Form F. R. 181

BOARD OF GOVERNORS
OF THE
FEDERAL RESERVE SYSTEM

Office Correspondence

Date July 2, 1936.

To Chairman Eccles

Subject: Report on the Large Deposit Study.

Fr Lauchlin Currie
L.C.

G P O 16—852

I should like to say a word with regard to the style of this memo. I expected that the general reader would look only at the Summary of Findings, which I tried to make simple and brief. Only serious students of the subject would read the body of the text, so I wrote this in a more technical style. Section VIII, the important theoretical section, you will think too long and technical, but I wanted to make it as watertight as possible so that it could stand up under the most minute and hostile criticism. My earlier drafts of this section, where I attempted to simplify, were misunderstood and misinterpreted by various people to whom I gave it to read. The validity of the treatment in this draft has so far not been questioned.

I should like you to read in particular pages 36-46. The treatment is in line with your views as to the income and outgo of government and business in the period 1933-35, but so far as I know has never been written out before. It provides, in my opinion, valuable additional support to the view that government expenditures constituted the main force in the recovery movement.

Pages 48-51 and 54-55 bear on the excess reserve problem.

Confidential
LC : R.and S.
May 29, 1936.

REPORT ON THE LARGE DEPOSIT STUDY

REPORT ON THE LARGE DEPOSIT STUDY

Table of Contents

LIST OF TABLES

REPORT ON THE LARGE DEPOSIT STUDY

I - Introduction

The solution of the problem of monetary control, - the problem of so directing the monetary mechanism as to minimize rather than intensify business fluctuations -, depends only in part on the instruments of monetary control and the effectiveness of those instruments. The solution of the problem of securing proper direction, degree and timing of policy depends mainly on the correctness of the diagnosis of business conditions - on the correctness of the understanding and interpretation of current forces, and their probable trend in the immediate future. Understanding and correct interpretation require, in turn, statistical data. Despite the apparent wealth of current statistics, all students of business conditions will testify to the difficulty of attempting to build up a comprehensive picture of current conditions. Essential current information bearing upon the various types of monetary expenditures and incomes, and upon the production and consumption of various types of goods and services, is missing.

It is true that no one statistical series can present the whole picture. It is also true, on the other hand, that the whole picture can be built up only by the use of many individual series. The present study, in addition to being directed toward certain specific questions, was undertaken partly to ascertain if current information on the distribution of deposits as between different economic groups would be of aid in the interpretation of current developments. It constitutes the first attempt made in this country

to ascertain the distribution of deposits, changes in the distribution, and the significance of such changes. The possible use to which such information could be put is indicated in the later sections of this report.

The experimental and exploratory character of the study, and the fact that it relied upon the voluntary cooperation of banks, explains in large part the form it took. Since there are over 50 million separate deposit accounts in the banks in this country, it was obviously out of the question to ask banks to make a complete classification. The classification of even a thousand accounts entails considerable labor. It was believed, however, that a comparatively few large accounts constitute a substantial portion of total deposits. In confirming this view and in determining a minimum size for accounts to be reported, the assistance rendered by Mr. S. Sloan Colt and Mr. James Perkins, Presidents of the Bankers Trust Company and the National C ity Bank, respectively, was very much appreciated. It was desired to select a minimum size such that banks would be asked to report relatively few accounts requiring a small amount of labor to list and yet having balances making up a substantial percentage of total deposits. It was finally decided to ask three of the largest banks for a listing under broad classes of those accounts which were over $500,000 on either of two dates, nine other large banks for the accounts which were over $250,000, and the remaining eighty-eight large banks for those accounts which were over $100,000.

It was also decided that the advantages of being able to compare the results with call report figures for all member banks outweighed the advantages afforded by figures representing monthly averages. Various bankers consulted were of the opinion that the figures on the call dates October 25, 1933, and November 1, 1935, would be more representative and less affected by fortuitous changes than those on June 30, or December 31.

The cooperation of the large member banks was most gratifying. Of the hundred banks asked to supply information only one, a large metropolitan bank that was asked to report accounts above $250,000, failed to comply. A smaller bank asked to report accounts above $100,000, responded too late for inclusion in the tables presented in this report.

II - Summary Tables

Table I presents consolidated figures of identical and total demand deposit accounts. It will be noted that identical accounts increased 46 percent between the two dates. It is perhaps remarkable that five of the sub-groups showed approximately the same percentage increase. The groups that displayed wide variations from the average increase were Deposits of Own Trust Department (239.6 percent), Trade and Service (17.9 percent), Foreign Non-Bank (145.6 percent), and All Other (16.5 percent).

Table II presents the consolidated figures of the identical and total time deposits reported. The two striking facts brought out by this table are the relative smallness of the figures of large time deposits and the decline between 1933 and 1935. Both of these facts are doubtless attributable to the reluctance of banks to accept or pay any interest on such deposits in the conditions prevailing in this period.

Table III was designed to show the wide diversity in the behavior of identical accounts. It shows the number of accounts that declined and the number that increased in each group, and the amount of the declines and increases. It may serve as a corrective to the impression conveyed by Table I that all business and financial accounts were increasing uniformly in response to the same set of factors.

TABLE I

REPORTED DEMAND DEPOSIT ACCOUNTS

(Millions of Dollars)

	October 25, 1955.			November 1, 1955.			Percent
	Number	Balance	% to Tot.	Number	Balance	% to Tot.	Change
Section A. Identical Accounts							
Total Demand	9,188	3,592.3	100.0	-	5,243.5	100.0	+ 46.0
Business	5,558	2,201.5	61.3	-	3,083.1	58.8	+ 40.0
Manufact'g.	3,489	1,323.2	36.9	-	1,883.0	35.9	+ 42.3
Pub.Utility	727	375.1	10.4	-	525.9	10.0	+ 40.2
Railroad,etc.	515	272.2	7.6	-	402.0	7.7	+ 47.7
Trade & Serv.	822	230.9	6.4	-	272.2	5.2	+ 17.9
Finance	3,014	1,218.6	33.9	-	1,933.1	36.9	+ 58.6
Ins.,etc.	1,846	836.3	23.3	-	1,149.7	21.9	+ 37.5
Individuals	1,114	257.4	7.1	-	359.2	6.9	+ 39.6
Own Tr.Dept.	59	124.9	3.5	-	424.2	8.1	+239.6
Foreign	88	20.6	0.6	-	50.7	1.0	+145.6
All Other	533	151.6	4.2	-	176.7	3.4	+ 16.5
Section B. Total Accounts							
Total Demand	9,589	3,707.5	100.0	10,478	5,716.2	100.0	+ 54.2
Business	5,739	2,260.8	61.0	6,164	3,301.6	57.8	+ 46.0
Manufact'g.	3,604	1,360.6	36.7	3,865	2,021.3	35.4	+ 48.6
Pub.Utility	748	384.7	10.4	812	565.0	9.9	+ 46.9
Railroad,etc.	536	277.1	7.5	560	420.6	7.4	+ 51.8
Trade & Serv.	851	238.4	6.4	927	294.8	5.1	+ 23.7
Finance	3,189	1,262.5	34.1	3,555	2,130.2	37.3	+ 68.7
Ins.,etc.	1,924	856.3	23.1	2,124	1,274.1	22.3	+ 48.8
Individuals	1,206	281.3	7.6	1,372	431.8	7.6	+ 53.5
Own Tr.Dept.	59	124.9	3.4	59	424.2	7.4	+239.6
Foreign	91	21.2	0.6	121	66.8	1.2	+214.8
All Other	570	163.0	4.4	638	217.6	3.8	+ 33.5

TABLE II

REPORTED TIME DEPOSIT ACCOUNTS
(Millions of Dollars)

	October 25, 1933.				November 1, 1935			Percent
	Number	Balance	% to Tot.		Number	Balance	% to Tot.	Change
Section A. Identical Accounts								
Total	755	375.2	100	-		372.7	100	- 0.7
Business	386	237.7	63.4	-		207.2	55.6	-12.8
Manuf.	239	117.2	31.2	-		103.8	27.8	-11.5
Pub. Util.	69	84.2	22.5	-		66.5	17.8	-21.1
Railroad, etc.	41	23.1	6.2	-		25.9	6.9	+12.2
Trade & Ser.	37	13.2	3.5	-		11.1	3.1	-15.9
Finance	307	114.9	30.6	-		144.4	38.7	+25.7
Insurance etc	79	36.1	9.6	-		55.8	15.0	+54.6
Individuals	209	42.5	11.3	-		45.6	12.2	+ 7.2
Own Tr. Dept.	19	36.4	9.7	-		43.1	11.5	+18.5
Foreign	6	2.0	0.5	-		1.7	0.5	-14.5
All Other	56	20.6	5.5	-		19.4	5.2	- 6.0
Section B. Total Accounts								
Total	1,260	675.5	100		1,146	512.9	100	-24.1
Business	748	493.2	72.9		602	284.5	55.5	-42.3
Manuf.	471	286.5	42.4		379	143.5	28.0	-49.9
Pub. Util.	118	140.1	20.7		103	89.4	17.4	-36.2
Railroad, etc.	101	48.9	7.2		64	36.2	7.1	-25.9
Trade & Ser.	58	17.7	2.6		56	15.4	3.0	-13.0
Finance	417	143.7	21.3		458	199.0	38.8	+38.5
Insurance etc	122	51.0	7.6		150	93.0	18.1	+82.4
Individuals	276	56.3	8.3		289	63.0	12.3	+11.8
Own Tr. Dept.	19	36.4	5.4		19	43.1	8.4	+18.5
Foreign	13	7.8	1.2		7	1.9	0.4	-75.3
All Other	82	30.9	4.6		79	27.4	5.3	-11.1

TABLE - III

CHANGES IN BALANCES OF IDENTICAL DEMAND DEPOSIT ACCOUNTS BETWEEN OCTOBER 25, 1933, AND NOVEMBER 1, 1935, CLASSIFIED INTO ACCOUNTS INCREASING, ACCOUNTS DECREASING AND ACCOUNTS UNCHANGED
(Balances in thousands of dollars)

	No.of Accts.	Absolute Change 1/
Accounts in all classifications	9,113	+1,642,388
Increasing	5,857	+2,419,659
Decreasing	3,160	- 777,271
Unchanged	96	-
Business accounts	5,508	+ 881,694
Increasing	3,464	+1,371,836
Decreasing	1,990	- 490,142
Unchanged	54	-
Manufacturing and Mining	3,462	+ 559,835
Increasing	2,159	+ 845,459
Decreasing	1,265	- 285,604
Unchanged	38	-
Public Utilities	719	+ 150,888
Increasing	464	+ 246,606
Decreasing	249	- 95,718
Unchanged	6	-
Railroad and Other Transportation	512	+ 129,921
Increasing	323	+ 179,032
Decreasing	184	- 49,111
Unchanged	5	-
Trade & Service	815	+ 41,050
Increasing	518	+ 100,759
Decreasing	292	- 59,709
Unchanged	5	-

(Continued on next page)

TABLE III - continued

CHANGES IN BALANCES OF IDENTICAL DEMAND DEPOSIT ACCOUNTS BETWEEN OCTOBER 25, 1933, AND NOVEMBER 1, 1935, CLASSIFIED INTO ACCOUNTS INCREASING, ACCOUNTS DECREASING AND ACCOUNTS UNCHANGED
(Balances in thousands of dollars)

	No.of Accts.	Absolute Change 1/
Financial Accounts	2,991	+706,333
Increasing	2,009	+933,659
Decreasing	946	-227,326
Unchanged	36	-
Insurance, etc.	1,835	+306,103
Increasing	1,246	+462,759
Decreasing	569	-156,656
Unchanged	20	-
Individuals & personal holding co.'s.	1,097	+100,979
Increasing	707	+170,290
Decreasing	374	- 69,311
Unchanged	16	-
Own Trust Department	59	+299,251
Increasing	56	+300,610
Decreasing	3	- 1,359
Unchanged	-	-
Foreign	87	+ 29,884
Increasing	68	+ 35,615
Decreasing	19	- 5,731
Unchanged	-	-
All Other	527	+ 24,477
Increasing	316	+ 78,549
Decreasing	205	- 54,072
Unchanged	6	-

1/ The amounts shown here are not identical with the changes as computed from Table I, because Table I includes accounts reported by one bank in a form unsuitable for inclusion in this table.

III - Limitations of the Data

It should, in the first place, be understood that the data refer to deposits which were over $100,000 on either of the two dates in 87 of the largest banks, over $250,000 on either of two dates in 8 banks, or over $500,000 on either of two dates in 3 banks. Hence, it cannot be said that the figures represent all the deposits in the country over a certain size on either of the dates. They merely represent a substantial portion of what may be called the large deposit accounts in the country. It is believed that the bulk of the large accounts not covered by the inquiry are contained in the banks reporting only accounts of $250,000 or over, or $500,000 and over on either of the dates, accounts in the large member bank failing to report and large accounts in a few large non-member banks which were not asked to furnish information. The 98 member banks in the inquiry covered, with two exceptions, all member banks with demand deposits of more than $22,000,000 on December 31, 1935.

It should also be understood that the figures do not include all the deposit balances of holders who have large aggregate cash funds. Not only were some large accounts omitted in the cases just mentioned but, in addition, all the accounts of large corporations which were scattered in smaller banks, or which did not amount to the minimum size selected in the reporting banks, were likewise omitted.

The concentration of deposits is greater, therefore, than appears at first sight. Since large corporations undoubtedly had large deposits in more than one of the respondent banks, the number of accounts reported exceeds the number of separate holders. It is probable that some holders whose accounts were reported in the identical group by one reporting bank opened accounts in other reporting banks between the dates reported. Insofar as this is the case, the percentage increase of the deposits of identical holders may be larger than that shown in the figure for the increase in identical accounts.

For the reasons cited above the percentage increase shown may not represent accurately the percentage increase in the deposits of all individuals and business units in the various groups having large cash holdings. The movements shown by the listed accounts may not reflect exactly even the movements of the aggregate cash holdings of holders whose accounts were listed, since the movements of the listed accounts may have arisen from shifts of balances by the listed holders to and from non-reporting banks. This applies particularly to the chain store and mail order companies in the Trade and Service group. It appears advisable, therefore, not to lay too much stress on the actual percentage changes shown, but rather to treat the material as indicating broad trends.

There is a certain amount of ambiguity in the "Deposits of Own Trust Department". While they are large deposits which have shown an extraordinarily rapid rate of increase, they represent the combined funds of the separate trust accounts of many individuals and institutions. Some of the accounts were doubtless over $100,000, while others may have been relatively small. It is known that at least one large deposit in this category represented funds earmarked for the redemption of bonds and there were doubtless other deposits of a like nature. Since the chief interest of this study is in the economic distribution of deposits, rather than in the size distribution, the fact that deposits of Own Trust Department represent deposits belonging to many individuals does not detract from the significance of the figures. Such deposits are considered to be available for investment and, hence, may be listed as financial. Banks reporting deposits under this category usually listed several separate accounts, such as Personal Trust, Corporate Trust, etc. Since it is unlikely that each account on both dates represented the identical list of beneficiaries, it was decided in this case to depart from the rule of listing only identical accounts and to list the various trust accounts of a bank on one date as one account.

The fact that deposits are reported as of a given date may impair their representativeness. While this would be a serious limitation if the inquiry had been confined to a few hundred accounts

in one bank, it is believed that sufficient banks and sufficient accounts were covered to minimize the effect of more or less accidental factors that caused individual accounts to be abnormally large or small on the particular dates selected. The total of manufacturing or financial accounts, for example, can hardly have been significantly different on the dates selected than the monthly averages of such accounts around those dates.

The classification was made very broad partly to simplify the task of filling out the questionnaires and partly to preclude the possibility of identifying the holder of any account. Thus, it is not possible to do much in relating the changes in balances to the changes in the operations or circumstances of individual lines of business.

Finally, it is perhaps worth mentioning that the inquiry was merely concerned with quantitative changes. Information provided by the respondent banks did not bear in any way on the causes of the indicated changes.

IV- Coverage

The reporting banks were asked to list accounts open on both dates separately from accounts which were withdrawn and accounts which were opened in the period intervening between the two dates. Accounts open on both dates are referred to in this report as "Identical Accounts" as distinguished from "All Accounts". Inferences as to movements of deposits in all banks should be based upon the movement of identical accounts rather than upon the movements of total accounts.

The number and balances of reported accounts newly opened in reporting banks during this period exceeded the number and balances of reported accounts withdrawn during the period. The excess of accounts opened over accounts withdrawn may be accounted for by shifts of accounts from non-reporting banks and by new accounts opened by holders who continued to hold other accounts in reporting and non-reporting banks.

The degree of coverage represented by these reports is summarized in Table IV. The term " Unclassified Deposits" is used to designate deposits whose ownership is not now specified in condition reports, that is, all deposits exclusive of interbank deposits and deposits of the Federal Government and other public bodies.

It has also been possible to state the percentage of the total deposits of the ninety-eight reporting banks which were held in the reported accounts and the accounts of public bodies. The latter

TABLE IV

PERCENTAGE OF UNCLASSIFIED DEPOSIT BALANCES

COVERED BY SPECIAL REPORTS

	Identical Accounts Reported		Total Accounts Reported	
	Oct.25,'33.	Nov.1,'35.	Oct.25,'33.	Nov.1'35.
All member banks				
Demand accounts	29.2	29.2	30.1	31.8
Time accounts	4.7	3.8	8.6	5.4
Demand and time accounts having balances of $50,000 and over	52.7		58.4	
Central reserve city member banks- New York				
Demand accounts	42.5	44.0	44.0	48.7
Time accounts	12.1	12.7	34.8	18.6
Central reserve city member banks- Chicago				
Demand accounts	43.4	46.0	45.0	49.8
Time accounts	7.8	7.3	12.5	10.2
Other reserve city member banks				
Demand accounts	27.2	26.8	27.9	29.9
Time accounts	8.5	6.5	12.7	9.0
Country member banks				
Demand accounts	2.9	2.3	3.1	2.6
Time accounts	0.2	0.2	0.5	0.2

information is obtainable from condition reports and may be combined with the balances specially reported for this study to indicate a possible line of approach which could be taken in building up a complete picture of the distribution of deposits in the banks of the United States. The accounts specially reported for the study and the accounts of public bodies may be referred to as "Classified Deposits". As of November 1, 1935, the percentage of classified demand deposits to total demand deposits, exclusive of interbank deposits, ranges from 19 percent to 75 percent and averages about 48 percent for the banks reporting accounts of $100,000 and over. The percentage ranges from 37 percent to 83 percent and averages about 57 percent for banks reporting accounts of $250,000 and over. The percentage averages 55 percent for banks reporting accounts of $500,000 and over.

The ninety-eight banks which made special reports for the study held about 60 percent of total member bank deposits and 65 percent of all member banks' individual deposits subject to check. These figures suggest that a report of deposits of somewhat lower minimum size by these institutions with a classification along somewhat broader lines than the ones employed in this study would provide information as to the distribution of a considerable proportion of total cash holdings.

It is possible to state the coverage of the reported balances in another way by comparing them with the cash balances reported on the balance sheets furnished to the Bureau of Internal Revenue in connection

with corporate income tax returns. These are classified by industrial groups in the published compilation, Statistics of Income. Through the courtesy of the Bureau of Internal Revenue it was possible to obtain the figures classified also by the size of total assets of the reporting corporations. It is a reasonable assumption that few corporations with total assets of less than $1,000,000 would have had deposit accounts of $100,000 or over at one of the two dates covered by the report. Hence, it is reasonable to assume that almost all business balances reported for this study belong to corporations with total assets of a million dollars or over. We may, therefore, compare the balances reported for this study not only with the Internal Revenue figures for all corporations but also with the figures for all corporations with total assets of a million dollars or over. This is done in Table V.

TABLE V.

PERCENTAGE OF CORPORATE CASH BALANCES COVERED

BY IDENTICAL ACCOUNTS -1933

	All size groups	Corporations with total assets of $1,000,000 or over
All groups, exclusive of banking	43.9	-
Manufacturing and mining	41.9	50.5
Transportation and other public utilities	58.5	61.2
Trade and service	20.4	38.0
Finance, exclusive of banking	55.8	-

The comparison is subject to an error of undetermined size because the special reports relate to the date October 25, while most of the balance sheets reported to the Bureau of Internal Revenue relate to the date December 31. Since total deposits in member banks increased somewhat between October 25 and December 31, 1933, there is some reason to believe that the error is in the direction of understating the degree of coverage obtained.

It is necessary to point out that data collected in this way, by obtaining reports of the balances of a few large accounts in a few large banks, are not likely to be representative of the movements of the deposits of the average business unit. It is probable that the business units which held the balances reported in this study are extremely large relative to the typical American business enterprise. While this seriously impairs the usefulness of the data from the point of view of some economic problems, such figures are significant from the point of view of monetary policy, which is interested primarily in shifts in holdings of money between consumers, financial enterprises, and other enterprises, and in the contribution which information of this kind may make to the explanation of changes in the total volume of spending. Because the relatively few large corporations account for so large a proportion of the economic activity of the country, decisions on the part of these corporations to spend or not to spend the funds under their control are likely to dominate the course of business, overweighing the influence of whatever policies may be pursued by the hundreds of thousands of smaller businesses. This is strikingly illustrated by the fact that 80 percent of the cash balances of all non-financial corporations are held by corporations with total assets of over $1,000,000.

V - Economic Distribution of Demand Deposits

Figures of large classified time deposits obtained in this study for October 25, 1933, may be utilized in conjunction with other data in an attempt to make a rough classification of total demand deposits on that date. It has been difficult to do this hitherto as the item "cash" in the corporation balance sheets published by the Bureau of Internal Revenue include both time and demand deposits and there was no way of estimating with any degree of precision the amount of each type comprising the totals. 1/

The present basis of estimating the demand deposits of corporations is as follows: The percent of time deposits to total deposits reported in the present study was calculated for each of the classifications, manufacturing, etc., transportation and public utilities, and trade and service. These percentages were then applied to the reported cash holdings on December 31, 1933, of the corporations in these groups that had assets of a million dollars or over. The justification for this procedure is that there is no reason for believing that the ratio of classified large time deposits to total classified large deposits differs in the banks not reporting from the ratio in the banks that were included in the study. Moreover, the degree of coverage of the million dollar asset class of corporation obtained by the inquiry was comparatively high. There is more guesswork involved in the estimate of the proportion of time deposits to total deposits of corporations having assets of less than a million dollars. The assumption adopted

1/ Forms to be used in reporting corporation balance sheets for 1935 provide a breakdown of the cash item into demand deposits, time deposits, and other cash.

was that the percentages in the three main groups ranged from the percentages for the large corporations in those groups to double those percentages. It was assumed that banks were less reluctant to accept smaller corporate time deposits and that therefore the percentage of time deposits to total deposits for small corporations would be at least as large as for the large corporations. Since the distribution of cash by size of corporation was not available for the financial group, the procedure adopted was to subtract the listed deposits in this group from the total. The remainder was distributed between time and demand deposits by applying first the percentage which the listed time deposits bore to the total listed deposits and then applying double this percentage. It is perhaps comforting to note that a comparatively large error in calculating the percentage of time deposits to total deposits of smaller corporations would affect the percentage figures of the distribution of total deposits very little.

Since deposits changed little between October 25, 1933 and December 31, 1933, it is not believed that the cash reported by corporations on the latter date differed significantly from that held on the former. A slight error also arises from the fact that "Cash" includes currency.

In building up the figure of total demand deposits on October 25, demand deposits of member banks as of that date were added to demand deposits of non-member banks as of June 30, 1933. The margin of error involved in this assumption would affect the totals only by from one to two percent. Since the classified deposits are unadjusted for float,

the figures for total deposits are likewise unadjusted. This means that all the figures involve some double counting of deposits, but this fact should not affect the percentage distribution significantly.

The estimate of deposits of own trust department was obtained by applying the percentage of time deposits to total deposits of own trust department in the national banks included in the study, to the figure of total deposits of own trust department of all national banks on June 30, 1933 as reported by the Comptroller of the Currency. To this figure was added the demand deposits of own trust department of state member banks included in the study.

The figure of large individual demand deposits is that reported by the banks in the present study. The fact that it represents only a portion of large individual demand deposits is indicated in the table by a plus sign. The same remarks apply to foreign non-bank deposits.

Table VI presents an approximate classification of demand deposits as of October 25, 1933. It is estimated that corporate business deposits amounted to approximately 29 percent of the total; financial deposits (corporate finance, own trust department, and large individual accounts) amounted to at least 11½ percent of the total; while deposits of public bodies amounted to 13 percent. The remainder, 46 percent, is attributable to unincorporated businesses and financial institutions, and large and small individual accounts. The bulk of the nearly five billion dollars of currency outside of banks and the Treasury on that date was doubtless likewise held mainly by unincorporated businesses and individuals.

TABLE VI

ECONOMIC DISTRIBUTION OF DEMAND DEPOSITS, OCTOBER 25, 1933.

	Demand Deposits (In billions)	Percent to Total
Unadjusted demand deposits	16.95	100.0
Corporate business	4.80 - 4.95	28.3 - 29.2
Manufacturing, mining & construction	2.74 - 2.84	16.2 - 16.8
Transportation & public utility	.99 - 1.00	5.8 - 5.9
Trade & service	1.07 - 1.11	6.3 - 6.6
Finance	1.93 - 1.96	11.4 - 11.6
Corporate finance (excl. of banking)	1.44 - 1.47	8.5 - 8.7
Deposits own trust department	.21 +	1.2 +
Large individual	.28 +	1.7 +
Public bodies	2.21	13.0
U. S. Government	.92	5.4
Other public bodies	1.29	7.6
Foreign non-bank	.02 +	.1+
Unclassified	7.99 - 7.81	47.1 - 46.1

There appears to be no way of estimating the proportion of demand deposits held by consumers. We know, however, that the aggregate amount of deposits (demand and time) under $10,000 in member banks on October 25, 1933, was $9.4 billion.[1/] Since almost all deposits held primarily for purposes of expenditure on consumption must be under $10,000, we could obtain the desired figure by subtracting from this aggregate (1) savings accounts under $10,000, (2) corporate demand accounts under $10,000 (already included under our classified groups), (3) demand accounts under $10,000 of unincorporated business units. None of these deductions can be made with certainty. We know, however, that savings accounts of all sizes on the same date amounted to $6.3 billion. The bulk of these must be under $10,000. When the accounts of the many small corporations in the trade and service groups and the accounts of unincorporated business units are also deducted, the residue must be a comparatively small figure. To arrive at the total money holdings of consumers, there must be added to this residue, however, a substantial portion of the currency outside banks.

1/ Federal Reserve Bulletin, 1935, p. 316.

VI- Distribution of Adjusted Demand Deposits by Class of Member Bank

It is interesting to compare the movement of individual demand deposits by city and "country" banks in the period under question. This is done in Table VII. For purposes of comparison, figures are also presented for 1929. Although "reserve cities" include some small cities and the "country" includes some large cities, on the whole the classification corresponds to a rough division between large cities on the one hand and smaller cities and towns on the other.

There appear to be some grounds for believing that there is a relation between the economic and the geographic distribution of deposits. Thus, the excess of individual demand deposits in New York and Chicago and in other large cities on November 1, 1935, over 1929, may indicate an excess of large business and financial deposits on November 1, 1935, over 1929. Similarly, on theoretical grounds we would expect consumer balances to be lower in 1935 than in 1929 in reflection of lower incomes. This expectation receives some degree of confirmation from the lower figure of demand deposits of "country" banks. Part of the change in the distribution of deposits since 1929 may be due to a shift of accounts by large corporations from country banks into large city banks in the course of the depression. Still another part of the change may be explained by the possibility that a larger portion of consumers' balances was represented in 1935 by currency. On the other hand, demand deposits in country banks would unquestionably have shown a much greater shrinkage if deposits of non-member banks had been included in the survey.

TABLE VII

MEMBER BANK ADJUSTED DEMAND DEPOSITS (EXCLUSIVE OF DEPOSITS OF BANKS AND OF PUBLIC BODIES) BY CLASS OF BANK, 1929, 1933, 1935.

	Total	Central Reserve City Banks	Reserve City Banks	Country Banks
Oct. 4, 1929	14,989	5,180	4,740	5,069
Oct. 25, 1933	11,254	5,142	3,558	2,554
Nov. 1, 1935	16,261	6,858	5,423	3,980
	Percentages of each class of bank to total			
Oct. 4, 1929	100	34.6	31.6	33.8
Oct. 25, 1933	100	45.7	31.6	22.7
Nov. 1, 1935	100	42.1	33.3	24.5
	Percentages of Oct. 4, 1929			
Oct. 25, 1933	75.1	99.2	75.1	50.4
Nov. 1, 1935	108.5	132.4	114.4	78.5
	Percentages of Oct.25, 1933			
Nov. 1, 1935	144.5	133.4	152.4	155.8

Insofar as the geographic distribution of deposits is related to the economic distribution, a change in the latter will involve a change in the former.

The fact that the percentage composition of demand deposits between city and country banks changed but little from October 25, 1933, to November 1, 1935, may possibly indicate that the percentage composition of demand deposits by economic groups likewise underwent little change in this period. The slightly greater percentage increase in individual demand deposits in country banks may in part be a reflection of the liquidation of assets of closed banks and in part may represent scattered demand deposits of large corporations such as chain stores. In any case it is not sufficient evidence in itself to establish the view that consumer deposits increased more rapidly than business deposits in this period.

In view of (a) the correspondence of the increase of large identical accounts with the increase of total individual demand deposits of member banks in this period; (b) the uniformity of the increase in five important groups; and (c) the very slight change in the distribution of demand deposits by size of city, little change in the percentage economic distribution of deposits between the two dates is indicated. All groups appear to have participated in the expansion of demand deposits brought about by Government financing and inflows of gold. Information bearing on this point, however, does not permit this statement to be made without reservation.

VII The Composition of Deposits and the Investment Policy of Banks

One of the results yielded as a by-product of the main line of investigation pursued in this study is the percentage of total deposits of each reporting bank represented by balances held in the large accounts which were reported, balances of public bodies and interbank balances. With this information available the question naturally arises: Is the proportion of deposit balances held in accounts of the specified types associated with the proportion of liquid assets held by individual banks? With this question in mind, the items cash and reserve with Federal Reserve bank, collection items and other amounts due from banks, dollar acceptances, commercial paper, loans on securities to brokers and dealers in New York City, and United States Government securities (direct and fully guaranteed issues) were tabulated from the condition report of each reporting bank. The proportion of these liquid assets to total deposits was then compared with the proportion of balances in large accounts to total deposits for each bank. In general, it was found that the higher the proportion of balances in large accounts to total deposits, the higher the proportion of liquid assets to total deposits.

A rough method of summarizing the results is employed in Table VIII. The above conclusion, however, rests upon analysis of the figures by more intensive methods. It is of interest to note that the dollar value of liquid assets exceeded the balances of large accounts for almost all the reporting institutions.

TABLE VIII

PERCENTAGE OF LARGE DEPOSITS TO TOTAL DEPOSITS AND PERCENTAGE OF LIQUID ASSETS TO TOTAL DEPOSITS: 86 LARGE MEMBER BANKS REPORTING ACCOUNTS OF $100,000 OR OVER.

NOVEMBER 1, 1935.

Groups of banks arranged in order of deposit concentration	Average 1/ Deposit Concentration Percentage	Average 1/ Liquidity Percentage
1st - 10th banks	76.5	78.2
11th- 20th "	68.0	75.4
21st- 30th "	62.3	73.2
31st- 40th "	57.4	69.3
41st- 50th "	50.7	67.2
51st- 60th "	44.8	59.3
61st- 70th "	40.3	63.8
71st- 80th "	33.5	57.0
81st- 86th "	21.7	55.8

1/ Unweighted average.

It was also possible to test the view that the proportion of demand to total deposits is associated with the amount of liquid assets held by banks. For this purpose interbank and demand public funds were combined with other demand deposits and the proportion of these accounts to total deposits compared with the proportion of liquid assets to total deposits. The results are summarized in Table IX by the same method as that employed in Table VIII. These figures, as well as analysis by more intensive methods, suggest that the proportion of demand to total deposits is not as closely associated with liquidity for the group of banks under consideration here, as is the proportion of large to total deposits.

TABLE IX

PERCENTAGE OF DEMAND DEPOSITS TO TOTAL DEPOSITS AND PERCENTAGE OF LIQUID ASSETS TO TOTAL DEPOSITS: 86 LARGE MEMBER BANKS, NOVEMBER 1, 1935.

Groups of banks arranged in order of ratio of demand to total deposits	Average 1/ Percentage of Demand to Total Deposits	Average 1/ Liquidity Percentage
1st-10th banks	96.8	72.0
11th-20th "	91.0	74.9
21st-30th "	87.3	64.1
31st-40th "	83.1	73.3
41st-50th "	79.3	72.5
51st-60th "	76.3	68.6
61st-70th "	68.3	69.7
71st-80th "	56.9	49.8
81st-86th "	44.2	55.5

1/ Unweighted average

In the interpretation of these results, there are a number of qualifications which should be kept in mind. The items tabulated from the condition reports may not include all assets which are in fact liquid. Although the reports show a considerable number of withdrawals of accounts and fluctuations from a very large to a very small figure in the balances of many accounts, some large accounts may be comparatively stable in their behavior and hence may not furnish a motive for any greater degree of liquidity than would be the case if the same aggregate balance were divided between many small accounts. Finally, there are a number of other factors bearing upon liquidity besides the considerations which have been mentioned here.

VIII - Significance of the Indicated Changes in Deposit Holdings in Relation to the Interpretation of Business Developments since 1933.

A. Introduction

Since 1933 we have experienced the most rapid expansion of demand deposits in our history. What happened to these deposits brought into existence through government financing and the inflow of gold? What is their relation to business developments in this period? Were the indicated large increases in business and financial deposits reflections of restrictive or expansive developments? Do they throw any light upon the nature of the forces bringing about recovery?

Inspection of the figures alone cannot give the answers to these questions. An increase in the deposit holdings of a group may correspond with increasing or decreasing business activity; may be a reflection of restrictive or expansive developments. Its significance depends partly on what is happening to the total volume of deposits; upon whether it rose from an excess of sales over disbursements or from an excess of receipts from sales, borrowings and sales of securities over disbursements; upon whether it is a more or less permanent addition to balances, or whether it is temporary; and upon the relation of balances to the value of output. The present distribution of deposits could theoretically be compatible with the national income of $50 billion or $100 billion, depending upon the rate at which deposits are flowing through personal, financial, Government, and business accounts. The fact that business deposits in the period under

study increased greatly can in itself tell us nothing about the magnitude of business expenditures or whether business was the active agent in bringing about an increase in the national income. Care must be taken not to regard any increase in the deposit holdings of a group as constituting a "deflationary" factor. After all, if deposits increase somebody must hold them. It cannot be repeated too often that the distribution of deposits is only one element of a complex problem. Of more importance is the rate at which deposits are flowing through an account. An example of the danger of regarding any increase in the deposit holdings as constituting a deflationary factor is afforded by the enormous increase in the holdings of money by consumers in Germany in the worst stages of inflation. It is necessary, in other words, in interpreting changes in the distribution of deposits to link these changes to such other information as is available on the causes of the change in deposits and their distribution.

B. Theoretical Framework of Analysis

Before indicating the possible bearing of the present study upon the interpretation of business developments since 1933, it is first necessary to outline very briefly the theoretical framework of analysis that is applicable here. It will be appreciated that any brief outline must inevitably be simplified and must be concerned with broad fundamentals rather than with refinements.

The income of the community is derived, broadly speaking, from the disbursements of business and public bodies. If such disbursements proceed at a steady rate and in turn are passed back to business and public bodies by income receivers at a steady rate, the national income would remain unchanged. In order for the national income to increase, the disbursements of business and public bodies must in any period exceed the disbursements of the previous period. In any period income is available for debt repayments, purchases of goods and services, purchases of securities or for additions to balances. The disbursements of business and public bodies, must, in other words, if the national income is to increase, be in excess of both consumers' expenditures for goods and consumers' current saving out of current income. This will ordinarily entail the borrowing and spending of new deposits or of deposits hitherto idle.

If the supply of money does not increase, increased disbursements by business and public bodies must mean that the ratio between money and the value of output declines. If the supply of money is increasing the ratio between balances and output may remain constant or even increase, since both balances and disbursements may increase. It may be said very broadly that any change in the distribution of money that causes the ratio of a constant volume of money to the volume of output to rise (fall) is a restrictive (expansive) development. A change in the distribution of money that would otherwise cause a change in this ratio may be partially, wholly, or more than offset by a change in the supply of money.

C. Cause of the Increase in Individual Demand Deposits

Adjusted non-Government demand deposits in member banks increased $6.8 billion from October 25, 1933, to November 1, 1935. The main factors increasing such deposits in this period were purchases of Government bonds by banks, reduction of Government cash and deposits, and inflows of gold. Member bank holdings of Government direct and guaranteed obligations increased $5 billion. Government deposits, postal savings deposits in banks, and Treasury cash, adjusted for the increment on gold, decreased $1.2 billion, and the addition to the gold stock from imports and domestic production was $2.9 billion. The main factors decreasing demand deposits were a contraction of loans of $1.1 billion and an expansion of time deposits of $1.7 billion. A number of other factors account for the difference.

D. Significance of the Increase in Business Deposits

Does the indicated increase in business deposits reflect a failure of business to pass along the full proceeds of sales to the factors of production? Or has business passed along to the factors of production in processing and plant expenditures more than it has received from the sale of consumer goods and built up its balances in other ways, such as by the sale of securities? The importance of this question is that if the increase in balances was attributable to an excess of final sales over disbursements, this would indicate that the increase in the demand for goods and production was attributable to factors other than business disbursements.

Information is not available as to business receipts from the sale of final goods and business disbursements in taxes and payments to the ultimate factors of production. We may, however, obtain some light on this question by examining the degree to which deposits could have been increased in other ways in this period.

We may, in the first place, eliminate one possible source of the increase. It was not attributable to increased borrowing from banks. On the contrary, the increase would have been greater had some deposits not been used for the liquidation of such borrowings. Business borrowings from member banks declined by at least $300 million. The decline was probably greater since reported figures for the later date include loans in banks which were unlicensed at the earlier date and also loans bought from suspended banks.

Another possible source of the increase, the borrowing of current savings, must likewise be eliminated in view of the fact that such borrowing was almost totally absent in this period; in fact, the net long-term indebtedness of all business units probably declined. A comparison of the funded debt of 597 industrial corporations on December 31, 1933 and December 31, 1935, indicated a decline of $288,000,000. The cash holdings of this particular group of corporations increased from $1.6 billion to $2 billion. Deposits of this group were increased by a decline in the holdings of marketable securities of $360 million but this, as has been just noted, was largely offset by a decline in funded debt.

It is highly doubtful if the repatriation of capital on the part of American business could have occurred in an amount sufficient to account for more than a small part of the increase in business deposits. The total inflow of capital in the period is estimated at around $2,000,000,000, and it is believed that the great bulk of this was for the account of foreigners.

There appears to be some evidence that the time deposits of business concerns decreased slightly and this may have represented a shift to demand deposits. This factor, however, appears to be of minor significance in this period.

Finally, in view of the recovery movement and the extension of time and installment sales, it is doubtful whether the net indebtedness of individuals to corporations could have declined in this period. The contrary, rather, appears to be true. By the process of elimination, therefore, we arrive at the conclusion that the major part of the indicated increase in business deposits must be attributed to the retention of receipts from sales of goods and services. It is possible to push this stage of the analysis one step further. Current receipts of business cover costs and profits, if any. Since labor and material costs, representing actual out-of-pocket expenditures, increased in this period, it would appear that the increase in business deposits is either a reflection of a failure to disburse money to the full amount represented by such costs as taxes, depreciation, bad debts, and loss on sale of capital assets, or to the full amount represented by profits, or both.

It will be understood that in speaking of "business" the general average is had in mind. As noted above, many business accounts declined in this period. The trade and service group, in particular, showed little increase. It is perhaps worth pointing out that depreciation charges are relatively smaller in this group than in most lines of business, and inventories are heavier relative to fixed plant. Hence, a larger proportion of the costs represents necessary out-of-pocket disbursements. Finally, it should be recalled that what little evidence there is suggests that business deposits increased no more rapidly than the deposits of other groups.

It would appear, therefore, that while business disbursements for labor, materials, and dividends were increasing in this period, they did not increase as rapidly as receipts from the sale of goods and services. They increased even less rapidly than consumers' expenditures plus current savings. This does not mean that business expenditures did not increase the national income in this period. As we know, business expenditures actually increased. It appears likely, however, that while business disbursements increased, the impetus came from elsewhere. This point will be taken up later.

The indicated increase in consumer deposits is both a reflection of expansive and restrictive developments. It is a reflection of an expansive development in so far as it arose from a growth of consumer income. It is a reflection of a restrictive tendency in so far as it represents a failure to spend income.

The same remarks apply to the increase in business deposits. As we have seen, it is a reflection of increasing sales, and itself increased the liquidity of business. It also, however, represents a failure to disburse gross money income as rapidly as it was received.

E. Significance of the Increase of Foreign Non-Bank Deposits

When we turn to the increase in foreign non-bank deposits, the problem is not so much to explain the increase as to explain why it was no greater. The inflow of capital from abroad in this period was somewhere in the neighborhood of $2,000,000,000. Part of this is attributable to repatriation of American capital; part is accounted for by an increase in foreign bank deposits in American banks and a decrease in American bank deposits abroad; part may be represented by foreign deposits of less than the minimum-sized accounts listed in this study. Even after making allowance for these factors, however, it would appear that a substantial portion of capital inflow on foreign individual account must still be accounted for. Apparently the explanation is that it went into securities and the deposits were diffused among consumers, business and holders of financial deposits. Thus the inflow of capital exerted an influence toward low interest rates not only because it gave rise to excess reserves but also because it represented an increase in the demand for securities.

F. Significance of the Increase in Financial Deposits

What is the significance of the indicated increase in financial deposits in the interpretation of business movements in this period?

Three main factors may account for the increase. Financial deposits may be increased by current saving out of current income, by the redemption of bonds and repayment of other debts held by financial institutions, or by the sale of securities by financial institutions. They are generally drawn down by the purchase of stocks, bonds, or the making of loans by financial institutions.

The significance of the increase in financial deposits depends in large part on the causes of the increase. If the increase is a reflection of the non-utilization of part of the current savings of the community out of current income, the effect is definitely restrictive. It means that part of the income of the community remains unspent and the monetary circulation is to this extent diminished.

This statement is sometimes questioned. It is occasionally asserted that an idle deposit differs from an idle piece of currency, inasmuch as the former is being "used" by a bank. The fallacy here is the implicit assumption that a bank can spend the deposit of a customer. What the bank can do is to use the cash or reserve funds deposited by a customer, which is an entirely different matter. The reserve funds arising from the deposit of a check represent a corresponding loss of reserve funds on the part of the bank on which the check is drawn. While one bank is able to expand its loans, another bank is forced to contract.[1/] If this were not so, loans and deposits would expand indefinitely.

1/ When excess reserves are widely diffused, as at present, net favorable or unfavorable clearing house balances may not result in expansion and contraction of earning assets but merely in a shift of excess reserves between banks.

The fallacy is perhaps even more clearly indicated by imagining a period when no checks are being written by customers of banks on their deposits with banks. Obviously, apart from currency transfers, there would be no monetary transactions of any kind. It follows, therefore, that if part of current income is added to consumers' or financial deposits and is not spent on the purchase of consumers' goods, or the production of goods, the act of saving has been abortive and instead of leading to the spending of an equal sum on capital equipment, actually results in less production of goods than would otherwise have occurred. 1/

Similarly, if the increase in financial deposits, i.e., deposits held by financial institutions, is attributable to the retirement of debt on the part of consumers or business out of current income or current receipts, the monetary circulation is to that extent decreased. If, however, it arose from the repayment of debt out of funds that would otherwise not have been used, the increase would not be a reflection of a development restrictive to business activity.

It follows, therefore, that whether the indicated increase in financial deposits was a reflection of developments operating to restrain the recovery movement depends upon whether it arose from unspent current receipts or income, or whether it represented merely a shift of deposits that would not otherwise have been used or the

---

1/ If current income is increasing this may not mean an absolute decrease in production but only a lesser increase than would have taken place had no saving occurred.

creation of deposits which would not otherwise have been brought into existence. It is possible that a part of the increase in financial deposits may be attributed to the refinancing of mortgages by Government agencies but the bulk of such refinancing took the form of exchanges of Government guaranteed bonds rather than cash for mortgages. There is also some indication that business liquidated more debt than it incurredin this period, though not to an amount comparable to the indicated increase in financial deposits. Even allowing for these and other types of debt redemptions, it would still appear that at least part of the increase in financial deposits must be attributed to some individuals' failure to spend large salaries, the failure of insurance companies to invest insurance premiums, and the failure of individuals and institutions to spend or invest interest and dividends. In view of the decline in the holdings of marketable securities by business corporations it appears unlikely that financial deposits could have been increased in any substantial amount by sales of securities by the holders of such deposits. On the contrary, it appears probable that financial institutions and wealthy individuals purchased marketable securities on balance from business and individuals. Life insurance companies' holdings of the securities of non-public bodies increased by over $600 million from December 1933 to December 1935, despite bond redemptions and the almost complete absence of new corporate issues. One important source of sales appears to have arisen from the liquidation of security loans by individual

In the earlier part of this section it was pointed out that normally a part of the community's income is saved and passed back into the production-consumption stream through the medium of loans to

producers and consumers. In the period under discussion, however, industry did not borrow on balance. In view of the low level of building activity the borrowings of consumers from savers can hardly have amounted to a significant figure. Yet, despite the interruption to the monetary stream arising from the failure of industry and consumers to borrow the current savings of the community, the national income increased.

G. Broad Interpretation of Business Developments in this Period

Leaving aside questions of motivation and concentrating upon the changes in the monetary circulation and in the distribution of balances, the information at hand appears to suggest the following broad interpretation of business developments in the period under discussion.

Public bodies disbursed funds which came in part from consumer, business and financial deposits, and in part from deposits newly created by the banking system. These disbursements were partly for refinancing purposes and mainly for purposes which directly increased the buying power of individuals. A previous study by Mr. Martin Krost and the present writer indicated that the net activity-increasing expenditures of the Federal Government amounted to $6,370,000,000 for the period October 1933-October 1935. This figure was obtained by adding together those expenditures of the Government which appeared to increase spending and business activity directly and subtracting tax receipts (except estate taxes) which might be held to decrease spending and business activity. The actual net activity-stimulating figure

is doubtless higher, since it is unlikely in this period that collection of corporate and personal income taxes decreased spending correspondingly. To this figure, moreover, should be added the net activity-stimulating expenditures of all other public bodies.

Those funds disbursed by public bodies which went directly into people's incomes were probably used in large part to purchase goods and services, in part used to liquidate past indebtedness and in part "saved". Of the part saved, in turn, a portion was probably added to demand deposit balances, a portion to time deposits, and a portion went into financial deposits via insurance companies and purchases of stocks and bonds. A part of the resulting increase in financial deposits was again borrowed by public bodies and respent.

The larger portion of Government disbursements to individuals which was spent directly for goods and services was in part disbursed in turn by business in the production of more goods and services, in part used by business to liquidate indebtedness, and in part was added to business balances. The same was doubtless true in the case of direct disbursements of public bodies for supplies and materials. Thus, business was able to add to its balances, refrain from borrowing, and at the same time increase its production and its disbursements to the factors of production.

This interpretation of business developments is consistent with (a) the indicated increase in consumer, business and financial deposits, (b) the increase in the national income and production, and (c) the failure of business to borrow and spend the current savings of the community. The increase in deposits of all groups was made possible

in very large part by the borrowing and spending by public bodies of newly created deposits. Business was able to increase both its disbursements and its balances because a substantial portion of the income devoted to the purchase of the products and services of business was not derived from the disbursements of business but from those of public bodies. The failure of business to borrow the current savings of the community did not have its normally restraining effect, since the current savings were in part borrowed by public bodies and passed back by them into the income stream, and in part offset by the Government borrowing and spending of newly created deposits. The collection and spending of corporate and personal income taxes and estate taxes by the Government resulted in part in a reduction of idle balances rather than a reduction of expenditures. A substantial part of such taxes represents funds that would otherwise have been saved and in the conditions prevailing in this period it is extremely unlikely that additional savings would have been borrowed and/or spent.

There were, of course, other factors in the situation. Thus, there was a small amount of borrowing of financial deposits by consumers to build new houses. Consumers, again, may have continued to use up some of their past savings and may have extended their purchases by credit advanced by business or finance. The increase in deposits arose in part from gold and silver inflows. We are here, however, concerned with the broad picture and it is difficult to reconcile the various observable facts without placing heavy emphasis on the part played by public bodies in bringing about an increase in incomes and expenditures in the period under discussion.

Unless we account for the excess of business sales over disbursements in terms of the increase in incomes due to Government spending, we will be forced to the view that consumers not only spent all their incomes derived from business on the products of business, but, in addition, drew down their balances and/or borrowed, and/or sold securities to institutions or savers -- in short, that the savings of consumers were a negative quantity in this period. In view of (a)the direct evidence that Government spending increased some persons' incomes and (b) the indirect evidence of saving on the part of consumers, we are forced to reject the hypothesis that increased business disbursements constituted the main element in the recovery movement. The assumption that throughout all this period the fiscal policies of public bodies were causing the income of the community to be in excess of the disbursements of business to the factors of production, plus the payment of taxes, appears to be necessary to explain the concomitant increase in consumption and savings.

The increased disbursements of business increased incomes and the demand for goods, but the increased disbursements were in response to previous increases in demand. The process may be viewed as (a) an increased demand for the products of industry arising from the incomes earned by the factors of production, plus the incomes derived from Government spending, and (b) a further increase in demand resulting from the increased disbursements of business in response to the initial increase in demand. The wavelike movements of business were doubtless due largely to inventory changes, but we are here concerned

with the broad upward movement. The continuation of activity-stimulating expenditures of the Government was necessary because the initial impetus of Government spending quickly lost its momentum in the conditions prevailing in this period. A portion of the receipts of both business and consumers remained unspent.

The preceding argument has been concerned with demonstrating that the increase in business deposits was mainly attributable to the failure on the part of business to disburse all its receipts from sales. Had business disbursed to the factors of production all its receipts from the sale of final goods and services the national income would have been increased by more than the amount indicated by the increase in business deposits. Part of the increased disbursements would have returned to business in increased sales, been redisbursed, and a further portion been respent on goods by income recipients, and so on. The amount by which the national income would have been additionally increased in the two-year period depends on the number of times the additional money would have completed the production-income-spending circle and the portion that would have been unspent by income recipients each time. Thus, in the period under discussion it appears that the recovery movement would have been more rapid than it was if business had disbursed the full proceeds of its sales and in addition had secured and spent financial deposits. Or, again, incomes and production would have increased more rapidly if income recipients had spent a larger portion of their incomes on consumer goods. These statements have been made before. As a result of the present study, however, they can be made with more assurance.

The conclusions arrived at above should not be interpreted as meaning more than they state. They do not state, for example, that no recovery would have been experienced in the absence of Government spending. Whether business disbursements would have been greater or less in these circumstances is a matter of opinion as regards business motivation. The material under discussion can throw little light on this problem.

IX - Bearing of the Study on Monetary Problems in the Future.

A - Introduction

In the event of a continuance of the recovery movement until relatively full employment is obtained what changes, if any, might be expected to occur in the distribution of deposits? This problem is of concern not only to individual bankers, but also to the Reserve Administration. It bears upon the problem of the trend of interest rates, upon the demand for bank credit, upon the distribution of reserves and earning assets among banks, upon the volume of expenditures, upon the adequacy of the existing supply of money, and upon the general problem of control.

B - Bearing on Trend of Interest Rates

The present distribution of demand deposits indicates a continuance of low interest rates for some time to come. The volume of financial deposits appears to be much in excess of the normal requirements of the holders, and hence represents funds available for investment. From 1925 to 1931 the cash holdings of reporting life insurance companies approximated 0.8 percent of their assets, or slightly over $100 million. At the end of 1935 they amounted to 3½ percent of their assets, or over $750 million. Deposits of trusts administered by national banks appear, likewise, to be larger than normal, increasing from 2.9 percent of trust assets in 1933 to 3.8 percent in 1935. The same is perhaps true of the deposits of wealthy individuals, though nothing is known of their customary size.

Of more importance than the existing supply of deposits available for investment is the probability that current saving will increase as income increases. Business and private borrowings will have to increase very substantially in order to absorb both current saving and the supply of deposits available for investment built up in the past few years.

C.- Bearing on Future Demand for Bank Loans

The present distribution of deposits has also some bearing upon the probable demand for loans and, hence, on interest rates. The rapid growth of business deposits indicates that considerable capital expenditures could be undertaken without recourse to borrowing. It is by no means certain that business will reduce its deposits but at least it seems reasonable to assume that some reduction will occur before recourse is had to borrowing on a large scale. That such deposits, by and large, are in excess of current operating requirements as determined by past experience is indicated by the fact that they appear to be approximately as large as they were in 1929, despite lower business activity and a lower price level.

D.- Bearing on Adequacy of Money Supply

The distribution of deposits has some reference to the adequacy of the existing money supply. The supply of adjusted demand deposits and currency outside banks was turned over approximately three times a year to income receivers in the years 1923-1929. The relation of this type of turnover, which is technically known as the income velocity of money, to the

distribution of money is complex. Theoretically, a given rate of turnover could correspond with almost any distribution of money. The relationship is determined by the percentage of their incomes which individuals decide to hold in the form of money and the percentage of the value of their output which corporations decide to hold in the form of money. This subject has been very little explored as yet, and little is known of the relationship of money to receipts.[1/] If, however, average money balances of consumers bear a fairly definite direct relation to their incomes and if incomes continue to increase, it would follow that the money holdings of consumers would increase above their present levels. That this process is actually taking place is perhaps indicated by the increase of $693,000,000 in net demand deposits in member banks in places under 15,000, between June 1933 and June 1935.[2/] Although a part of such deposits may belong to larger corporations, the bulk of them must represent very small individual business and personal accounts.

In an earlier part of this report evidence was cited to the effect that the demand deposits of consumers constituted a comparatively small portion of the total. If this is true it would follow that a comparatively large percentage increase in consumers' deposits would not constitute a large absolute increase. The great bulk of deposits disbursed by business and public bodies will, in other words, return to business and financial accounts. It is not to be expected, therefore,

1/ One of the objects of the WPA project in a number of closed banks, being supervised by the Federal Reserve System, is to secure some information on the relation of deposits to incomes in the years 1928-1931.

2/ The same definition of net demand deposits applied on both dates.

that in the event of continued recovery, accompanied by no further expansion of money, business deposits will experience a significant decline. What would decline under these circumstances would be the ratio of business balances to the value of output, which is another way of saying that the income or circular velocity of money will increase. There are, needless to say, a large number of factors that affect both the volume of business operations and the amount of balance held by business. The income velocity of money, or the balances-output ratio, is merely a convenient way of summarizing the net resultant of hundreds of "real" factors. If the income velocity increased to its 1923-1929 range, the existing supply of money of about $30 billion would be compatible with a national income of between $80 and $90 billion.

A discussion of the figure of national income that might be expected to correspond with relatively full employment cannot be entered upon here. It is, however, relevant to the present study to point out that the national income corresponding with a given supply of money is dependent on the relationship of money to the value of output. From 1923 to 1929 the estimated average stock of money was nearly one-third of the estimated value of annual production, or, in other words, the income velocity was nearly 3. It follows, therefore, that whether the existing stock of money is deficient, adequate, or excessive for conditions of relatively full employment depends upon the value of output that would correspond with full employment and the ratio between the stock of money and the value of output that will be arrived at. It is to be expected that consumer demand deposits will increase, and

financial deposits and the deposits of public bodies will decline as recovery proceeds. The important question, however, in determining the adequacy of a given supply of money to correspond with a given national income is the probable relationship between business deposits and the value of output, since the bulk of demand deposits appear normally to be held by business. There are some grounds for believing that business may maintain a higher ratio of demand deposits to output than in the past, because of the increased emphasis on liquidity resulting from the depression, and the lessened attractiveness and availability of other types of liquid assets. Business call loans to brokers are no longer permitted. There are increased restrictions on time deposits and banks are reluctant to accept large corporate time deposits when short-term interest rates are very low. If, however, short-term interest rates rise as recovery proceeds, which appears probable, time deposits and government securities will become more attractive relative to demand deposits as sources of liquidity. There are, of course, many other factors that will affect both the value of output and the size of balances held.

E. Possible Geographic Changes in Distribution of Demand Deposits

If consumers' balances increase and financial deposits decline, as appears possible, the geographic distribution of deposits would be affected. Smaller banks and banks in smaller urban places would gain deposits at the expense of metropolitan banks. This would not only affect the position of individual banks but it bears also on the

problem of monetary control. A shift of deposits from banks required to hold high reserves against deposits, to banks required to hold lower reserves, would release some reserves for further expansion. On the other hand, by resulting in a loss of reserves to metropolitan banks, it would have a tendency to tighten the money market through which monetary control customarily operates.

F. Bearing on an Outward Capital Movement

In the previous section the probability that a substantial portion of the inflow of capital went into securities was mentioned. The significance of this fact, if true, with reference to future problems is that a reverse flow of capital resulting in gold outflows would entail two distinct types of liquidation. One would be by the foreign holders selling securities and the other by banks losing the deposits that were converted into gold. Assuming no excess reserves and a disinclination to make up a loss of reserves by borrowing from the reserve banks, banks suffering a loss of deposits would sell securities and call loans. If foreigners' balances in this country were held in the form of cash, only the latter type of liquidation would arise as a result of an outflow of capital in the form of gold.

G - The Necessity of Increased Private Borrowings as Public Borrowings Decline

In the previous section grounds were advanced in support of the view that public bodies, in borrowing and spending existing financial and new deposits, were performing the monetary function

customarily performed by private borrowers in ensuring that the current savings of the community were not withdrawn from the monetary circulation. The fiscal policies of public bodies were invoked to explain the growth of deposits and the possibility of recovery proceeding despite the fact that business appeared to be disbursing less than its current receipts from final sales to consumers and to be refraining from borrowing. The question naturally arises as to what conditions are necessary for the continuance of a recovery movement in the event that the net activity-stimulating expenditures of public bodies became zero or a negative quantity.

It seems a reasonable assumption that consumer balances will increase if incomes increase, and it is certain that consumers will also continue to save a portion of their incomes in the form of insurance payments, savings deposits, and purchases of stocks and bonds. That is, savings will increase. It would appear necessary for the excess of business disbursements to income receivers over their receipts from the sale of final goods also to increase and to exceed current savings if the national income is to increase. Such an excess could arise from capital expenditures, or with less permanent effects, from increased inventories. In the absence of public borrowing the excess of disbursements will have to be financed mainly through business borrowing, personal borrowing, and the sale of new stock issues. It is, of course, possible for the recovery movement to continue without public or private borrowing or new

stock issues, provided business is prepared to dispose of its marketable securities and to draw down existing balances. It will be recalled that an increase in business disbursements may be expected to increase the national income by more than the initial decrease in business deposits. It is to be expected that the ratio between business balances and the value of output will decline. It is unlikely, however, that business deposits will decline absolutely, as would be necessary for a continued increase in the national income if consumer deposits and financial deposits continued to increase and no new money was created. Since borrowing or new stock issues are customarily undertaken for expansion of plant and building rather than for maintenance or current production, we arrive at the familiar point that, in the absence of Government activity-stimulating expenditures, an increase in capital expenditures is necessary for a growth in the national production and income.

H - Government financing

A final question which the inquiry helps to answer has to do with the dependence of the Government on the banks in financing its deficit. If we exclude the retirement of bonds bearing the note circulation privilege by the use of part of the gold profit, Federal Govt. debt increased by 6.4 billion in the period under consideration. Member bank holdings, again excluding the retirement of the circulation privilege bonds, increased 4 billion. Holdings of other financial and business institutions and individuals increased 2.4 billion.

Since financial deposits apparently increased so substantially in this period it is evident that a larger portion of Government bonds could have been absorbed by non-bankers. This point must be treated with caution. The fact that financial deposits increased does not mean that business development would have been the same if public bodies had not borrowed in part from banks. For one thing, the rate of interest would probably have been somewhat higher. For another, part of the increase in financial deposits arose from the new deposits created by banks' purchases of securities of public bodies. It would appear, however, that at present the Government would experience little difficulty in financing its requirements if member banks possessed no excess reserves and all new issues were ultimately distributed to non-bankers. It would have to pay more on short-term issues but, in view of the large amount of financial deposits, the increasing volume of saving and the low level of private demand for new capital, it would seem unlikely that the long-term yields on Government securities would rise significantly.

X- Summary of Findings

1. The proportion of deposits covered by the study

The 9,188 large identical demand deposit accounts reported in the study amounted to 29.2 percent of the total unclassified demand deposits of member banks on October 25, 1933. They accounted for $1,650,000,000 or 29.2 percent of the increase in unclassified demand deposits of member banks between October 25, 1933 and November 1, 1935. Total deposits reported on October 25, 1933 amounted to 44 percent of all corporate cash holdings (exclusive of banking) reported on December 31, 1933, and to 58.4 percent of all unclassified deposits of member banks which were over $50,000 on October 25, 1933. It will be seen, therefore, that the coverage of both total unclassified demand deposits and of large deposits obtained by this study was comparatively high despite the small number of accounts reported.

2. The distribution of total demand deposits of all banks among economic groups in 1933

As closely as can be estimated, business corporations held 29 percent; financial corporations, trust departments, and wealthy individuals held at least 11½ percent; public bodies held 13 percent; some 46 percent was held by unincorporated businesses and individuals. The information on the size-distribution of accounts suggests that the bulk of the 46 percent of demand deposits that were unclassified belonged to unincorporated businesses and wealthy individuals.

3. The geographic distribution of demand deposits in 1933.

Adjusted non-Government demand deposits of member banks on October 25, 1933 were distributed approximately as follows: New York and Chicago, 45.7 percent; Reserve City banks, 31.6 percent; "country" banks, 22.7 percent. On October 4, 1929, 34.6 percent of the adjusted demand deposits were in New York and Chicago, 31.6 percent were in reserve city banks, and 33.3 percent were in "country" banks.

4. Changes in the economic distribution of demand deposits from 1933 to 1935.

The 5,558 identical large business demand deposits reported increased $881,000,000, or 40 percent. The 3,014 identical large financial demand deposits reported increased $714,000,000, or 59 percent. The identical large demand accounts of manufacturers, public utilities, railroads, insurance companies, etc., and individuals, increased at approximately the same rate (38% - 48%). Accounts in the trade and service group showed a much smaller increase (18%), and deposits of the banks' own trust departments a very much greater percentage increase (240%). Both identical demand deposits covered in this study and total individual demand deposits in member banks increased 46 percent between October 25, 1933 and November 1, 1935.

In view of (a) the correspondence of the increase of large identical accounts with the increase of total individual demand deposits of member banks in this period; (b) the uniformity of the increase in five important groups; and (c) the very slight change

in the distribution of demand deposits by size of city, little change in the percentage economic distribution of deposits between the two dates is indicated. All groups appear to have participated in the expansion of demand deposits brought about by Government financing and inflows of gold. Information bearing on this point, however, does not permit this statement to be made with certainty.

5. The diversity of movement of demand deposits within the various groups.

The group totals conceal wide diversity of movement within the groups between the two dates. Out of 9,113 accounts, 3,160 declined to an aggregate amount of 777 millions. This suggests the absence of forces affecting all accounts in a uniform manner.

6. Probable changes in the distribution of demand deposits that may be expected to occur with continued recovery.

There are some grounds for believing that consumer deposits would expand relatively to business and financial deposits, and that financial deposits would decline both relatively and absolutely. This would probably entail a change in the distribution of deposits by size of city. The movement of business deposits, in the event of continued recovery, is difficult to forecast because of a number of new elements in the situation, but it is unlikely that they will decline.

7. The proximate cause of the increase in business accounts.

By a process of elimination it appears probable that the increase in business deposits may be attributed to the retention of receipts from the sale of final goods and services. Such receipts represent either costs that did not result in immediate cash disbursements, such as

depreciation or provision for future taxes, or profits that were not distributed.

8. The significance of the increase in business accounts

(a) Insofar as it arose from the retention of a portion of the receipts from the sale of final goods and services, it represented an excess of payments from the factors of production over business disbursements to the factors of production. The growth of business disbursements and national income and production under these circumstances, points to the importance of the income-increasing expenditures of public bodies in this period. In normally prosperous times the disbursements by business to the factors of production exceed the receipts from final sales to consumers, because a substantial part of the expenditures arise from plant extensions.

(b) Insofar as corporations improved their liquid position and increased their holdings of demand deposits more than was necessitated by increased production, they possess funds acailable for increased plant and inventory expenditures. This indicates less future demand for bank credit and other loans to finance increased output than would have been the case had corporations not experienced so large an increase in their holdings of cash.

(c) Insofar as (b) is valid, the increase in business deposits represents a factor making for continuance of low interest rates.

9. The significance of the increase in financial deposits

(a) The increase may be attributed to an excess of bond redemptions over new bonds or sales of securities, or to an excess

of saving out of current income over investment. It is believed that a substantial portion represented saving that was not as yet respent. The increase, therefore, reflected a development which was operating to restrain the recovery movement.

(b) The increase in financial deposits indicates that the borrowings of public bodies did not absorb all the deposits becoming available for investment.

(c) Both the percentage increase and the present large holdings of financial deposits indicate that the Government could finance its present requirements at little advance in rates if member banks possessed no excess reserves and all new issues were ultimately distributed to non-bankers. In addition to the current volume of saving, large financial deposits covered by the present study alone amounted to $2,000,000,000 on November 1, 1935.

(d) The increase of financial deposits in this period indicates the necessity of increased private borrowings and/or new stock issues, when and as public borrowings decline, if the national income is to increase.

(e) The increase of financial deposits reflects a factor making for continued ease in interest rates.

10. The significance of the indicated decline in identical and total large time deposits between 1933 and 1935

(a) In the first place, it indicates that the increase of $1.7 billion in the category of "other time deposits" of member banks between October 1933 and November 1935 was attributable to the

increase in smaller accounts, and probably represented in large part current saving out of income. Insofar as this resulted merely in a change in the composition of deposits and not in additional earning assets of banks, it was a reflection of forces operating to restrain the recovery movement. It represented income that was not respent.

(b) The relative smallness of large time accounts is doubtless attributable to the reluctance of banks to accept such deposits in the conditions of low short-term interest rates prevailing in this period.

(c) The relative smallness of large time deposit accounts suggests that the great bulk of the reported cash holdings of corporations consist of demand deposits.

11. The significance of the increase in non-bank foreign deposits.

In view of the estimated inflow of capital in 1934-1935 of approximately $2,000,000,000, the smallness of the absolute increase in both foreign individual and foreign bank deposits in American banks indicates that a substantial portion of the capital inflow went into American securities. A withdrawal of the capital might, therefore, entail two types of liquidation.

12. Is the indicated heavy concentration of accounts in a few large banks a source of danger to those banks?

In general, in the 98 banks in the study, the higher the percentage of large deposits to total deposits, the higher the percentage

of liquid assets to total assets. Moreover, in most banks, the absolute amount of liquid assets exceeded the sum of the large deposits reported.

13. Current information on the distribution of deposits would aid in understanding and interpreting current economic developments.

The findings of the present exploratory study suggest that such information would be helpful. Information on current movements of business and financial deposits would be particularly helpful in supplementing information on borrowings, redemptions, etc., and would throw light upon certain factors bearing upon the immediate future trend of interest rates.