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The Share of Financial Intermediaries in Main Types of Assets and Liabilities

The share of financial intermediaries in national wealth will be studied at two levels. The first is the determination in this section of the share of financial intermediaries' holdings in total amounts outstanding of selected assets and liabilities. The second is the comparison to be made in Section 4 of the total assets of financial intermediaries with an appropriate national aggregate.

The first comparison is presented in reasonable detail for United States government securities, states and local government securities, corporate and foreign bonds, preferred and common stock, and mortgage loans but in a much more summary fashion for short-term loans and tangible assets held by financial intermediaries, as well as for their liabilities and equity. The comparison thus omits cash and miscellaneous assets and liabilities. This may be justified first by the fact that at most benchmark dates cash and miscellaneous assets represent less than one-fifth of the total assets of financial intermediaries. More important is the fact that the omitted cash assets consist largely of items (currency, bank deposits, items in process of collection) representing mostly transactions between financial intermediaries. Comparison with the rest of the economy is, therefore, of little interest. The miscellaneous assets (as well as miscellaneous liabilities) are generally too small and too little explored to warrant or permit significant statistical comparisons.

The main results of these comparisons are summarized in Tables 9 and 10. The first of these is limited to three dates — 1900, 1929, and 1949 — but shows estimates for about a dozen

TABLE 9

Share of Financial Intermediaries in Selected Assets (per cent)

	1900	*1929*	*1949*
1 Tangible assets (land and structures)	2	2	1
2 Short-term loans	35	45	40
3 Mortgage loans	55	67	72
Farm	37	59	67
Nonfarm	65	69	72
4 Bonds			
United States government	54	52	69
State and local government	60	54	77
Corporate and foreign	35	48	86
5 Domestic stocks	8	14	24
Preferred	7	19	37
Common	8	14	22
6 All securities	23	26	58
7 Bonds and mortgages	47	56	72
8 Mortgages and securities	31	33	59
9 Mortgages, securities, and tangible assets	12	17	30

TABLE 10

Share of Financial Intermediaries in Securities and Mortgages Outstanding (per cent)

	U. S. Government Securities (1)	*State & Local Government Securities* (2)	*Corporate & Foreign Bonds* (3)	*Domestic Stocks* (4)	*Mortgages* (5)
1900	54	60	35	8	55
1912	67	54	36	10	66
1922	38	52	43	13	62
1929	52	54	48	14	67
1933	68	56	44	21	64
1939	80	69	66	23	70
1945	69	78	71	21	68
1949	69	77	86	24	72

types of individual assets and combinations of them. The second gives figures for all eight benchmark dates but only for the five types of assets for which the required data are available. The two tables show that the share of financial intermediaries has increased over the last half century in eight of the nine main forms of assets that can be compared with the relevant national total with a reasonable degree of confidence. The only exception is tangible assets (land, buildings, and equipment) which, of course, are of very small importance for financial intermediaries. The share of financial intermediaries has increased both between 1900 and 1929 and between 1929 and 1949 in all assets except United States government and state and local securities between 1900 and 1929, and short-term loans between 1929 and 1949.

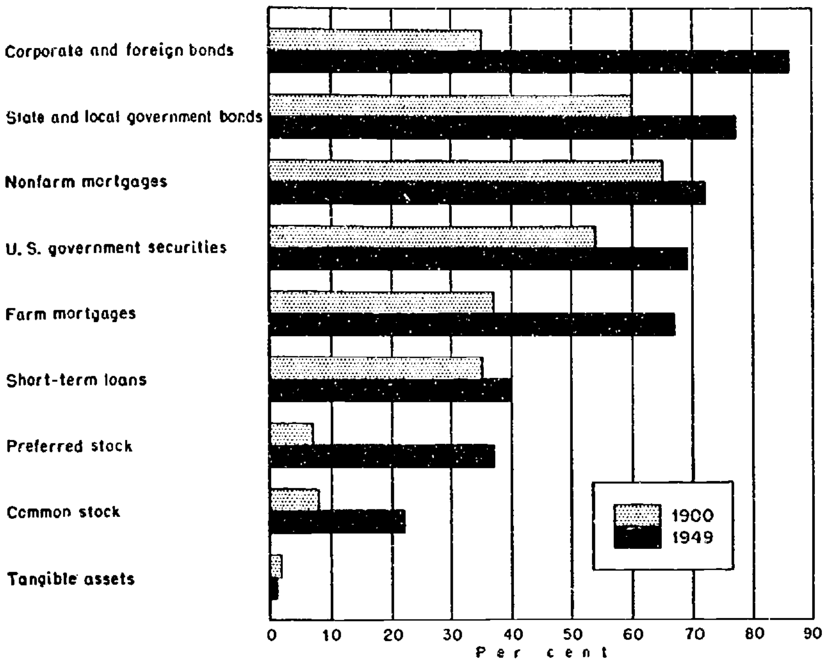
The share of financial intermediaries' holdings is found to be highest for corporate and government bonds and mortgage loans, and relatively low – although still substantial – for short-term loans and stocks. The increase in the share of financial intermediaries during the first half of the century has been most pronounced in corporate bonds and smallest in short-term loans.[18]

If the seven types of loans and securities (excluding short-term loans) are combined, i.e. if the ratios are weighted by total outstanding for the different types of assets, the share of financial intermediaries is seen to have risen rather slowly from slightly over 30 per cent in 1900 to almost 35 per cent in 1929, but to have increased much more rapidly during the following two decades to reach 60 per cent in 1949. If the comparison is extended to cover tangible assets, which are almost insignificant for financial intermediaries but very important on a national scale, the weighted share of financial intermediaries is naturally much smaller, but the trend remains the same as for their share in loans and securities. It rises slowly from slightly over 10 per cent at the turn of the century to almost 20 per cent in 1929 and rather rapidly to 30 per cent in 1949.

[18] That the share of financial intermediaries in United States government securities outstanding failed to rise greatly between 1900 and 1949 notwithstanding the enormous increase in the absolute amount of holdings of United States government securities by financial intermediaries is due to the fact that in 1900 a large part of the then very small federal debt was held by national banks to secure circulation.

CHART 6

Share of Financial Intermediaries in selected Assets, 1900 and 1949



United States government securities

Both in 1900 and 1912 most of the United States government securities outstanding were held by financial intermediaries (Table 11). This is not of great significance since at that time the debt of the United States government was very small relative to both national income and the assets of financial intermediaries, and most of the institutional holdings were accounted for by bonds acquired to serve as the base of currency issued by the national banks. The decline of the share of financial intermediaries to 38 per cent in 1922 reflected both a large increase in absolute holdings and still more substantial sales of Treasury securities to individuals and other noninstitutional holders during World War I. Of the United States government securities held by finan-

TABLE 11

Share of Financial Intermediaries in Total United States Government Securities Outstanding (per cent)

		1900	1912	1922	1929	1933	1939	1945	1949
1	Federal Reserve banks	...	...	1.9	3.1	10.2	5.2	8.6	7.3
2	Commercial banks	41.6	64.8	19.9	28.6	34.7	34.2	32.5	26.1
3	Mutual savings banks	8.2	1.0	4.7	3.3	3.5	6.5	3.8	4.4
4	Postal Savings System	...	...	.3	.2	.8	2.5	1.0	1.2
5	Savings and loan associations	...	...	.1	.1	.3	.3	.9	.6
6	Credit unions	...	...	...	...	0	0	.1	.1
7	Life insurance companies	.5	.1	3.8	2.1	3.6	11.3	7.4	5.9
8	Fraternal insurance organizations	.1	.2	.1	0	0	.2	.1	.2
9	Fire and marine insurance companies	3.1	.5	1.4	1.7	1.1	1.2	.5	1.0
10	Casualty and misc. insurance companies	...	.1	.7	1.2	.7	1.2	.6	1.0
11	Mutual accident associations	...	...	0	0	0	0	0	0
12	Private pension funds	...	...	0	.3	.3	.3	.5	1.2
13	Personal trust departments	...	...	3.9	5.5	10.4	7.3	4.4	5.8
14	Government trust funds	...	...	0.5	4.7	2.1	9.6	8.6	14.3
15	Investment companies	...	...	0	.2	0	0	0	.1
16	Investment holding companies	...	...	...	.8	.2	0	0	0
17	Investment installment companies	...	...	0	0	0	0	0	0
18	Mortgage companies	...	...	...	...	...	...	...	...
19	Land banks	...	...	.3	.2	.3	.2	.1	0
20	Government lending institutions[a]	...	...	...	...	...	...	...	...
	Total Holdings	53.5	66.7	37.7	51.8	68.2	80.2	69.3	69.3
	Total Outstanding ($ *bill.*) (See Appendix Table A-2)	1.2	1.2	23.0	16.3	24.0	47.6	278.7	257.2

[a] United States government securities held by government lending institutions have been regarded as interagency transactions and hence are excluded from the holding and outstanding figures of this table. The amounts involved are about as follows: 1939, $0.8 billion; 1945, $1.5 billion; and 1949, $2.0 billion. This is equivalent to 1939, 1.7 per cent; 1945, 0.6 per cent; and 1949, 0.8 per cent of total United States government securities outstanding.

cial intermediaries in 1922 about one-half were in the hands of commercial banks, now, however, predominantly as secondary reserves or as investments rather than as cover for notes. Substantial holdings of United States government securities — 4 to 5 per cent of the total amounts outstanding — were shown by three other groups of financial intermediaries, mutual savings banks, life insurance companies, and personal trust departments. Most of these holdings were acquired during World War I.

Developments between 1922 and 1929 are interesting. A combination of net debt retirement by the Treasury; maintenance of holdings, at least in the aggregate, by financial intermediaries; and heavy sales or redemptions by noninstitutional holders contributed to increase the share of financial intermediaries in total United States government securities outstanding to slightly over 50 per cent in 1929. Virtually the entire increase was attributable to a small rise in the holdings of commercial banks in the face of a much larger expansion of their total assets and a reduction by over one-fifth in the federal debt outstanding and to the first stages of the substantial accumulation of Treasury securities by government pension and trust funds. Smaller increases by other groups of financial intermediaries (e.g. the Federal Reserve banks, property insurance companies, personal trust departments, and investment companies) were offset by a decline of the share of Treasury securities held by mutual savings banks and by life insurance companies, which reflected sharp reductions — together from 9 to $5\frac{1}{2}$ per cent of total federal debt — in both absolute amounts and proportion of total assets.

The share of financial intermediaries continued to increase during the next decade even though the total United States government debt outstanding more than doubled. Indeed, both between 1929 and 1933 and between 1933 and 1939, financial intermediaries accounted for virtually the entire increase in Treasury securities outstanding. As a result their share in total government debt outstanding increased from slightly over 50 per cent to 80 per cent.

The experience of World War I was repeated between 1939 and 1945. Although financial intermediaries absorbed two-thirds of the total increase in the federal debt and almost quintupled their holdings (see Table 12), the share of financial intermediaries in total debt outstanding decreased from 80 to about 70 per cent. In the four years after 1945 the share of financial intermediaries' holdings of United States government securities remained the same. This was in marked contrast to developments after World War I; after World War II, individual holders as a whole did not reduce their holdings of United States government securities, and nonfinancial corporations even increased them, partly as a ready reserve against tax liabilities.

TABLE 12

Share of Financial Intermediaries in Changes in Amounts Outstanding of Selected Major Assets (per cent)[a]

	1901-1912	1913-1922	1923-1929	1930-1933	1934-1939	1940-1945	1946-1949	1901-1949
1 U. S. govt. securities	−273	36	3	103	93	67	70	69
2 State & local govt. securities	50	50	58	61	512	31	75	78
3 Corporate & foreign bonds	37	55	56	127	−55	45	119	96
4 All stock	11	17	15	9	30	16	108	25
5 Preferred stock	12	35	22	0	38	66	44	43
6 Common stock	10	15	15	10	31	15	177	23
7 All mortgages	81	59	74	87	−26	188	77	74
8 Nonfarm mortgages	96	66	67	107	−32	18	78	73
9 Farm mortgages	58	50	−41	47	−19	90	49	90
10 Short-term loans	59	54	34	33	−41	50	39	41
Average (Median, disregarding sign, of 1, 2, 3, 4, 8, 9, & 10)	58	50	41	61	41	45	75	73
Weighted average	36	42	32	15	79	58	69	58

[a] Negative figures indicate increase (decrease) in holdings by financial intermediaries coincident with decrease (increase) in outstanding.

Between 1929 and 1949 the share of financial intermediaries in total United States government securities outstanding increased from 52 per cent to 69 per cent, or by 17 points. Most of this increase is accounted for by intra-agency holdings; the Federal Reserve banks, the Postal Savings System, and government pension and trust funds together increased their share in the federal debt outstanding from 8 to 23 per cent. The share of private financial intermediaries rose only insignificantly from 44 to 47 per cent. Among them the only substantial increases were registered by life insurance companies, the holdings of which advanced from 2 to 6 per cent of total outstanding. Most of the other groups held a smaller proportion of the federal debt in 1949 than in 1929. Commercial banks in particular accounted for only 26 per cent of Treasury securities in 1949 against 29 per cent in 1929.

There are three periods during which the federal government has absorbed funds on a large scale, the two world wars and the thirties. Financial intermediaries furnished about one-third of the funds during World War I, about two-thirds during World War II, and practically 100 per cent during the thirties. They also, as a rule, increased their holdings, or at least decreased them but little, in periods when the total federal debt was stable or when the Treasury supplied rather than absorbed funds. As a result the holdings of United States government securities by financial intermediaries increased by $177 billion between 1900 and 1949, or by almost 70 per cent of the total increase in the federal debt. Governmental organizations supplied 23 per cent; the commercial banking system, 26 per cent; and other private financial intermediaries, the remaining 20 per cent. Financial intermediaries thus were the main source of supply of funds for the federal government, not only for the period as a whole but also for all significant subperiods with the exception of World War I.

State and local government securities

Financial intermediaries have held one-half or more of the amount outstanding of state and local government securities at all benchmark dates. Their share declined until the early twenties; showed only a minor upward movement from then on to the end of the Great Depression; but increased during the thirties and early forties to over three-quarters.

The aggregate share of financial intermediaries in state and local government debt outstanding, as it is shown in Table 13, is as high as 78 per cent in 1945 and 77 per cent in 1949. These figures probably somewhat overstate the proportion of state and

TABLE 13

Share of Financial Intermediaries in Total State and Local Government Securities Outstanding (per cent)

		1900	1912	1922	1929	1933	1939	1945	1949
1	Federal Reserve banks	...	...	...	...	...	...	...	...
2	Commercial banks	10.5	13.8	12.6	14.1	15.1	19.4	26.8	31.6
3	Mutual savings banks	33.5	20.6	7.8	6.2	5.2	3.4	.6	.4
4	Postal Savings System	...	...	...	...	...	...	...	...
5	Savings and loan associations	...	.1	.1	.2	.2	.1	.2	.2
6	Credit unions	...	...	...	...	...	...	...	...
7	Life insurance companies	4.1	4.8	4.1	3.9	4.9	9.8	4.2	5.1
8	Fraternal insurance organizations	.8	2.5	3.2	3.3	2.6	2.7	2.9	2.3
9	Fire and marine insurance companies	1.4	1.9	1.3	1.5	1.0	.9	.8	1.8
10	Casualty and misc. insurance companies	.6	.9	.9	1.1	.7	.7	.7	2.0
11	Mutual accident associations	.3	.3	.3	.3	.2	.2	.4	.4
12	Private pension funds	...	...	...	...	...	...	...	...
13	Personal trust departments	8.7	9.2	20.1	20.6	21.5	23.3	30.3	24.1
14	Government trust funds	.2	.3	1.5	3.1	4.0	7.3	7.4	7.0
15	Investment companies	...	...	0	0	0	0	0	0
16	Investment holding companies	...	...	...	...	...	...	...	...
17	Investment installment companies	...	...	0	0	0	0	0	0
18	Mortgage companies	...	...	...	...	...	...	...	...
19	Land banks	...	...	...	...	...	...	...	...
20	Government lending institutions	...	...	...	...	.3	1.6	3.3	2.0
	Total Holdings	60.0	54.3	52.0	54.4	55.5	69.3	77.6	76.9
	Total Outstanding (\$ *bill.*)	1.7	3.8	9.0	14.6	17.5	18.0	14.8	20.7

(See Appendix Table A-2)

local government securities outstanding actually held by financial intermediaries. The first reason is that the holdings of a few groups, for which no detailed statistics are available, may have been overstated. Secondly, state and local government securities may now be carried on the average at slightly above par in the balance sheets of financial intermediaries whereas the statistics of outstandings are all expressed in par values. Thirdly, the statistics of holdings, as they are reported for the different types of financial intermediaries, may include some categories of securities not included in the statistics of state and local government debt, although it is difficult to see how the amounts involved could be significant. While these discrepancies may, and probably do, lead to a slight overstatement of the holdings of state and local government securities by financial intermediaries (Table 13), and their ratio to total state and local government debt (Appendix Table A-2), they are not likely to be of considerable size and should not affect the main trends shown by the figures.

Between 1900 and 1933 when the share of holdings of financial intermediaries in state and local government securities outstanding decreased from three-fifths to slightly over one-half, there were two pronounced changes in the shares of individual groups of financial intermediaries. The first is the increase of the holdings of personal trust departments from 9 per cent of state and local government securities outstanding in 1900 to 22 per cent in 1933, most of the increase occurring between the 1912 and 1922 benchmarks. This movement is of interest because it reflects the increasing share of state and local government securities within personal trust departments (15 per cent in 1933 against 5 per cent in 1900) and is clearly traceable to the introduction and increase of the personal income tax which made the tax-exempt state and local government securities particularly attractive to individuals in high income brackets, who predominate among beneficiaries of personal trust funds. The second important change is the sharp decline in the share of state and local government securities held by mutual savings banks – from 34 per cent in 1900 to 5 per cent in 1933 – which accounts for more than the total shrinkage in the share of all financial intermediaries. This decline is due to a reduction in the share of state and local government securities among assets of mutual savings banks (9 per cent in 1929 against 20 per cent in 1912 and 24 per cent in 1900) and probably is influenced by the increasing differential between the yield on tax-exempt state and local government bonds and those on taxable bonds and mortgages. Thus exactly the same feature that made state and local government securities more attractive to personal trust funds after the introduction of the personal income tax in 1913 rendered them less desirable to the mutual savings banks, whose income is not subject to taxation.

Between 1933 and 1949 the share of financial intermediaries in state and local government debt increased from 56 to 77 per cent. Mutual savings banks virtually liquidated their holdings, while four other groups increased their shares moderately by 1 to 3 per cent of outstandings: personal trust departments, property insurance companies, government trust funds, and government lending institutions. The decisive increase was attributable to commercial banks, which lifted their share from 15 to 32 per cent of outstandings, reflecting an increase in absolute holdings from $2.6 billion in 1933 to $4.0 billion in 1945 and $6.6 billion in 1949. This rise paralleled the absolute growth of total assets of commercial banks between 1933 and 1945, though state and local government securities in 1945 accounted for a smaller proportion of total assets than in 1933. Between 1945 and 1949, however, commercial banks' holdings of state and local government securities rose more rapidly than total assets (their share increased from 2½ to 4 per cent) or than the total debt of state and local governments. One of the reasons for the increasing importance of commercial banks' holdings of state and local government securities, both in relation to their own assets and to the total supply of such securities, is the tax exemption feature of this kind of security. In a period of rising corporate tax rates this feature was increasingly attractive to commercial banks, whose profits are taxable, although not to mutual savings banks or life insurance companies, whose earnings are, broadly speaking, not subject to corporate income tax. Another is the close connection between commercial banks and their own localities and states, which may have made participation in the financing of heavy capital expenditures after World War II appear in the nature of accommodating a regular important customer.

Financial intermediaries throughout the period were the main source of funds for state and local governments. Of the increase in debt between 1900 and 1949 of approximately $19 billion, which may be regarded as a rough measure of the net absorption of funds by state and local governments, financial intermediaries furnished about $15 billion, or almost four-fifths. Between 1900 and 1929 their share in supplying the financial needs of state and local governments was slightly above one-half. During the last twenty years, however, the absorption of state and local government securities by financial intermediaries of about $8 billion has been considerably in excess of the total increase in state and local government debt of $6 billion. The holdings of groups other than financial intermediaries, therefore, decreased from about $7 billion in 1929 to about $5 billion in 1949.[19] The financing of state and local governments thus has now become almost exclusively an institutional matter, and individuals participate in it predominantly through personal trust funds administered by banks and trust companies.

Corporate and foreign bonds

During the last fifty years the supply of corporate bonds has been increasingly concentrated in the portfolios of financial intermediaries.[20] At the 1900 and 1912 benchmarks, financial intermediaries held approximately one-third of all corporate bonds

[19] The estimates of individuals' holdings, calculated as the residual between total outstanding and holdings of financial intermediaries, agree reasonably well with figures derived from estate tax statistics (see R.W. Goldsmith, *A Study of Saving in the United States* [Princeton University Press, 1954], Vol. III, Part III).

[20] In this section the description "corporate bonds" includes foreign bonds, both corporate and government, unless otherwise indicated. Segregation of foreign bonds among the holdings of financial intermediaries is generally unnecessary since foreign bonds accounted for at most 8 per cent of corporate and foreign bonds (1922, 1945) and at most benchmark dates represented less than 6 per cent of the total. The proportion of foreign to domestic corporate bonds outstanding was somewhat higher —nearly 20 per cent at the peak of 1929, but below 10 per cent before 1922 and since 1939.

TABLE **14**

Share of Financial Intermediaries in Total Corporate and Foreign Bonds Outstanding (per cent)

		1900	1912	1922	1929	1933	1939	1945	1949
1	Federal Reserve banks	...	...	...	...	...	...	...	...
2	Commercial banks	9.8	11.4	14.2	12.4	10.3	10.3	10.2	7.8
3	Mutual savings banks	6.3	5.4	4.4	4.6	5.0	4.0	3.3	5.0
4	Postal Savings System	...	...	...	...	...	...	...	...
5	Savings and loan associations	...	...	...	...	...	...	...	...
6	Credit unions	...	...	0	0	0	0	.1	0
7	Life insurance companies	8.5	9.5	8.9	11.1	12.9	24.9	38.2	53.6
8	Fraternal insurance organizations	0	.1	.1	.3	.4	.7	1.5	1.2
9	Fire and marine insurance companies	1.3	1.6	1.7	1.8	1.4	1.1	.9	.9
10	Casualty and misc. insurance companies	.3	.3	.5	1.0	.9	.8	.6	1.0
11	Mutual accident associations	...	0	0	0	0	.1	.2	.2
12	Private pension funds	...	...	.2	.7	1.0	1.6	2.5	5.6
13	Personal trust departments	8.6	7.7	12.8	14.7	11.5	19.7	12.2	9.4
14	Government trust funds	...	...	...	...	...	...	...	...
15	Investment companies	...	...	.1	.4	.3	.4	.8	.5
16	Investment holding companies	...	...	...	1.1	.2	.3	.3	.4
17	Investment installment companies	...	...	0	0	0	0	0	0
18	Mortgage companies	...	...	...	...	...	...	...	...
19	Land banks	...	...	...	...	...	...	...	...
20	Government lending institutions	...	...	...	...	.1	2.4	...	...
	Total Holdings	34.9	36.0	43.0	48.0	43.8	66.3	70.5	85.6
	Total Outstanding ($ bill.)	7.0	18.1	28.2	45.9	43.6	35.6	29.6	42.8
	(See Appendix Table A-2)								

outstanding in the United States. In 1929 their share had increased to nearly one-half. Ten years later it had risen to approximately two-thirds of outstanding. In 1949, finally, more than four-fifths of all corporate bonds outstanding were in the hands of financial intermediaries.[21] (See Table 14.)

The increase in the share of financial intermediaries in the supply of corporate bonds is still more evident if we look at the relation between the increase in the holdings of corporate bonds by financial intermediaries and the change of total outstandings between benchmark dates. From 1900 to 1929 the increase in intermediaries' holdings of about $20 billion was equal to just about one-half of the growth in bonds outstanding, and the proportion was close to this ratio for all three interbenchmark periods within these thirty years. From 1929 on, however, the holdings of financial intermediaries have continuously increased by more than the total supply of corporate bonds, or they have decreased less than the supply. Hence financial intermediaries have, in the aggregate, supplied all new funds raised by corporate borrowers by issuance of bonds and have, in addition, taken over a considerable part of the corporate bonds held in 1929 by noninstitutional investors. This is true not only for the twenty-year period as a whole but also for the four interbenchmark periods within it. Indeed, life insurance companies alone have increased their bond holdings by more than the rise in total supply of corporate bonds.

The large-scale migration of corporate bonds into the portfolios of financial intermediaries has taken three routes. The first, and the most obvious one, is direct placement of securities with small groups of buyers, virtually identical with financial intermediaries, a practice that has developed since the thirties.[22]

[21] It is possible that the amounts outstanding used in the calculation are somewhat too low and consequently the ratios of financial intermediaries' holdings somewhat overstated. The ratio may, on the other hand, be slightly understated because the average book value of corporate bonds held by financial intermediaries is likely to have been below par at most benchmark dates. These errors, however, if they are material at all, are not large enough to affect the levels or trends discussed in this section.

[22] For the entire period from 1934 to 1949, 34 per cent of the new issues of corporate bonds have been placed directly, and the proportion has averaged 45 per cent for

(Continued on page 64)

Whenever either a new or a refunding issue is directly placed, the increase in the bond portfolios of financial intermediaries is at least as large as the increase in total bonds outstanding. A similar result is obtained when a new issue is publicly offered – the second route – but financial intermediaries purchase almost the entire issue either immediately upon issuance or shortly afterward, as has been common since the thirties. The third route by which the share of financial intermediaries in corporate bonds outstanding has been increased is the open market purchase of outstanding issues from noninstitutional holders. Although no detailed studies have been made, it is probable that this route has accounted for a considerably smaller proportion of the increase in the share of financial intermediaries than either of the two others, particularly since the thirties. Before that time, when direct placements were almost unknown, both the purchase of new public offerings and open market purchases of outstanding issues were of considerable importance, although it is impossible to assess their relative significance.

In addition to the sharp increase in the share of financial intermediaries' holdings in total outstanding, considerable changes have occurred in the distribution of financial intermediaries' total holdings of corporate bonds as between the main groups of intermediaries. These changes are the result of differences in the rate of growth of total assets and of changes in the proportion of total assets invested in corporate bonds. In general the first factor has been the more important one.

In 1900, commercial banks, life insurance companies, and personal trust departments each held between 8 and 10 per cent of total corporate bonds outstanding, and mutual savings banks were not far behind with 6 per cent. By 1929 the shares for the three largest holders were up to 11 to 15 per cent, but their relation was still not too different from that prevailing three decades

1946-1949. (See *Securities and Exchange Commission*, 17th Annual Report, p. 197; also E. R. Corey, *Direct Placement of Corporate Securities* [Harvard University, Graduate School of Business Administration, 1951]). Before 1930 the share of private placements has been very small. (W. B. Hickman, *The Volume of Bond Financing since 1900*, Table A-10 [National Bureau of Economic Research, 1953]).

TABLE 15

Proportion of Main Classes of Corporate and Foreign Bonds[a] Outstanding Held by Financial Intermediaries (per cent)

Type of Bond	*1900*	*1912*	*1922*	*1929*	*1933*	*1939*	*1945*	*1949*
1 Railroad	28	32	38	51	49	44	47	50
2 Public utilities	13	16	19	34	32	49	64	71
3 Industrial	19	25	22	20	12	32	57	85
4 Foreign	51	26	24	21	19	38	54	69
5 All bonds, financial intermediaries for which breakdown is available[b]	25	26	28	32	29	42	56	70
6 All bonds, all financial intermediaries	35	36	44	49	45	66	71	86

[a] Excludes, in contrast to Table 14, U. S. government not fully guaranteed and federal land bonds outstanding.
[b] Excludes personal trust departments, private pension funds, and some smaller groups.

Sources: For outstandings Appendix Tables A-2 and A-3; for holdings of all financial intermediaries (line 6) Table 7; for lines 1 to 5 tables in forthcoming full study.

earlier. Sharply divergent trends, however, appeared with the Great Depression. As a result, life insurance companies in 1949 accounted for more than 50 per cent of total outstanding, while commercial banks and personal trust departments fell back to their share of fifty years earlier. Together, however, these three groups still accounted for about four-fifths of total institutional holdings, slightly more than in 1900. This continued predominance was possible because over half a century only one important new holder of corporate bonds had emerged – private pension funds – and even they accounted for only 6 per cent of total outstanding in 1949.

No comparable data are available for the bonds by main groups of issuers since the appropriate breakdown is unavailable for several groups of financial intermediaries, particularly personal trust departments. It is, however, possible to follow the share of the holdings of most groups of financial intermediaries in the amount outstanding of the three main groups of domestic corporate and of foreign bonds. These figures should not be seriously in error since the financial intermediaries for which they are available account for about two-thirds of the holdings of all financial intermediaries in 1900 and 1929 and to as much as four-fifths in 1949. Table 15, which, notwithstanding a considerable margin of error in some of the figures, may be regarded as reflecting the main trends, permits the following conclusions:

1. There was a definitely upward trend in the share of financial intermediaries' holdings in all three main groups of domestic issues of corporate bonds (railroads, public utilities, and others) and in foreign bonds.

2. Of the three main groups of corporate bonds this trend is least pronounced in the case of railroad bonds. Here the share of financial intermediaries has less than doubled between 1900 and 1949, and the rise has virtually come to a halt since the Great Depression.[23] Even so, financial intermediaries since the twenties have held at least two-fifths of railroad bonds outstanding.

3. The most regular increase in the share of financial inter-

[23] If allowance is made for the holdings of personal trust departments the share has probably declined between 1929 and 1949.

mediaries' holdings occurred in public utility bonds. In 1900 probably less than one-fifth of all public utility bonds outstanding were held by financial intermediaries. Fifty years later the positions were almost reversed and not much more than one-fourth of all public utility bonds were to be found outside the portfolios of financial intermediaries.[24]

4. The share of financial intermediaries in other domestic corporate (i.e. largely industrial) bonds was relatively low and failed to show a definite rise up to the Great Depression. For the twenties this may be due to the fact that financial intermediaries purchased virtually none of the large amounts of real estate bonds issued during the decade.[25] Since the mid-thirties, however, the increase in the share of financial intermediaries has been more rapid in this category than for any other type of bond. As a result over four-fifths of all industrial and miscellaneous corporate bonds were held by financial intermediaries in 1949, while their share had been less than one-third a bare ten years earlier.

5. Up to the early thirties, financial intermediaries held generally about one-fourth of all foreign bonds in the United States.[26] The considerable increase in the last fifteen years, which raised the share to over two-thirds in 1949, is exclusively the result of the acquisition of Canadian bonds.[27] It is probable, though comprehensive figures seem to be missing, that the majority of Canadian bonds held in the United States are now found in the portfolios of financial intermediaries but that financial intermediaries hold

[24] These figures make rough allowances for the bond holdings of personal trust departments.

[25] The sharp decline in the ratio between 1929 and 1933 shown in Table 15 is somewhat puzzling, even if it is somewhat exaggerated by the fact that the estimates of bonds outstanding reflect par values while the book values of financial intermediaries' holdings of that year were affected by considerable writedowns. Possibly the relatively poor default record of industrial bonds (Hickman. *op. cit.*, Table A-17) led to large net sales.

[26] Before 1922 the absolute amounts of outstandings as well as of intermediaries' holdings are very small.

[27] Canadian government bonds held by the forty-nine largest life insurance companies alone (see J. J. O'Leary, *1951 Record of Life Insurance Investments* [Life Insurance Association of America, 1951], p. 16) increased from 5 per cent in 1929 to 49 per cent in 1919 of the value of foreign bonds held in the United States. (See Appendix Table A-2).

only a small fraction -- as they have done throughout the period -- of the bonds of non-Canadian foreign issuers sold in the United States.

Corporate stock

Financial intermediaries have been of less importance as fund suppliers in the case of corporate stock than for almost any type of bond or loan. Moreover, most of the holdings of financial intermediaries in this field are accounted for by personal trust departments.

At the turn of the century financial intermediaries held about one-twelfth of all corporate stock outstanding.[28] This proportion increased slowly to between one-eighth and one-seventh in the twenties. It rose sharply to fully one-fifth between 1929 and 1933 and has remained at approximately that level until 1949. The increase in the share during the Great Depression is partly due to a relatively high proportion of well seasoned and less speculative stocks in the portfolios of personal trust departments. Finally, the fact that the book value of stock holdings had to be used for some groups, though not the most important ones, may have led to some understatement of the share of financial intermediaries in total stock outstanding in 1929 and some overstatement in 1933 and, hence, possibly to a substantial exaggeration of the increase in that share during the Great Depression.

The level of the share of financial intermediaries' holdings is considerably higher for preferred than for common stock. Precise figures are impossible to obtain because the breakdown of the holdings administered by personal trust departments must remain largely conjectural. It is probable, however, that in 1949 the share of financial intermediaries was between 20 and 25 per cent for common stock but around 40 per cent for preferred stock.

The share of intermediaries' holdings in marketable stocks is somewhat higher than Table 16 indicates since financial institu-

[28] The amounts outstanding used in this section exclude intercorporate holdings other than those of financial intermediaries, i.e. they exclude primarily the holdings of parent, subsidiary, and affiliated corporations, but they include stocks in closely held corporations.

TABLE 16

Share of Financial Intermediaries in Total Domestic Stock Outstanding
(per cent)

		1900	1912	1922	1929	1933	1939	1945	1949
1	Federal Reserve banks	...	...	...	...	...	...	...	...
2	Commercial banks	.9	.9	.9	.8	1.6	.7	.3	.2
3	Mutual savings banks	.4	.1	.1	.1	.2	.2	.1	.1
4	Postal Savings System	...	...	...	...	...	...	...	...
5	Savings and loan associations	...	...	...	...	...	...	...	...
6	Credit unions	...	...	...	...	...	...	...	...
7	Life insurance companies	.5	.3	.1	.2	.8	.7	.7	1.3
8	Fraternal insurance organizations	...	...	...	...	...	...	...	...
9	Fire and marine insurance companies	.9	.6	.5	.8	1.1	1.3	1.4	1.6
10	Casualty and misc. insurance companies	.1	.1	.1	.2	.4	.4	.5	.7
11	Mutual accident associations	...	...	...	...	...	...	...	...
12	Private pension funds	...	...	0	.1	.2	.3	.4	.7
13	Personal trust departments	5.1	7.6	11.0	8.4	12.5	15.7	14.1	15.2
14	Government trust funds	...	...	...	...	...	...	...	...
15	Investment companies	...	...	.1	1.5	1.6	1.5	1.6	1.9
16	Investment holding companies	...	...	...	2.1	2.1	1.6	1.7	1.7
17	Investment installment companies	...	...	0	0	0	0	0	0
18	Mortgage companies	...	...	...	...	...	...	...	...
19	Land banks	...	...	...	...	...	...	...	...
20	Government lending institutions	...	...	...	...	.4	1.0	.3	.1
	Total Holdings	7.9	9.6	12.9	14.2	21.0	23.4	20.9	23.6
	Total Outstanding (\$ *bill.*)	11.8	32.2	57.1	149.6	63.9	82.3	127.7	131.6

(See Appendix Table A-2)

tions held only small quantities of nonmarketable issues — mostly to be found in trust departments — while a substantial proportion of all stock outstanding is of this type, in 1949 possibly as much as one-fifth of the total. The share of financial intermediaries in marketable stock outstanding, therefore, may have been as high as 30 per cent in 1949 (compared with 24 per cent in Table 16) of which 20 per cent was accounted for by personal trust departments and 10 per cent by all other intermediaries.

Personal trust departments were by far the most important group of holders at every benchmark date, accounting for between three-fifths and seven-eighths of the total for all financial intermediaries. In 1900 personal trust departments held 5 per cent of all domestic stock outstanding. In 1929 their share had risen to 8 per cent, well below the 1922 peak of 11 per cent. From 1933 to 1949 it varied between 13 and 16 per cent. Two factors have contributed to this increase. The first is the increasing proportion of the assets administered by personal trust departments invested in stocks. The second is the more rapid growth of personal trust fund assets than of the value of total stock outstanding. Both forces operated until the early twenties. Since then the increase in the share of outstanding stock held in personal trust departments is due exclusively to the rise in the proportion of such funds invested in stocks, a rise reflecting definite changes in the investment policy of the trustees, somewhat delayed by the slowness of changes in statutory provisions and in the specifications of trust instruments.

Holdings of all other groups of financial intermediaries have been small throughout the period compared to the total value of stocks outstanding, none having been substantially in excess of 2 per cent for any benchmark date. The share of management investment companies has kept between 1½ and 2 per cent since these companies began large-scale operations in the late twenties. Even the inclusion of investment-holding companies does not raise the share of investment companies to more than 4 per cent. In this case the trend is determined largely by the total assets of investment companies since most of their funds are always kept in stocks. The share of property insurance companies in total stock outstanding has increased fairly steadily since 1929, but even in 1949 it was not much in excess of 2 per cent. Still smaller are the shares of life insurance companies and private pension plans, although their growth has been more rapid during the last decade.

The picture is somewhat different if preferred stocks are studied separately. Here financial intermediaries other than personal trust departments accounted for over 10 per cent of outstanding in 1933 but by 1949 had increased their share to 20 per cent. Next to personal trust departments, life insurance companies have become the most important group of financial intermediaries holding preferred stock. From a negligible proportion up to the late twenties their share in outstanding of preferred stock sharply increased in the forties, reaching 10 per cent in 1949. The proportion is about 5 per cent for property insurance companies against 2 per cent in 1929. Private pension funds seem to account for another 3 per cent in 1949, but this figure is a precarious estimate.

The share of financial intermediaries in the total flow of equity funds to corporations cannot be immediately derived from these figures since they are greatly affected by stock price changes.[29] It is clear, however, even from the figures of changes in values of holdings between benchmark dates, that financial intermediaries have constituted only a secondary source of equity funds and one almost negligible if the holdings of personal trust departments — which often represent not net purchases but gifts or inheritances — are eliminated.

The situation is different for preferred stock, for which the changes in holdings can be used with less reservation as indicative of the flow of funds involved. Of the increase in preferred stock outstanding of about $12 billion between 1900 and 1949, less than $3 billion is accounted for by increases in holdings of financial intermediaries, although personal trust departments add an-

[29] For a reasonably close estimate it is necessary to use figures for net issue (i.e. cash proceeds of issues less cash outlays for retirements) of stock on the one hand, and net purchases or sales of stock by financial intermediaries on the other. Such figures have been prepared for the period from 1897 to 1949 as part of R. W. Goldsmith, *A Study of Saving in the United States* (Princeton University Press, 1954). (See Tables V-35 to V-78 in Vol. I and discussion in Vol. II, Chap. VIII, Sec. 3.)

other $2 billion. The aggregate figures, however, mean little as the relations are entirely different before and after the Great Depression. Between 1900 and 1929, preferred stock outstanding also increased by about $12 billion while the holdings of financial intermediaries (excluding personal trust departments) rose by less than $1 billion. Even allowing for shortcomings of the estimates, it is clear that the share of financial intermediaries in providing funds to corporations in the form of preferred stock was quite minor. Since 1933, however, the holdings of preferred stocks by financial intermediaries, even excluding personal trust departments, have risen by more than the total increase in preferred stock outstanding. Hence financial intermediaries would seem to have provided, in the aggregate, all the funds raised by corporations through the means of preferred stock during the last two decades.[30]

It is not possible to determine the share of financial intermediaries in the outstanding amounts of common and preferred stock of the main industries comprehensively or reliably. Data are available, at least for part of the period, for investment and insurance companies; but they are missing for the largest holder, personal trust departments. The available data do not point to substantial differences between the distribution by industry of the stock holdings of financial intermediaries among major industries and of total stock outstanding. Among the main industries the proportion of common or preferred stock held by financial intermediaries probably does not differ much. It is likely, however, that, at least at recent benchmark dates, the proportion of financial intermediaries' holdings was relatively low for railroad and financial stocks and relatively high for public utility stocks.

Mortgage loans

Mortgages throughout the period have been held predominantly by financial intermediaries, but the share of their holdings has increased from not much over one-half in 1900 to almost three-

[30] This surmise is confirmed by the more appropriate figures on net issues and net purchases by financial intermediaries of preferred stock. (*Ibid.*, Tables V-9 and V-51.)

fourths in 1949. The increase has occurred mainly in three periods. The first and sharpest increase took place between the benchmarks of 1900 and 1912, raising the share of mortgages held by financial intermediaries from approximately 55 to over 65 per cent of the total outstanding.[31] The second increase occurred during the twenties and lifted the share of financial intermediaries in total mortgages outstanding from slightly above 60 per cent in 1922 to almost 70 per cent in 1929. The third rise in the late thirties increased the share further from 64 per cent in 1933 to 70 per cent in 1939, a level which was restored by 1949 after a dip to 68 per cent at the end of World War II. Although the comprehensive figures used in this report are not continued beyond 1949, it is very likely that the share of financial intermediaries in total mortgages outstanding continued to increase in the next three years and reached a new high. (See Table 17.)

A more dramatic picture of the share of financial intermediaries in mortgage loans is provided by changes between benchmark dates in the proportion of the total increase (or decrease) in total mortgage loans outstanding accounted for by financial intermediaries. For the period as a whole, total mortgage debt increased by $59 billion while the mortgage holdings of financial intermediaries rose by $44 billion. Financial intermediaries thus supplied about three-fourths of the total funds used for mortgage loans.[32] In none of the seven periods did financial intermediaries absorb much less than 60 per cent of the total increase in mortgages outstanding, and in several of them they accounted for as much as 75 per cent. In one period (1934-1939) the holdings of financial intermediaries increased while mortgages outstanding decreased.

[31] There is little doubt about the direction of the movement, but the extent depends somewhat on the estimates of total mortgages outstanding which for these two benchmark dates are subject to a considerable margin of error. (*Ibid.*, Vol. II, Chap. IX, Sec. 6.)

[32] This calculation disregards some adjustments for non-cash items which should be made in the changes of both total mortgages outstanding and mortgages held by financial intermediaries, and probably more in the former than the latter. These adjustments would not affect the ratio to a significant extent, although they might well increase it slightly.

TABLE 17

Share of Financial Intermediaries in Total Mortgages Outstanding (per cent)

		1900	1912	1922	1929	1933	1939	1945	1949
1	Federal Reserve banks	...	...	...	...	...	...	...	...
2	Commercial banks	7.6	14.8	14.7	13.2	11.6	11.4	12.8	17.6
3	Mutual savings banks	13.0	14.8	10.8	11.6	13.5	12.5	11.1	9.8
4	Postal Savings System	...	...	...	...	...	...	...	...
5	Savings and loan associations	5.5	7.2	9.1	13.9	10.8	9.7	14.2	17.5
6	Credit unions	...	...	...	...	...	...	...	...
7	Life insurance companies	7.4	12.6	11.6	15.6	16.3	14.7	17.5	19.5
8	Fraternal insurance organizations	0	.1	.2	.3	.5	.4	.5	.4
9	Fire and marine insurance companies	.8	.5	.3	.2	.2	.1	.1	.1
10	Casualty and misc. insurance companies	0	.1	.1	.2	.2	.1	.1	.1
11	Mutual accident associations	0	0	0	0	0	0	0	0
12	Private pension funds	...	...	...	...	...	...	...	...
13	Personal trust departments	17.8	13.0	10.0	6.4	6.1	6.3	3.6	1.5
14	Government trust funds	...	...	...	...	...	...	...	...
15	Investment companies	...	...	0	.1	.1	.2	.2	.3
16	Investment holding companies	...	...	...	...	...	...	...	...
17	Investment installment companies	...	...	...	...	...	...	...	...
18	Mortgage companies	2.7	3.1	2.1	1.7	1.0	1.1	.4	.8
19	Land banks	...	...	3.2	3.8	3.9	5.5	2.7	1.3
20	Government lending institutions	...	...	...	...	.2	7.9	4.3	2.7
	Total Holdings	55.0	66.3	62.1	67.0	64.2	70.1	67.6	71.6
	Total Outstanding ($ *bill.*)	6.7	11.8	27.1	46.9	41.1	38.6	37.8	66.2
	(See Appendix Table A-2)								

In addition to the basic trend toward an increase in financial intermediaries' share in total mortgages outstanding, pronounced shifts occurred in the holdings of the different groups of financial intermediaries. In 1900 more mortgages were administered by personal trust departments than were held by any other single group of financial intermediaries – about one-third of all mortgages in the hands of financial intermediaries and nearly one-fifth of all mortgages outstanding. As a result of an almost continuous decline, particularly pronounced before 1929, the share of trust departments fell by 1949 to 2 per cent of total holdings by financial intermediaries and to 1½ per cent of all mortgages outstanding. This was the effect, first, of the slower growth of the assets administered by personal trust departments since 1929 than of all financial intermediaries and, second and more important, of the decline of the percentage of the total assets of all personal trust funds invested in mortgages from about 40 per cent in 1900 to only 2 per cent in 1949.

Most of the other groups of financial intermediaries have gained in importance as mortgagees. The main exception is presented by mutual savings banks whose share in mortgages outstanding has declined, slowly and irregularly, from a peak of about 15 per cent in 1912 to about 10 per cent in 1949.[33] This was due primarily to the relatively slow growth of the assets of mutual savings banks and only since the early forties to a decline in the share of the assets which they invested in mortgages.

The increase in the proportion of total mortgages outstanding held by financial intermediaries has been accounted for primarily by three groups – savings and loan associations, commercial banks, and life insurance companies. The share of each of these institutions increased from 6 to 8 per cent in 1900 to 18 to 20 per cent in 1949. Together they accounted for only one-third of all mortgages held by financial intermediaries in 1900, but for three-fourths of institutional mortgage holdings in 1949. Their share in

[33] The share of fire and marine insurance companies and mortgage companies in total mortgages outstanding also declined, but their holdings were relatively small at all benchmark dates.

total mortgages outstanding rose from only one-fifth at the turn of the century to over one-half fifty years later.

The share of savings and loan associations in mortgages outstanding increased steadily, with an interruption only between 1929 and 1939, from 6 per cent in 1900 to 18 per cent in 1949. This was due exclusively to the relatively rapid growth of their total assets since mortgages have always accounted for nearly their entire investments.

The increase in the share of life insurance companies from 7 to 20 per cent was concentrated in the periods from 1900 to 1912 and 1922 to 1929, but was also considerable in the 1940's. It was largely due to the relatively rapid increase in total assets of these companies since mortgages accounted for nearly 30 per cent of their total assets at the beginning but only for slightly over 20 per cent at the end of the period.

Most of the increase in the share of commercial banks from 8 to 18 per cent occurred before 1912. After a slight decline over the next three decades, a second increase after World War II lifted their share in mortgages outstanding from 13 per cent in 1945 to 18 per cent four years later. This sharp and concentrated advance reflected largely an increase in the share of mortgages among bank assets.

Quite different changes are shown in the shares of land banks and government lending institutions. The land banks, created in the second decade of the century, and limited to farm mortgages, slowly increased their share in total mortgages outstanding to a peak of 6 per cent in 1939. The liquidation of most of these banks in the last decade has decreased the share of the group to not much over 1 per cent in 1949. Government lending institutions, which began their operations only in the Great Depression, accounted by 1939 for 8 per cent of total mortgages outstanding, largely the result of the Home Owners' Loan Corporation's and the Federal National Mortgage Corporation's acquisition of distressed mortgage loans from financial intermediaries and other mortgagees. As these mortgages were paid off or sold to other mortgagees, the share of government lending institutions declined.

By 1949 it had fallen to 3 per cent, represented largely by holdings of the Federal National Mortgage Corporation.

The proportion of the main types of mortgages held by financial intermediaries has differed considerably, particularly as between farm and nonfarm mortgages.[34] In recent years financial intermediaries have held between two-thirds and three-fourths of farm as well as nonfarm mortgages. In the case of nonfarm mortgages, however, the share of financial intermediaries has been close to two-thirds at all benchmark years during the last half century. Of farm mortgages, on the other hand, slightly over one-third was held by financial intermediaries at the turn of the century; about one-half by 1912; and more than three-fifths only since the late twenties and then only with the help of land banks and other government lending institutions. Financial intermediaries thus have been a much more important source of supply of nonfarm than of farm mortgage money.

The available basic data are not comprehensive or reliable enough to permit further breakdowns for types of nonfarm mortgages. The material, however, does not point to substantial differences in the share of financial intermediaries, at least not as between residential and nonresidential mortgages or as between one-to-four family homes and multifamily dwellings.

Short-term (non-mortgage) loans

Short-term loans are of importance for only a few groups of financial intermediaries — particularly commercial banks and government lending agencies — but for these they represent one of the major assets.[35] Even for all financial intermediaries taken to-

[34] Since the already rough estimates of total mortgage holdings of personal trust departments had to be allocated between farm and nonfarm mortgages in proportion to outstandings except for the last decade, this paragraph is based on only very rough figures.

[35] No classification of loans by maturity is entirely satisfactory in concept or consistently applicable to the available data. The difficulties are indicated, though not exhausted, by the difference between contractual and actual duration; the difference between original duration and distance to maturity at the date of creditors' or debtors' balance sheet; and the many transitory stages existing between claims designated as securities (particularly those with a short remaining life), mortgages,

(Continued on page 78)

gether such loans have accounted for a substantial though declining proportion of total assets – more than one-fourth in 1900, fully one-fifth in 1929, but only approximately one-tenth in 1949.

The main difficulty in determining the share of financial intermediaries in total short-term (non-mortgage) credit is the absence of comprehensive figures on the total debt of this type in the economy. Next to financial institutions, the most important suppliers of short-term credit are nonfinancial business enterprises, in corporate or unincorporated form, but few reliable or comprehensive data are available on either the aggregate or the distribution of the short-term credits extended by them.[36] Virtually nothing is known of the short-term credit transactions among individuals. It is, therefore, impossible to attempt for these loans a statistical comparison of the type that has been presented for securities and mortgage loans. The available data are barely sufficient to establish the level of the share of financial intermediaries in all short-term (non-mortgage) loans or to be sure about the trends over the last fifty years.

Between 1900 and 1929 total short-term (non-mortgage) loans of the financial intermediaries covered by the basic tabulations increased from $5 to $35 billion. Inclusion of the receivables of finance companies and of security brokers and dealers would not affect the estimate for 1900 greatly but would raise that for 1929 to as much as $45 billion. The increase by 600 to 800 per cent in three decades appears definitely in excess of the growth of total

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secured and unsecured credits. With the available statistics probably all that can be done is to put together all the "receivables" listed in the balance sheets of financial intermediaries except those classified as securities or as mortgage loans. There is little doubt that most of the claims falling into this category represent short-term credits in the sense that their actual life does not exceed, say, three years. It is equally certain, however, that a not negligible fraction of the total is not of this character and, what is more serious for an analysis of the figures, that the division between true short-term credits and other non-mortgage loans differs among financial intermediaries and has changed over time. In the absence of comprehensive and systematic studies in this field it has not been possible to refine the data as they are found in the balance sheets of the various groups of financial intermediaries and to proceed beyond an admittedly rather broad category of "non-mortgage loans."

[36] The most important of these are the figures on accounts receivable reported since the late twenties in *Statistics of Income*, which have been utilized in Table 18, below.

TABLE 18

Share of Financial Intermediaries in Short-Term (Non-Mortgage) Loans (billions of dollars)

	ACCOUNTS RECEIVABLE			FINANCIAL INTERMEDIARIES	
	National Total (1)	*Nonfinancial Corporations* (2)	*Unincorporated Business* (3)	*All Short-Term Loans* (4)	*Short-Term Business Loans* (5)
1900	$18.6[a]	. . .	. . .	$5.2	$4.0
1912	26.0	. . .	. . .	11.6	9.0
1922	50.7	. . .	. . .	25.0	19.2
1929	79.3	$22.7	$6.2	34.8	21.5
1933	41.8[b]	14.6	. . .	22.6	12.6
1939	. . .	21.6	4.4	19.3	12.0
1945	. . .	25.9	7.5[c]	26.7	15.6
1949	. . .	41.9	. . .	40.4	30.0

[a] 1904.
[b] 1932.
[c] 1946.

Column
1 1904-1932: R. R. Doane, *The Measurement of American Wealth* (Harper & Bros., 1933), p. 199; includes notes receivable.
2 1929, 1933: *Statistics of Income.* (All nonfinancial corporations; excludes financial corporations not treated as financial intermediaries.)
1939: *Statistics of Income.* (All corporations excluding banks and trust companies.)
1945: Securities and Exchange Commission, *Statistical Bulletin,* August 1, 1950.
1949: *Ibid.,* May 1, 1952.
3 R. W. Goldsmith, *A Study of Saving in the United States* (Princeton University Press, 1954), Tables U-7 to U-9.
4,5 Table 7, lines 6 to 8 and 8, respectively.

short-term (non-mortgage) debt in the economy. It is, therefore, likely that during this period the share of financial intermediaries in total short-term debt increased, and possibly to a substantial extent, but that most of the increase occurred before 1922. (See Table 18.)

Total short-term loans of financial intermediaries (including finance companies and security brokers and dealers) were only slightly higher in 1949 than they had been twenty years earlier. Since the total of such debt outstanding was almost certainly considerably higher in 1949 than in 1929, the share of financial intermediaries seems to have declined, though it probably was well above the level of the turn of the century.[37]

Estimates of the absolute values of the share, rather than of its movements, are even more hazardous. All that can be said is that financial intermediaries' share in short-term (non-mortgage) credit does not seem to have exceeded one-half at any time and is probably somewhat, though not very much, below that level at mid-century.

Even for an elementary understanding of the role of financial intermediaries in the supply of non-mortgage credit, it is necessary to distinguish three types of such credits: loans on securities, consumer credit, and business loans. Virtually all loans on securities are made by financial intermediaries, primarily commercial banks, either directly or indirectly in the form of bank loans to brokers who re-loan the proceeds to their customers. The only exception occurred in the late twenties when nonfinancial corporations made substantial amounts of funds available for Stock Exchange loans and for a short period supplied more than one-third of total reported loans on securities.[38]

Financial intermediaries have been equally predominant as suppliers of consumer credit. The available data, however, are not sufficiently reliable, comprehensive, or consistent to permit more than two broad conclusions. First, the share of financial intermediaries in total consumer credit outstanding increased considerably between 1900 and 1929 but has not shown a definite trend during the last two decades. Second, since 1929, financial intermediaries have supplied approximately two-thirds of all organized consumer credit (including policy loans).

The share of financial intermediaries in short-term loans to business (excluding loans on securities) can be determined only very roughly. The scattered data, some of which are presented in Table 18, permit only two tentative conclusions. The first is that

[37] It is possible that the share of 1949 will turn out to be close to a low point in its long-term movements. From 1949 to 1952 at least short-term loans of financial intermediaries seem to have increased somewhat more rapidly than those of other lenders, particularly accounts receivable of nonfinancial business enterprises.

[38] See R. W. Goldsmith, *op. cit.*, Vol. II, Chap. XI and Table D-8.

the share of financial intermediaries in short-term business loans declined markedly between 1929 and 1939 but recovered part of the loss in the following ten years. The second puts the share of financial intermediaries in short-term business loans as well under one-half for all benchmark dates.[39]

The decline in the proportion of short-term business loans supplied by financial intermediaries — primarily commercial banks — during the last twenty years is compatible with the fragmentary evidence on the relation between notes payable to banks and accounts payable to other creditors for different branches of business. So is the indication that the share of financial intermediaries as suppliers of short-term business credit declined between 1929 and 1939 but recovered from 1939 to 1949. It is to be expected that during a period of falling prices and depressed business the short-term loans of banks should be reduced more rapidly than trade credit, and the opposite relation may be expected to prevail in periods of rising prices and expanding business.

The absence of comprehensive or reliable data for most of the period, and particularly before 1929, on the share of financial intermediaries in short-term business loans is regrettable. The only trustworthy long-term series, unfortunately limited to large manufacturing and trade corporations, indicates a somewhat larger increase of notes payable than of accounts payable between 1900 and 1920,[40] i.e. it points to an increase in the ratio of bank to trade credit. During the twenties, however, the ratio of bank credit to trade credit declined — and even quite sharply — the direction of the movement being in line with the further decline in the ratio observed in the last two decades. Manipulation of a set of over-all rough estimates also indicates a substantial increase in the ratio of bank credit to trade credit during the first two decades of the twentieth century and an equally sharp decline

[39] Table 18 points to a ratio of 1:2 between short-term loans to business by banks and trade credit for 1939. An extensive sample study, based on 6,200 nonfinancial concerns, puts the same ratio at 1:2.5 (N. H. Jacoby and R. J. Saulnier, *Business Finance and Banking* [National Bureau of Economic Research, 1947], p. 41).

[40] Jacoby and Saulnier, *op. cit.*, p. 88.

during the twenties.[41] Some indirect light, finally, may be shed on the question by the ratio of the short-term business loans of financial intermediaries to gross national product since it may be assumed that the latter is a reasonably good indicator of volume of sales. This ratio increased between 1900 and 1922, declined moderately to 1929, experienced a considerable further reduction through 1945 but had partially recovered by 1949.[42] To the extent that changes in the ratio of gross national product to sales and of sales to trade credit can be regarded as absent or minor, these movements confirm the ups and downs in the ratio of bank to trade credit shown by the other scattered data. It therefore looks as if the share of financial intermediaries in the supply of short-term business credit had shown an increasing trend from the turn of the century to the early twenties but a declining trend over the last thirty years.

Tangible assets

Tangible assets held by financial intermediaries are of three types: buildings and equipment for own use, income properties, and foreclosed real estate. It is therefore difficult to decide with which national total to compare tangible asset holdings of financial intermediaries. There is also the difficulty that for the tangible assets of financial intermediaries we must rely on book values, while national totals are generally given in current values. Fortunately, the problems may be dismissed summarily as it is evident that the tangible assets held by financial intermediaries represent

[41] This statement is based on a comparison of the short-term business loans of financial intermediaries, as shown in Table 18, with the difference between Doane's estimates of all notes and accounts receivable (R. R. Doane, *The Measurement of American Wealth* [Harper & Bros., 1933], p. 199) and of all short-term business loans of financial intermediaries. Such a comparison, of course, is very hazardous, not only because of the use of a residual between two figures of doubtful comparability, but also because of the character of Doane's estimates, the sources and methods of derivation of which are not known in detail.

[42] The ratio continued to rise between 1949 and 1952 reflecting the sharp increase in bank loans to business which had been at an unusually low level during and immediately after World War II. Even in 1952, however, the ratio of short-term loans to business by financial intermediaries to gross national product was still far below the level of the 1920's.

only a very small proportion of the national total, however defined or measured.

Most of the holdings of tangible assets by financial intermediaries are concentrated among three groups – commercial banks, life insurance companies, and personal trust departments.[43]

The broadest comparison, and probably one most appropriate for most purposes, is that between all tangible assets held by financial intermediaries and the value of structures, equipment, and inventories. Using original cost values for the national total[44] and

TABLE 19

Share of Financial Intermediaries in Total Tangible Assets

	NATIONAL TANGIBLE ASSETS *Total*	*Structures* (*billions of dollars*)	TANGIBLE ASSETS OF FINANCIAL INTERMEDIARIES	SHARE OF FINANCIAL INTERMEDIARIES *Total Tangible Assets* (*per cent*)	*Structures*
	(1)	(2)	(3)	(4)	(5)
1900	$53.8	$33.2	$.9	1.7	2.7
1912	96.9	56.0	1.6	1.7	2.9
1922	183.3	88.7	2.9	1.6	3.3
1929	285.5	153.9	4.5	1.6	2.9
1933	260.7	157.9	6.1	2.3	3.9
1939	279.5	162.5	7.4	2.6	4.6
1945	326.6	169.9	3.6	1.1	2.1
1949	518.8	230.5	3.7	.7	1.6

Column
1,2 From R. W. Goldsmith, *A Study of Saving in the United States* (Princeton University Press), Vol. III; original cost basis.
3 From Table 7.
4,5 Column 3 divided by columns 1 and 2, respectively.

[43] It may be recalled that the tangible assets of government lending institutions are not included in the tabulations on which these statistics are based. They amounted in 1949 to 2 per cent of the national total on a book value basis and at that date consisted mostly of inventories of agricultural commodities held by the Commodity Credit Corporation.

[44] See R. W. Goldsmith, "A Perpetual Inventory of National Wealth," *Studies in Income and Wealth, Volume Fourteen* (National Bureau of Economic Research, 1951), p. 18.

book values for the tangible assets of financial intermediaries,[45] we find that the share of the latter amounted to 2 per cent up to 1929, rose steadily to 3 per cent in 1939 as the result of foreclosures on real estate loans during the Great Depression, and declined to 1 per cent in 1949 as foreclosed properties were liquidated. (See Table 19.)

The holdings of commercial banks have consisted almost exclusively, except in the thirties, of the buildings in which they have their offices. Those of life insurance companies have begun to include increasing amounts of income properties, multifamily dwellings as well as office and factory buildings. The real estate in personal trust funds, finally, has consisted mainly of income properties – residential, urban nonresidential, and agricultural.

As would be expected from the nature of their operations, financial intermediaries have never directly owned more than a negligible proportion of the tangible wealth of the country. Even in the more restricted field of urban nonresidential real estate, in which their tangible assets have been concentrated except during the thirties, the proportion of direct ownership probably has not exceeded 5 per cent save during the Great Depression.

Liabilities

The share of financial intermediaries in total liabilities in the United States has increased considerably and almost continuously since the turn of the century.[46] In 1900 slightly under one-quarter of all claims were against financial intermediaries. Fifty years later the proportion had risen to almost two-fifths. The rise was rather slow, though steady, between the benchmarks of 1900 and 1933 but very rapid between 1933 and 1939. During the last ten years the ratio has remained virtually unchanged.

[45] See Table 7, above, line 9.

[46] In all these calculations, claims against government insurance and private pension funds have been regarded as part of liabilities of financial intermediaries and measured by the total assets of these funds even though the ultimate beneficiaries may not have claims in the legal sense against the funds. Personal trust departments, however, have not been regarded as giving rise to creditor-debtor relationships between beneficiaries and trustees.

TABLE 20

Share of Financial Intermediaries in Total Liabilities

	TOTAL LIABILITIES		FINANCIAL INTERMEDIARIES Amount	Share (per cent)
		(billions of dollars)		
	(1)		(2)	(3)
1900	$50		$12	24
1912	95		26	27
1922	225		62	28
1929	325		94	29
1933	285		84	29
1939	360		135	38
1945	775		292	38
1949	875		325	37

Column
1 Sum of currency, bonds, mortgages, and short-term debt outstanding (including tax accruals); deposit liabilities of banks and reserve liabilities of insurance companies; government insurance and private pension funds. (From R. W. Goldsmith, *A Study of Saving in the United States* [Princeton University Press], Vol. III.)
2 Total assets of financial intermediaries minus equity of personal trust funds (Table 1) and of other intermediaries (Table 21).
3 Column 2 divided by column 1.

These conclusions can be drawn with a reasonable degree of confidence from Table 20, even though the absolute level of the ratio of financial intermediaries' liabilities to total debt is subject to considerable error, particularly because of the difficulty of making comprehensive and reliable estimates of all debts in the economy. Refinement of the estimates would undoubtedly somewhat alter the ratios, though it might not affect the trend; but in any case it is not likely to lead to a modification of the significant result that financial intermediaries now owe about two-fifths of the debt outstanding within the economy or that their share in total debt is considerably higher than it was fifty years ago. The policies of financial intermediaries are, therefore, now of much greater importance for the entire claim and credit structure of the country than they were half a century earlier.

The increase in the share of financial intermediaries as debtors is only part of the radical change in the debt structure of the economy over the last fifty years. At the turn of the century nonfinancial business was the most important debtor, alone accounting for almost one-half of total debt outstanding in the United States. Financial intermediaries came next with about one-fourth of the total. Individuals owed about one-fifth of the total debt, mostly in the form of mortgages on their homes or farms.[17] Government debt was almost negligible, accounting for less than 10 per cent of total debt, and most of it was owed by state and local governments.

Nonfinancial business enterprises were still the most important group of debtors in 1929, but their share had declined to about two-fifths. The share of financial intermediaries had risen but was still under one-third, while that of individuals remained unchanged at about one-fifth. Government debt now accounted for fully one-tenth of the total, divided about equally between the federal government and state and local governments.

By 1949, nonfinancial business had fallen to third place among the four main debtor groups and accounted for only about one-sixth of the total debt. The share of individuals had also declined to only one-tenth. In contrast both the government and financial intermediaries now accounted for at least one-third of total debt outstanding. The movements of government and financial intermediaries' debt are, of course, at times closely related. The increase in the government's share in total debt reflects primarily the large-scale borrowing during World War II and secondarily during the thirties; and it is the absorption of this additional debt by financial intermediaries that is largely responsible for their increasing share of liabilities in total debt.

It is not necessary to study in detail the shares of different groups in the increase of the share of all financial intermediaries' debt in the national total since the trends in the distribution of debt are necessarily very similar to those in the distribution of the aggregate assets of financial intermediaries among the main groups of institutions other than personal trust departments. It may therefore suffice to recall that the liabilities of insurance institutions

[17] The figures might be slightly larger if better estimates were available of open account trade debt and of debt among individuals.

have increased considerably more rapidly than those of the banking system both between 1900 and 1929 and between 1929 and 1949, while those of other financial intermediaries have increased more rapidly than the total in the first half of the period but less rapidly from 1929 to 1949. As a result the share of the liabilities of the banking system in total debt outstanding did not increase at all from 1900 to 1929 and rose only slightly in the following two decades, while that of insurance institutions increased considerably in both periods.

The share of financial intermediaries in the total of short-term liabilities outstanding in the nation has, of course, always been considerably higher than their share in total liabilities since financial intermediaries have raised only relatively small amounts of funds through bonds and mortgages. Indeed, their share in the total long-term debt of the country has not exceeded a few per cent at any benchmark date and in 1949 was below 1 per cent, being essentially limited to the bonds issued by certain government lending agencies, the land banks, and a few investment companies. If the liabilities of insurance organizations are regarded as of a short-term nature, financial intermediaries have at most benchmark dates accounted for more than half of the country's short-term debt.

Equity

The determination of share of financial intermediaries in national equity is considerably more difficult, both conceptually and practically, than similar calculations of assets and liabilities.[48]

The first difficulty arises in defining the equity of financial intermediaries. This is a relatively noncontroversial matter only for financial intermediaries in corporate form, although even for these a decision must be made whether equity is to be measured in terms of book value or market value of the stock. What exactly is to be regarded as the "equity" of mutual savings banks, credit unions, savings and loan associations, mutual insurance companies,

[48] Some of the difficulties discussed here with respect to equity have already been met with in the case of liabilities but were disregarded there because they were of little quantitative importance in relation to the aggregate.

government pension and trust funds, and private pension funds is far from clear. Obviously, measurement of equity on a market value basis is out of the question for these institutions. On a book value basis we may take the legalistic position of regarding as equity everything that does not constitute a definite liability. That, however, would include virtually all assets of savings and loan associations and credit unions since what is economically a deposit with these institutions is legally regarded as a share. How government pension and trust funds and private pension funds would be treated from a strictly legalistic point of view is doubtful. From that point of view the rights of beneficiaries in personal trust departments certainly would have to be regarded as being in the nature of equity.

In this situation it would seem best to be guided by economic rather than by legal considerations and to treat all financial intermediaries, as far as possible, in analogy to corporations. Under this treatment the "equity" of financial intermediaries will include only the book or market value of the stock of financial intermediaries in corporate form. All assets of private and government insurance organizations are regarded as balanced by liabilities to their policyholders or other beneficiaries. The assets of personal trust departments, on the other hand, are treated as giving rise to an equivalent equity interest of the beneficiaries.

The second and more difficult question concerns the national total of equity with which the aggregate equity of financial intermediaries so defined may be compared. The simplest solution is to use national wealth as the measure of national equity. National wealth, however, is unsatisfactory for this purpose since it is primarily the equity of ultimates, i.e. households, governments, and nonprofit institutions. Moreover, national wealth is generally calculated on the basis of current values, while the equity of financial intermediaries is, as a rule, based on book values. A conceptually more appropriate national total is the sum of the equity of all business enterprises, but this is difficult to measure on a uniform basis. Finally, there is the narrower comparison between the equity of all corporations and of financial intermediaries in corporate form.

The equity of financial intermediaries has been quite small compared to total national equity, in whatever way the latter is defined. (See Table 21.) We may, therefore, be satisfied with two rough indications of the ratio between the two.

TABLE 21

Share of Financial Intermediaries in Equity

	NATIONAL WEALTH (*current value*)	CORPORATE STOCK (*market value*)	EQUITY OF FINANCIAL INTERMEDIARIES[a] *All*[b] (*book value*)	*Corps.* (*market value*)	SHARE OF FINANCIAL INTERMEDIARIES *National Wealth*	*Corporate Equity*
	(*billions of dollars*)				(*per cent*)	
	(1)	(2)	(3)	(4)	(5)	(6)
1900	$87.7	$11.8	$2.9	$2.5	3.3	21.2
1912	165.2	32.2	5.8	5.3	3.5	16.5
1922	334.2	57.1	11.4	10.3	3.4	18.0
1929	439.1	149.6	23.1	21.3	5.3	14.2
1933	330.2	63.9	19.3	5.5	5.8	8.6
1939	395.6	82.3	21.5	9.9	5.4	12.0
1945	570.6	127.7	53.6	14.8	9.4	11.6
1949	898.2	131.6	57.4	15.1	6.4	11.5

[a] Excluding personal trust departments.
[b] Includes in addition to commercial banks, property insurance companies and investment companies covered in column 4, net worth of savings and loan associations, credit unions, Federal Reserve banks, land banks, and government lending institutions; undistributed surplus of mutual savings banks, life insurance companies, and fraternal insurance organizations.

Column
1 From R. W. Goldsmith, *A Study of Saving in the United States* (Princeton University Press), Vol. III, Part I.
2 Appendix Table A-2.
3 Detailed tables in Appendix to forthcoming full study.
4 From Appendix to the forthcoming full study.
5 Column 3 divided by column 1.
6 Column 4 divided by column 2.

1. The book value of the equity of financial intermediaries (excluding personal trust departments) throughout the last fifty years has hovered around 5 per cent of national wealth. Personal trust departments alone, however, have represented an approximately equal proportion of national wealth.

2. Financial intermediaries in corporate form, primarily commercial banks and property insurance companies, have accounted for as much as 21 per cent of the market value of the equity of all corporations in 1900, but their share declined rapidly to 14 per cent in 1929 and has remained at around 12 per cent during the last decade.

The proportion of total equity accounted for by financial intermediaries is thus quite small and is well below the share of financial intermediaries in virtually all types of assets which they hold or their share in total or short-term liabilities. Furthermore, the share fails to show the increasing trend over the last half century visible in most other ratios. The reason for the difference in level is that equity, as here defined, constitutes only a small proportion of the total assets of financial intermediaries.