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Introduction

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This is one of a series of *Occasional Papers* stemming from the inquiry into long-term trends in capital formation and financing in the United States initiated at the National Bureau in mid-1950. The project is supported by a generous grant from the Life Insurance Association of America.

In this inquiry the study of financial intermediaries, i.e. institutions engaged in investing funds mobilized from a large number of individual and other savers, is of strategic importance. The various sector studies that examine trends in the accumulation of real capital and other assets, and the ways such accumulation was financed – in agriculture, mining, manufacturing, the public utilities, residential real estate, government, and the foreign sector – are designed to shed light on the factors that determined demand for capital funds either in the domestic economy or abroad. We are also fortunate to have at hand Dr. Goldsmith's recently completed estimates of savings in this country since 1897 by groups of savers and the forms that savings assumed, which will be published shortly in Volume I of his work, *A Study of Saving in the United States* by the Princeton University Press. Clearly, however, a statistical and analytical bridge is needed between the flow of savings on the supply side and the use of such savings in financing capital formation and other expenditures by capital users. We need to determine channels through which savings originating with certain groups in the economy flowed into certain sectors of capital formation or other uses. In drawing such lines of connection, we must obviously give full consideration to the role of financial intermediaries – in mobilizing savings and channeling

them into such uses in the economy as assure the purposes of savings – from the standpoint of both the savers and the economy at large. In such consideration the volume of assets handled by the various financial intermediaries, and their trends, either by type or in their distribution among the various financial intermediaries and in relation to the long-term movements in the economy at large, must all be ascertained. Dr. Goldsmith covers this topic, among others, in detail in a forthcoming monograph. The results of his investigation are brought together, in greatly abbreviated form, in the present paper.

Before we venture a few comments on Dr. Goldsmith's substantive findings, a brief statement about the place of these findings in the inquiry as a whole is in order. Demand for funds can originate either in the need for capital goods or for current consumption; governments' need for the latter, for instance, is particularly large in wartime. This demand can be satisfied either by borrowing, i.e. by external financing, or by a draft on the unit's own accumulated stock of claims on current income, i.e. by internal financing. In turn, external financing can take place either directly, e.g. where funds are provided without intervention by a financial intermediary as when an individual purchases a newly issued bond or share in an enterprise, or when he lends his savings directly to some industrial firm. But much external financing of capital formation or of other uses of funds takes place through financial intermediaries. It is important to remember that in this paper Dr. Goldsmith's estimates, presented in such rich detail in the text, relate only to the part of the flow of savings into capital formation and other uses that is channeled from savers to users through intermediaries. Measures of level and trends in the other types of financing are clearly needed in the inquiry as a whole; and it is hoped that they can be approximated, although the obstacles in the way are formidable and compromises may have to be made.

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The variety of financial intermediaries, about which Dr. Goldsmith's paper contains a mine of statistical information, is rich

indeed: banks ranging from the Federal Reserve institutions to the commercial and savings banks; insurance companies of various descriptions; private self-administered pension funds and government pension, retirement, and Social Security funds; the personal trust departments of banks; and the miscellaneous group comprising savings and loan associations, mortgage companies, credit unions, investment companies of various types, and government lending institutions. The variety occurs because (1) savers make funds available under different conditions; (2) the various financial intermediaries specialize in different types of assets or claims, and this, in turn, gives rise to important differences in the uses to which funds can be put; (3) the intermediaries differ in character: they may be private or governmental, designed for general service or attached to a special group of enterprises. The necessary differentiation of financial intermediaries, together with a minimum classification of their assets by form – government securities; corporate bonds, domestic or foreign; corporate stocks, domestic or foreign; mortgages, cash, short-term claims in the form of notes and loans of various types – present a diversified picture. This variety and complexity are, of course, a reflection of the system's functional significance – of the service that it renders in mobilizing savings from various sources and under different conditions and channeling them into the economically most desirable uses. And even though Dr. Goldsmith found it possible to present his series of estimates only at selected benchmark dates within the fifty-year period that he covers, the wealth of statistical information thus assembled is impressive.

It might help orient the reader amidst this embarrassment of statistical riches to present briefly Dr. Goldsmith's major findings on two topics: (1) the level and trends in the shares of all financial intermediaries in some comprehensive total of all assets in the economy and (2) the level and trends in the distribution of assets of all financial intermediaries among the major groups.

As Dr. Goldsmith rightly stresses, a central difficulty in establishing the share of financial intermediaries in some countrywide total is that of duplication. The assets held by the intermediaries may be either tangible goods or claims of various description –

long- and short-term, fixed debt claims and equity shares, claims against private units and claims against government. There is duplication among these assets in the sense that the claims held by one group of financial intermediaries may be against other intermediaries, e.g. the assets administered by personal trust departments may include bank stocks. When we try to establish a countrywide total of assets, duplication will be all the more extensive in that tangible goods, e.g. industrial plants and equipment, will be included, together with the corporate bonds and stocks which constitute claims against the income derived from the use of plants and equipment. The share of financial intermediaries in

Table A

Shares of Financial Intermediaries in Several Totals of Assets Selected Dates, 1900-1949

		1900	*1923*	*1939*	*1949*
		(totals in billions of dollars)			
1	All assets	160	650	880	2,020
2	Intangible assets (all claims)	72	316	484	1,122
3	Intangible assets, excluding cash and short term (all long-term claims)	29	145	224	521
4	Fixed long-term intangibles[a] (bonds and mortgages)	17	87	140	387
5	Private long-term intangibles (bonds, mortgages, stocks, except government)	26	113	158	243
6	Private fixed long-term intangibles (bonds and mortgages)	14	55	74	109
		Percentage Shares of all Financial Intermediaries in the Totals			
1	All assets	11	15	22	21
2	Intangible assets (all claims)	24	29	39	38
3	Intangible assets, excluding cash and short term (all long-term claims)	31	34	54	59
4	Fixed long-term intangibles[a] (bonds and mortgages)	47	48	73	72
5	Private long-term intangibles (bonds, mortgages, stocks, except government)	28	32	44	47
6	Private fixed long-term intangibles (bonds and mortgages)	45	52	68	77

[a] Including government short-term notes.

any countrywide total of assets will, therefore, necessarily depend upon the amount of duplication permitted in both the numerator and denominator of the fraction which measures that share.

Since it is doubtful that even with the best of feasible data a unique *net* ratio could be calculated except upon some artificial and highly restrictive assumptions, it seemed best to operate with a variety of countrywide totals and of resulting ratios or shares. Table A provides a brief summary of a few of such possible totals and shares, selected out of the wealth of data provided in Dr. Goldsmith's paper, with the estimates shown at as few dates as necessary in order to reveal the major trends during the last half century.

The first countrywide total of assets shown is the most inclusive and duplicated of all: it comprises all the tangible goods, the real wealth of the country, and also all the intangible assets -- the overt debt claims, whether in the form of bonds, stocks, mortgages, notes, receivables, or cash. Of this total, the share of financial intermediaries has in the last fifty years ranged from about a ninth to somewhat over a fifth.

But it is clear that in this countrywide total, used in the denominator, duplication is relatively much greater than in the total of assets of financial intermediaries, used in the numerator. The denominator includes all tangible goods together with all the intangibles, the claims against the income and principal of these goods. Financial intermediaries hold few tangible goods: by definition they are specialists in the handling of money savings and claims. It is, therefore, more meaningful to compare their assets, reduced by these minor amounts of tangible goods, with the countrywide total of all claims or intangible assets. This is the rationale for the second countrywide total in Table A, that of all intangible assets or claims (line 2). The share of financial intermediaries in this total is found to range from not much under a fourth to a bit under two-fifths -- almost twice as great as their share in the more duplicated first total.

The total of intangible assets also contains duplication, and a fairly significant one, between long- and short-term claims -- e.g. between bank stock (a claim upon the bank) and the bank's receivables or cash. And again the duplication in the countrywide

total used as denominator is likely to be greater than in the total for financial intermediaries used in the numerator. Many financial intermediaries do not deal in short-term claims, and their cash assets are quite small compared to their holdings of long-term claims. Hence the next step (line 3 of Table A) in which we confine the countrywide total to intangible assets of long-term character — bonds, stocks, and mortgages. Unfortunately, Dr. Goldsmith's data do not permit differentiation between short- and long-term government securities; although in this case, unlike the case of private credit, the distinction is not as significant in reflecting largely different types of capital formation. Short-term government notes are therefore included in the total of all long-term claims or intangibles; and, with all its limitations, the resulting total is fairly useful if one admits the validity of a rough distinction between short- and long-term claims or intangibles. Of this total, the share of all financial intermediaries ranges from under a third to almost six-tenths — consistently larger than their share in the countrywide total of all intangible assets.

The three remaining totals in Table A are variants derived as we either omit long-term intangible assets in the form of equity shares and thus limit the total to *fixed* debt claims (total in line 4), or include the former but omit all government securities, thus limiting the total to private long-term intangibles (bonds, stocks, and mortgages, total in line 5), or omit both corporation stocks and government securities and limit the total to private fixed long-term debt (total in line 6). The relevance of these variants needs little explanation. The financial intermediaries for many reasons participate less in the holding of stock than of a more fixed type of claim; and the marked fluctuations in the prices of stocks complicate the problem of comparative valuation in any estimated total of assets or claims (one reason why Dr. Goldsmith's estimates for 1929, a year of exceedingly inflated stock values, were not used). Hence the share of financial intermediaries in the total, except for stocks, is greater than in the total of all long-term intangibles, ranging from a half to about three-quarters (compare lines 4 and 3). The reinclusion of stocks in the total in line 5 and the exclusion of government securities (widely held by finan-

cial intermediaries) naturally results in a decline in the share of intermediaries in the countrywide total of all private long-term debt – the share ranging from 28 to 47 per cent. Finally, the exclusion of stocks and of government securities results again in a high share of financial intermediaries in the countrywide total of all private fixed long-term debt – ranging from not much over two-fifths to about four-fifths (line 6).

A most significant finding of Dr. Goldsmith, indicated clearly in Table A, is that despite marked differences in the *level* of shares of financial intermediaries in the alternative countrywide totals of assets or claims, the major *trends* in the shares are quite similar. In all the lines of the lower panel of Table A the shares of financial intermediaries rise from 1900 to 1949 and quite substantially: if they nearly double only in some, it is because in others the shares in 1900 are already at such high levels that doubling is arithmetically almost impossible. In all lines in Table A the upward trend in the shares of financial intermediaries in the countrywide totals of assets is more pronounced from 1922 to 1949 than from 1900 to 1922, and the difference is marked in most cases. Finally, in comparing the periods 1922-1939 and 1939-1949, one can see immediately that the rise in the shares of financial intermediaries in the economy was much steeper from 1922 to 1939 than from 1939 to 1949 – even allowing for the fact that the first interval is seventeen and the second only ten years long.

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The combination, just observed, of differences in the level of shares of financial intermediaries in the several countrywide totals of assets, with the similarity in the trends in these shares over time – the finding that the shares of intermediaries in countrywide totals of assets rose from 1900 to 1949, the rise being most conspicuous from 1922 to 1939 – may assume more interest and significance as we observe the distribution of assets among the major groups of financial intermediaries proper. A minimum amount of information on such distribution is provided, for the same selected dates, in Table B.

TABLE B

Percentage Distributions of Total Assets among Major Groups of Financial Intermediaries for Various Asset Totals, Selected Dates, 1900-1949

	1900	*1922*	*1939*	*1949*
1 Total assets[a]				
a) Banking system	68	63	50	53
b) Insurance system	12	12	22	28
c) Personal trust departments	16	19	18	12
d) Miscellaneous	4	5	10	8
e) Private sector	100	93	82	77
f) Government, total	0	7	18	23
Banking	0	6	14	14
Insurance	0	0	3	9
2 Intangible, long-term assets (bonds, stocks, mortgages)				
a) Banking system	46	42	35	42
b) Insurance system	18	19	28	36
c) Personal trust departments	29	31	25	15
d) Miscellaneous	6	8	12	7
e) Private sector	100	98	88	80
f) Government	0	2	12	20
3 Fixed long-term (bonds and mortgages)				
a) Banking system	50	48	41	47
b) Insurance system	18	21	31	38
c) Personal trust departments	25	21	17	9
d) Miscellaneous	7	10	11	6
e) Private sector	100	98	86	78
f) Government	0	2	14	22
4 Private long-term intangibles				
a) Banking system	38	35	22	21
b) Insurance system	20	19	27	40
c) Personal trust departments	34	35	32	22
d) Miscellaneous	8	11	20	18
e) Private sector	100	100	93	98
f) Government	0	0	7	2
5 Private fixed long-term (bonds and mortgages)				
a) Banking system	41	42	28	28
b) Insurance system	21	23	32	48

c) Personal trust departments	29	22	19	6
d) Miscellaneous	9	14	21	18
e) Private sector	100	100	92	98
f) Government	0	0	8	2

[a] The percentage shares for the total of all intangibles would be almost identical.

The classification of intermediaries follows that given in much greater detail in Dr. Goldsmith's paper (see particularly page 19). All that need be added here is that the government classification includes the Federal Reserve and Postal Savings Systems, the various trust accounts for pensions, retirements, Social Security, and other government lending institutions.

The table shows the distributions for the several totals of claims differentiated in Table A. The distinction between the total of all assets and the total of intangible assets alone has been omitted; because the amount of tangibles held by financial intermediaries is minute in relation to their holdings of claims, the distributions of the two totals would be almost identical.

Since despite much simplification the findings are still numerous and complex, it is best to list them:

1. The shares of the banking system in the assets of all intermediaries differ largely as we include or exclude short-term assets and cash: with their inclusion the shares of the banking sector are appreciably higher than with their exclusion. Of much more interest, because less familiar, are the differences in the *trends* in the shares of the banking system in the different totals of assets. If we deal with *all* intangible assets, the share of the banking system declines perceptibly — from 68 per cent in 1900 to 53 in 1949; and the decline is more marked after 1922, particularly in the period from 1922 to 1939 (line 1a). If we exclude short-term claims (except the governmental), the downward trend in the share of the banking system in the assets of financial intermediaries disappears: it moves from 46 per cent in 1900 with some fluctuations to 42 in 1949 (line 2a) or, with exclusion of corporate stocks, from 50 per cent in 1900 to 47 in 1949 (line 3a). Finally, if we exclude government securities as well as short-term claims, the share of the banking system in the assets of all intermediaries again

declines, either from 38 in 1900 to 21 in 1949 (line 4a) or with exclusion of corporate stocks, from 41 in 1900 to 28 in 1949 (line 5a). Again, the decline is most apparent from 1922 to 1939. Obviously, the holding of government securities sustained the banking system's share in the total of all long-term assets held by financial intermediaries.

2. The share of the insurance institutions in the assets of all intermediaries rises – in *all* variants of the asset totals used in Table B. This rise was mild, if present at all, between 1900 and 1922 and really perceptible only after 1922. In all variants the rise in the share of the insurance system was as great or almost as great from 1939 to 1949 as it was from 1922 to 1939 – indeed in most cases, with allowance for the different lengths of the two periods, greater during the last ten years than during the seventeen years from 1922 to 1939. However, this latter finding would not be true for the share of the private insurance group in the totals of assets including government securities: in such totals, which include assets held by the government insurance sector, the shares of private insurance would not rise markedly from 1939 to 1949, and the rise would therefore be largely confined to the interval 1922-1939.

3. The share of personal trust departments in the assets held by all financial intermediaries declines over the period in all variant totals of assets. In most variants the decline in the share is particularly perceptible for the decade 1939-1949.

4. The share of the miscellaneous group (dominated by building and loan associations and in later years influenced also by the government lending institutions) rises in almost all the alternative totals of assets held by financial intermediaries – but not in those that exclude short-term claims and include government securities. The exclusion of the former removes a component whose total weight in all assets held by financial intermediaries declines; and since the miscellaneous group holds few of such short-term claims, its share in a total would not rise as much if the total excludes a decreasing component of short-term claims. Nor does the miscellaneous group hold much of government securities; the inclusion of the latter into a total of assets, with a rising weight, has a de-

pressing effect on the share of the miscellaneous intermediaries.

5. In general in the alternative totals of assets held by all intermediaries, the share of the government group tends to rise and that of the private group to decline. But the participation of the government sector is largely in the holding of government securities. Hence when we observe shares in totals including such securities (lines 1f, 2f, 3f), the upward trend in the shares of government is quite marked. In the totals of long-term assets alone, the rise in the shares of the government sector is particularly conspicuous after 1922 — but not before then (lines 2f and 3f). But if we deal with totals of *private* long-term claims alone, government intermediaries cease to play a significant role; and while there is an increase in their shares in 1939 (lines 4f and 5f) in connection with bailing out operations of the government lending agencies, the share dwindles again to insignificance by 1949.

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The findings noted above are but a few of the many more that can be derived from the two summary tables, let alone from the variety of information provided in Dr. Goldsmith's paper. One need not stress their relevance to the understanding of the processes by which savings are channeled into capital formation and other uses, and of the major changes in these processes over the last half century.

Despite their apparent complexity, the findings can, I believe, be reduced to a few underlying trends; it is the combination of these trends with different weights in different periods that produces the somewhat bewilderingly complex picture of changes in shares of financial intermediaries in the total assets of the economy and in the structure of the system of financial intermediaries proper. The underlying trends stem from factors which determine the growing importance of security as a motivation for savings as compared with other motives for savings — such as expansion of one's own business. This is reflected in the marked growth of insurance institutions among the intermediaries and in turn con-

tributes to a rise in the share of intermediaries in the total assets of the economy. Another set of forces affects the position of the upper income groups, whose savings presumably constitute the bulk of funds handled through personal trust departments. The decline since 1939 in the share of upper income groups in total national income may have contributed to the marked decline in the share of personal trust departments in the assets of all financial intermediaries, and partly to the fact that the share of all intermediaries in the various totals of assets failed to rise markedly from 1939 to 1949. A third set of forces accounted for changes in the structure of all intangible assets or claims. A shift away from short-term and toward long-term claims would, all other conditions equal, tend to *raise* the share of financial intermediaries in the totals of all assets; and it is perhaps no accident that the greatest rise in that share occurred from 1922 to 1939 – the period in which short-term claims showed least growth as compared with long-term intangibles, particularly fixed debt. The same shift would also affect the distribution of assets *among* financial intermediaries, presumably depressing the shares of the banking system and raising those of others. Finally, a fourth set of forces centers about the role of government and the state – the development of new forms of government insurance, of new types of government banking, and, quantitatively most important, the creation through the federal debt of fixed debt intangibles that enter the holdings of financial intermediaries in great quantities. One can see clearly the reflection of these forces in the sustained or rising share of fixed debt in the total of long-term or of all intangibles, in the supply to financial intermediaries of a safe if low return investment – with consequences for both the shares of intermediaries in the various countrywide totals of assets and the structure of the intermediary system in the distribution of assets among the several groups.

The explanatory comments above are tentative and cursory. More light and information can be secured in Dr. Goldsmith's paper, and more deeply reaching analysis will, it is hoped, be possible in the monograph. The purpose here is merely to arouse the curiosity and interest of the reader and to provide him with some

clues that, however superficial, might serve him as preliminary guides to the abundance of data in the paper.

Two concluding comments are, perhaps, in order. The first is the high probability of interrelationship among the various groups of factors operating. Even the incomplete list above clearly suggests that the events of the recent decade, in putting greater responsibilities on government, contributed at the same time to the increased share of government insurance, to the enormous rise in the total of fixed debt, and to the decline in the income shares of upper income groups. The resulting trends, some of which were observed in Tables A and B, were therefore directly interrelated. And this still does not take account of the more indirect ties – influences of war-produced inflation and other disturbances on the flow and channeling of savings in general and on their flow through financial intermediaries in particular. The task of analysis, as well as of statistical testing, must take into account interrelations among underlying forces and interconnections of the resulting trends.

Second, as always in trying to account for some series of historical events, there will be no dearth of explanations, particularly if we are satisfied by the rather vague semantics of "factors," "forces," and "trends" without defining them to the point of being able to observe, measure, and test what it is that we call by these suggestive names. This comment applies just as much to this somewhat general discussion as to many other examples of what might be called implicit generalizing. The much more difficult and much more satisfying task involves pinning down these variables, defining them in terms in which their size and impact can be measured — without sacrificing thereby analytic validity. For this task the wealth of detail in Dr. Goldsmith's paper is indispensable, although it may still be found far from sufficient. Nevertheless, the greater detail in distinguishing the types of financial intermediaries; the kind of assets they hold; the periods of time over which changes can be observed – are all valuable precisely because they reveal a greater variety of historical experience, permit finer comparisons, and hence make it possible for the analyst to define his hypothesis more specifically and test it more

closely. The purely informational value of Dr. Goldsmith's paper, resting in part and building upon the vast statistical work in his study of savings, is patent indeed. But from the standpoint of this inquiry, and of economic knowledge in general, the weaving of this detail into a series of tenable hypotheses concerning the interrelated processes of capital formation and financing and economic growth in the country would be even more important. It was the major purpose of this introduction to suggest the high potential value of Dr. Goldsmith's estimates to this broader task, to which our whole inquiry is intended to contribute.

Simon Kuznets

Summary

1. The usual ratio of the assets of financial intermediaries to national wealth is not an appropriate measure because the numerator is a gross unconsolidated concept and the denominator, a net consolidated figure.[1] In order to find a meaningful magnitude with which to compare total assets of financial intermediaries, it is necessary to prepare a national balance sheet on an unconsolidated basis. This permits derivation of a ratio between two commensurable quantities, total combined (unconsolidated) assets of financial intermediaries and of all economic units within the nation.

2. The share of financial intermediaries in national assets has increased considerably from about one-eighth in 1900 to one-sixth in 1929 and to one-fourth in 1945. The trend has been reversed during the last few years: the total assets of financial intermediaries have grown but slowly, while the current value of national assets has risen substantially under the influence of a sharp increase in the price level of tangible assets. As a result the share of financial intermediaries in national assets at the present time is slightly over one-fifth.

The more familiar ratio of financial intermediaries' assets to national wealth shows movements in the same direction, but on a higher level and of greater steepness. It rises from fully one-fifth in 1900 to over one-third in 1929, increases further to approxi-

[1] For the purposes of this study, financial intermediaries include the banking system, private and government insurance and pension funds, savings and loan associations, personal trust departments of banks and trust companies, government lending institutions, and a number of other groups of smaller size. For brief definitions of national wealth and national assets see p. 23.

mately two-thirds in 1945, but falls back to about one-half in 1949.

3. The share of financial intermediaries differs greatly as between types of assets. It is very high – accounting in 1949 for 70 per cent or more of the total – for corporate bonds, state and local government bonds, mortgages, and United States government securities. The share is still considerable – about two-fifths – for preferred stock and non-mortgage loans; modest – about one-fifth – for common stock; and negligible for tangible assets.

4. The share of financial intermediaries has increased considerably between 1900 and 1949 for all types of assets except tangibles. The rise has been most pronounced in the case of corporate bonds and stocks. It has been much less marked in mortgage and non-mortgage loans and has been negligible in the case of government securities where the proportion was already very high in 1900. The most important aspect of these movements probably is the marked increase in the role of financial intermediaries in the long-term external financing of business enterprises.

5. As a result of considerable differences in the rate of growth of the various types of financial intermediaries during the last fifty years, the share of commercial and savings banks in the total assets of all intermediaries has declined from approximately two-thirds to two-fifths, while that of insurance organizations has risen from one-eighth to one-fourth. A second important change is the increasing share of publicly owned financial intermediaries from only 2 per cent up to 1929 to 13 per cent in 1949 even if the Federal Reserve banks are excluded.

6. Marked changes have occurred in the composition of assets held by financial intermediaries. These changes have been dominated by the rise in the proportion of total assets consisting of United States government securities, from only a few per cent up to World War I to over 40 per cent in 1949. The relative importance of holdings of corporate stock and consumer loans has likewise shown a tendency to increase, although irregularly and as a rule slowly. Virtually all other assets have lost in relative importance, the decline in the share in total assets being particularly pronounced for non-mortgage business loans, state and local government securities, corporate bonds, and tangible assets.