify the provision governing penalties to be paid by member banks for reserve deficiencies. At the present time penalties for deficiencies in a member bank's reserve are assessed by its Federal reserve bank at a rate of 2 per cent per annum above its current rediscount rate. In some Federal reserve districts, a progressively higher penalty rate is assessed for reserve deficiencies prevailing over long periods. The Committee recommends that the provision relating to progressive penalties be eliminated from the Federal Reserve Board's regulation, since in most cases progressive rates are incurred by member banks not as the result of negligence or indifference but as the consequence of conditions that make compliance with requirements difficult if not impossible. The Committee also feels that when discount rates are below 4 per cent the present penalty rate is too low to prevent member banks from becoming negligent with respect to their reserves. It, therefore, recommends that the penalty rate be 2 per cent above the discount rate on 90-day commercial paper but that in no case shall such penalty rate be less than 6 per cent.

Effective six months after enactment

In event the proposed amendment to Section 19 of the Federal Reserve Act is adopted, the Committee recommends that a six month period be allowed before changes in reserve requirements become effective.

E. L. Smead, Chairman

Ira Clerk

M. J. Fleming

E. A. Goldenweiser

L. R. Rounds

W. W. Riefler, Executive Secretary

## A BILL

To amend Section 19 of the Federal Reserve Act, and for other purposes.

BE IT ENACTED BY THE SENATE AND HOUSE OF REPRESENTATIVES OF THE UNITED STATES OF AMERICA IN CONGRESS ASSEMBLED, That Section 19 of the Federal Reserve Act (United States Code, Title 12, Sections 461 to 466, inclusive, and Section 374), as amended, be further amended and reenacted to read as follows:

## "BANK RESERVES

"Section 19. (a) Each member bank shall establish and maintain reserves equal to five per centum (5%) of the amount of its net deposits, plus fifty per centum (50%) of the amount of its average daily debits to deposit accounts; but, in no event, shall the aggregate reserves required to be maintained by any member bank exceed fifteen per centum (15%) of its gross deposits.

"(b) Each member bank located in the vicinity of a Federal reserve bank or branch thereof shall maintain not less than four-fifths of its total required reserves in the form of a reserve balance on deposit with the Federal reserve bank, and every other member bank shall maintain not less than two-fifths of its total required reserves in the form of a reserve balance on deposit with the Federal reserve bank. The remainder of the total required reserves of each member bank, over and above the amount required to be maintained in the form of a reserve balance on deposit with the Federal reserve bank, may, at the option of such member bank, consist of a reserve balance on deposit with the Federal reserve bank, or of cash owned by such member bank either in its actual possession or in transit between such member bank and the Federal reserve bank.

"(c) The term 'gross deposits,' within the meaning of this section, shall include all deposit liabilities of any member bank whether or not immediately available for withdrawal by the depositor, all liabilities for certified checks, cashiers', treasurers' and other officers' checks, cash letters of credit, travelers' checks, and all other similar liabilities, as further defined and specified

by the Federal Reserve Board: Provided, however, That the term 'gross deposits' shall not include any liability of a foreign branch.

"(d) The term 'net deposits,' as used in this section, shall mean the amount of the gross deposits of any member bank, as above defined and as further defined by the Federal Reserve Board, minus the sum of (1) all balances due to such member bank from other member banks in the United States and their domestic branches, and (2) checks and other cash items in process of collection which are payable immediately upon presentation in the United States, within the meaning of these terms as further defined by the Federal Reserve Board.

"(e) The term 'average daily debits to deposit accounts,' as used in this section, shall mean the average daily amount of checks, drafts, and other items debited or charged by any member bank to any and all accounts included in gross deposits as above defined and as further defined by the Federal Reserve Board, except charges resulting from the payment of certified checks and cashiers', treasurers' and other officers' checks.

"(f) The term 'cash,' within the meaning of this section, shall include all kinds of currency and coin issued or coined under authority of the laws of the United States.

"(g) The term 'reserve balance,' as used in this section, shall mean a member bank's actual net balance on the books of the Federal reserve bank representing funds available for reserve purposes under regulations prescribed by the Federal Reserve Board.

"(h) The term 'vicinity of a Federal reserve bank or branch thereof,' as used in this section, shall mean the city in which a Federal reserve bank or branch thereof is located, unless otherwise defined by the Federal Reserve Board.

"(i) With respect to each member bank, the term 'Federal reserve bank,' as used in this section, shall mean the Federal reserve bank of the district in which

such member bank is located.

"(j) The Federal Reserve Board is authorized and empowered to prescribe regulations defining further the various terms used in this Act, fixing periods over which reserve requirements and actual reserves may be averaged, determining the methods by which reserve requirements and actual reserves shall be computed, and prescribing penalties for deficiencies in reserves. Such regulations and all other regulations of the Federal Reserve Board shall have the force and effect of law and the courts shall take judicial notice of them.

"(k) Subject to such regulations and penalties as may be prescribed by the Federal Reserve Board, any member bank may draw against or otherwise utilize its reserves for the purpose of meeting existing liabilities: Provided, however, That if any member bank shall fail for thirty consecutive calendar days to maintain the reserves required by this section, it shall not declare or pay any dividend or make any new loan or investment until its reserves are restored to the amount required by this section.

"(l) All penalties for deficiencies in reserves incurred under regulations prescribed by the Federal Reserve Board pursuant to the provisions of this Act shall be paid to the Federal reserve bank by the member bank against which they are assessed.

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

"(n) National banks, or banks organized under local laws, located in Alaska or in a dependency or insular possession or any part of the United States outside of the continental United States may remain nonmember banks, and shall in that

event maintain the reserves and comply with all the other conditions provided by law regulating them prior to the enactment of the Federal Reserve Act; or said banks may, with the consent of the Federal Reserve Board, become member banks of any one of the Federal reserve districts, and shall in that event take stock, maintain reserves, and be subject to all the other provisions of this Act.

"(o) The provisions of Section 7 of the First Liberty Bond Act, approved April 24, 1917, Section 8 of the Second Liberty Bond Act, approved September 24, 1917, and Section 8 of the Third Liberty Bond Act, approved April 4, 1918 (U. S. Code, Title 31, Section 771) which exempt deposits of public moneys by the United States in designated depositories from the reserve requirements of this Act and all other acts or parts of acts in conflict with this Act are hereby repealed only in so far as they are in conflict with the provisions of this Act."

Section 2. This Act shall become effective six months after its approval by the President of the United States.

