Volume Title: The Flow of Capital Funds in the Postwar Economy

Volume Author/Editor: Raymond W. Goldsmith

Volume Publisher: NBER

Volume ISBN: 0-870-14112-0

Volume URL: http://www.nber.org/books/gold65-1

Publication Date: 1965

Chapter Title: Scope and Function of the Capital Market in the American Economy

Chapter Author: Raymond W. Goldsmith

Chapter URL: http://www.nber.org/chapters/c1680

Chapter pages in book: (p. 22 - 42)

CHAPTER 1

Scope and Function of the Capital Market in the American Economy

Origin of the Capital Market in the Separation of Saving and Investment

A MARKET for new capital, apart from transactions in existing financial and real assets, exists because in a modern economy saving (the excess of current income over current expenditures on consumption) is to a large extent separated from investment, i.e., expenditures on durable assets usually defined as new construction, equipment, and additions to inventories and excluding education, research, and health.[1]

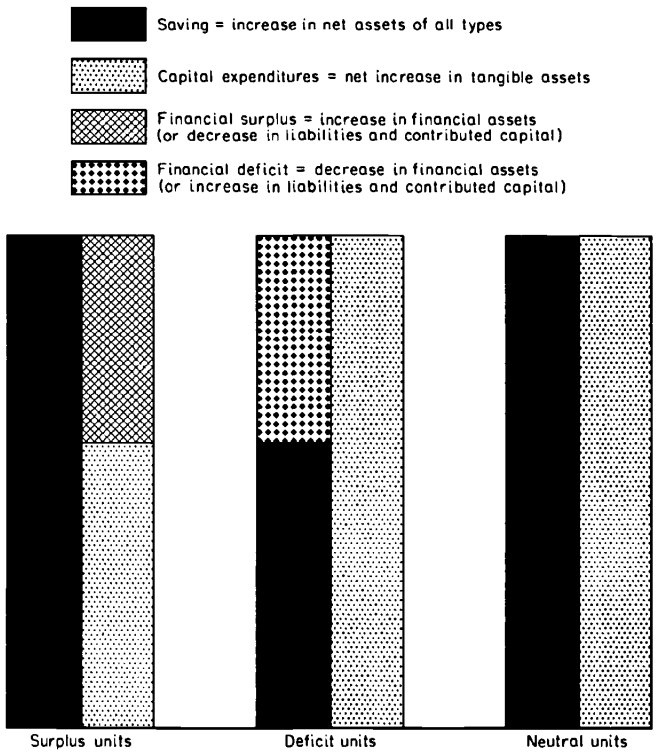
In any given period every economic unit either saves or dissaves—if we ignore the relatively few units whose current expenditures exactly balance their current income; and most units make capital expenditures, which usually involve payments to other units for finished durable goods, materials, or labor, but which may also be internal and imputed (e.g., Crusoe building his boat). Both saving and investment may be calculated gross or net of capital consumption allowances or retirements. Since these diminish saving and investment equally, the difference between saving and investment is the same whether calculated on a gross or net basis.

The relation between saving and investment varies considerably among economic units. For some, saving is regularly in excess of

[1] For an individual economic unit, investment also includes the acquisition of existing tangible assets, but such acquisitions are offset by equivalent sales in a closed economy.

CHART 1

CHARACTERISTICS OF FINANCIAL SURPLUS AND DEFICIT UNITS



investment. These units, which may be designated as saving surplus units (Chart 1), make funds available to the capital market, either by acquiring financial assets—money, other claims, or equities—or by reducing their own liabilities through repayment. The fact that a unit has a surplus status does not, of course, mean that it does not have any investment during the period, i.e., that it makes no capital expenditures; it only indicates that the unit's investment is smaller than its saving during the period. For other units, designated as saving deficit units,[2] capital expenditures are in excess of saving. These units absorb funds from the capital market by increasing their liabil-

[2] The terms surplus and deficit units indicate the difference between saving and investment, not, as might be suggested by the words, the difference between current income and current expenditure which, of course, is equal to saving or dissaving.

ities, including the sale of their own equity securities or by reducing their financial assets, including their holdings of money. In the third type of unit, which may be called neutral, saving is equal to investment. These units, therefore, neither supply funds to nor demand funds from the capital market.

If all the economic units in a country were constantly neutral, no capital market would exist and money would be used only as a medium of exchange, as a means of immediate payment for transactions undertaken in markets for commodities and services. Such an economy is characterized by the absence of financial assets or liabilities.

At the other conceptual extreme stands a society in which saving (or dissaving) and investment are completely separated, i.e., in which the investment of all saving surplus units and the saving of all saving deficit units are zero. Such a society is entirely compatible with the basic characteristics of a modern economy. It would only require that all homes and consumer durables, as well as the structures and equipment used by the government and nonprofit organizations, be rented from business enterprises, which in turn rely entirely on external financing supplied by ultimate economic units either directly or through financial institutions.

All the societies which we know, and particularly all modern economies, lie between these two extremes. In them, saving surplus units account for most of saving, and saving deficit units account for a large proportion of investment. There are well-defined groups that have more or less regularly a saving surplus or deficit status. Within a modern economy, nonfarm households are commonly saving surplus units, while nonfinancial business enterprises and governments as a group generally have a saving deficit status, and financial institutions are close to a neutral position. This is evident for the United States in Table 1, which shows for each of the seven main sectors aggregate saving and aggregate investment, as well as the excess of saving for the period 1946–58 as a whole.

The total saving surpluses and deficits of all sectors together comes to $270 billion for 1946–58, as shown in Table 1. This figure, to repeat, is not a measure of the volume of primary capital market transactions—i.e., new loans made and new securities issued—because the saving surpluses of some units are netted against the saving deficits of other units within sectors, and because many units simultaneously save and make capital expenditures.

TABLE 1

SAVING AND INVESTMENT, BY SECTOR, 1946-58
(billion dollars)

Sector	Saving		Capital Consumption Allowances	Investment		Excess Saving: Surplus (+) or Deficit (-)
	Gross (1)	Net (2)	(3)	Gross (4)	Net (5)	(6)
1. Nonfarm households	680	334	346	554	208	+126
2. Agriculture	89	21	69	95	26	-6
3. Nonfarm unincorp. business	62	12	49	75	26	-13
4. Nonfinancial corporations	278	91	186	359	173	-81
5. State and local govts.	82	29	54	106	52	-24
6. Federal government (civil)	17	1	16	20	4	-3
7. Financial intermediaries	22	19	3	5	2	+17
8. Total (civil)	1,230	506	724	1,215	491	+15
9. Federal government (military)	156	-28	184	156	-28	0
10. Total (including military)	1,386	478	909	1,371	462	+15

Source: National Balance Sheet, Vol. II.
Col. 1: Table VIII-d-3.
Col. 2: Table VIII-d-3b.
Col. 3: Difference between gross and net investment.
Col. 4: Table VIII-a-7.
Col. 5: Table VIII-a-7b.
Col. 6: Col. 1 minus col. 4.
Note: Components may not add to totals because of rounding here and elsewhere in this chapter.

Among the sectors, virtually the only net suppliers of funds are nonfarm households, their saving being far in excess for their capital expenditures. This sector's saving surplus is about one-fifth of its gross saving and more than two-fifths of its net saving.

Financial institutions, which hardly make sizable capital expenditures, represent the only other sector with a saving surplus, but it amounts to less than one-seventh of that generated by nonfarm households.

The largest saving deficit is shown by nonfinancial corporations, which alone account for more than three-fifths of the aggregate saving deficits of all sectors. Their saving deficit—which measures the net absorption of funds from other sectors—amounts to three-tenths of their own gross saving but to 90 per cent of their net saving. Unincorporated business, farm and nonfarm, also absorb net funds from other sectors, the saving deficit of these two sectors together being about one-seventh of the saving deficits of all sectors and nearly one-fourth of that of nonfinancial corporations.

State and local governments also show a substantial excess of investment over saving, amounting to more than one-sixth of the net saving deficit of all sectors. The deficit, however, amounts to only about three-tenths of their own gross saving and four-fifths of their net saving, thus being smaller relatively than for nonfinancial corporations but greater than for the other two business sectors.

The federal government had during the postwar period only a negligible excess of investment over saving, so that it neither absorbed funds from other sectors nor supplied funds to them (Chart 2).

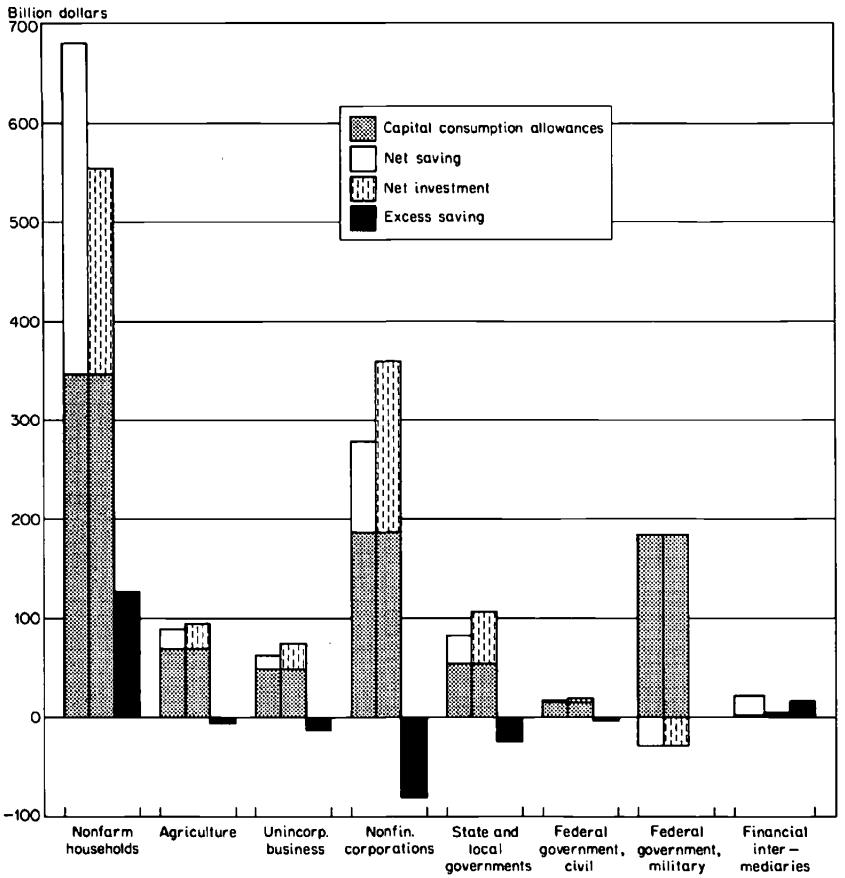
It is unfortunately impossible to prepare tables similar to Table 1 for narrower sectors or to show for any given period the number of saving surplus, saving deficit, and neutral units, and the amounts of aggregate surpluses and deficits. This is because the usual statistics of corporations and governments do not classify units by the existence or size of a saving surplus or deficit. Even households have not been tabulated by the size of their saving surplus or deficit, although the information could be obtained by retabulating the basic data collected in some of the sample surveys of consumer income and expenditure.[3]

[3] Some inferences can, however, be drawn from average saving and average investment for groups of households classified by total income and expenditures, aggregate saving or dissaving, age and occupation of head of household, or other characteristics by which the data have been tabulated.

It is, therefore, impossible to judge how large the average proportion of saving surplus, saving deficit, and neutral units is in the different sectors and subsectors, how it varies with the business cycle, how

CHART 2

SECTORAL SAVING AND INVESTMENT, 1946–58



Source: Table 1.

concentrated surpluses and deficits are within groups, and how regularly the same units show saving surpluses or deficits. This severely reduces our ability to analyze the usual aggregative statistics of savings and investment.

Two Functions of the Capital Market [4]

The capital market of a modern economy has two basic economic functions: first, the allocation of a period's current saving among users and uses, or the supply of financing for the period's investment; second, the facilitation of the transfer of existing assets, tangible and intangible, among individual economic units, groups of them, sectors, and countries. These two functions are closely connected in theory as well as in practice. Modern market economies could not operate without discharging both functions reasonably effectively. In both cases, the main instrument and guide of allocation is the price, in the sense of the yield of a tangible asset or a financial instrument and of yield differentials among assets.[5]

Allocation operates primarily through three devices: first, the pattern of yield differentials among capital market instruments; second, institutional restrictions on the flows of funds which are not expressed in yield differentials—often referred to as capital rationing, i.e., the fact that no borrower except possibly the central government can secure any amount of funds by simply offering a higher price; and third, government controls which have effects similar to institutional capital rationing.

Yield differentials reflect primarily three factors: relative cost, relative risk, and relative liquidity. All three factors influence the supplier as well as the user of the funds, but they do so in somewhat different ways.

From the point of view of the lender, it is the relative cost of acquiring a capital market instrument and of servicing it that is relevant. Obviously if it is more expensive for a lender to acquire and administer, directly or indirectly through an agent, one type of capital market instrument than another, then the yield he requires will be higher by the difference in cost, other characteristics of the instruments being equal. This factor explains part of the differential between large and

[4] The word "function" is used here solely to describe an existing situation, not to claim that the allocation resulting from the operation of the capital market is optimal.

[5] The term "yield" is used instead of the more familiar "interest rate" in order to emphasize that what influences the allocation of funds is not the nominal interest rate (the relation of the contractual interest payment to the face value of the claim), but the relation of income—fixed or variable; contractual, actual, or expected; gross or net of capital consumption allowances, depending on the situation under study—to the market value of the asset.

small commitments and between commitments close to or far from the lender's base of operation, although it may not explain the actual size of the differential which, of course, is influenced by many other factors. Even apart from these other factors, the actual yield differential may be larger or smaller than the cost differential unless the market is perfect.

Cost differentials are not constant over time. In particular, costs are likely to be high when a specific capital market instrument is new, is applied to new types of transactions or uses, or is acquired by lenders unfamiliar with it. In other words, in addition to the well-known simultaneous economies of scale, there are historical economies of habituation which are independent of, or complementary to, economies of scale.

In a perfect market where participants act rationally and take the long view, the risk component in interest rate differentials would be equal to the expected average loss on a specific type of commitment.[6] Loss here is to be interpreted broadly, including not only ultimate out-of-pocket cost after tax, but also making allowance for the cost of liquidating the commitment, the foregone opportunities of using the funds otherwise, the loss of actual or potential business because of adverse publicity connected with losses, even if covered by reserves, and similar indirect effects of commitments that get into difficulties. Hence an entirely rational risk allowance by the lender may well be above the strictly actuarial evaluation of losses. If participants do not act rationally and do not take the long view, in which reserves established on some commitments are regarded as balancing losses of other commitments, the risk allowance reflected in yield differentials is indefinite and erratic.

Even if they try to act rationally, different lenders will differ in their evaluation of the risk inherent in the same commitment, particularly of the nonactuarial component of risk. So much has been written recently about different attitudes toward risk that it does not seem necessary to elaborate on this point. These differences in the evaluation of the risk on identical commitments would drive the risk component in yield differentials up to the risk allowance of the lender who rates the risk highest and who is still needed to satisfy demand.

[6] To the extent that repayment provisions reduce this risk, e.g., by providing for gradual repayment or callability at the borrower's choice, they improve an instrument's liquidity and may reduce its yield.

Scope of the Capital Market

In this report the broadest and simplest limitation of the boundaries of the capital market will be used. It will cover all financial assets and liabilities and all transactions in such assets except those which involve the exchange of money for a nonfinancial consideration, i.e., except monetary payments in exchange for commodities and for labor and capital services. For statistical convenience, gross transactions in money and money market instruments (federal funds, Treasury bills, bankers' acceptances, commercial and finance company paper), though not the holdings or net changes in them, will be disregarded.

The capital market so defined includes transactions not only in organized markets—securities exchanges or the over-the-counter markets—but also in nonmonetary financial assets effected among financial institutions, between a financial institution and a member of another sector of the economy, or among members of nonfinancial sectors. The capital market also covers imputed transactions of a financial character, the most important of which are retained earnings (internal saving) accruals and capital consumption allowances, and interest accrued. These are sometimes called nonmarket capital fund flows to distinguish them from actual capital market transactions.

This definition of the capital market entirely ignores the distinction often made between the capital market and the money market, i.e., the separation of liquid short-term claims and liabilities from other financial assets. There seems to be no sound reason for making this distinction as no sharp boundary exists between short-term claims, on the one hand, and long-term claims and equities, on the other. Instead, a fairly continuous spectrum extends from claims that can be immediately exchanged for cash—whether legally or actually—to claims with a very distant, or even without any final, maturity. There is more economic meaning in the distinction between financial assets which are a general medium of exchange—i.e., the U.S. currency and deposits with the Federal Reserve or commercial banks subject to check—held outside the banking system and other financial assets. Under this distinction, however, the scope of the "money market" becomes small in comparison to the capital market and little reason remains for the separation, particularly in view of the existence of financial assets of near-money character.

Capital Market Instruments

The capital market has two aspects—flows of financial transactions and stocks of financial assets and liabilities—which are closely related because stocks may be looked upon as the sum of net previous flows and net flows can be regarded as first differences in stocks.[7]

There are as many categories of financial flows as there are types of financial instruments, i.e., types of intangible assets and liabilities that are reasonably homogeneous internally and distinguishable from each other. Within financial stocks and flows, the basic distinction is between claims, which are expressed in terms of a definite number of monetary units and usually carry a fixed interest rate, and equities which embody fractional right to profits (i.e., certain residuals between income and expenditures or between assets and liabilities) and which fluctuate in value. Among claims, in turn, at least five main categories can usefully be distinguished, despite gradual transitions between them: money, nonmonetary short-term claims against financial institutions, other short-term claims, long-term claims against financial institutions, and other long-term claims. Each of these categories, as well as equities, can be further divided according to their marketability under normal conditions. This leads to the establishment of nine chief categories of financial assets and the corresponding types of financial transactions, which are shown in Table 2 together with rough estimates of their size in 1958 in the United States to indicate orders of magnitude. For practical purposes, a finer and somewhat different breakdown of financial assets is needed, one which will vary with time and place and will be strongly influenced by the prevailing legal and institutional arrangements.

Capital Market Participants

Three basically different groups must be distinguished among the owners and issuers of financial instruments and among the partners to the transactions in financial assets: financial institutions, nonfinancial business enterprises, and ultimate economic units (i.e., households and governments). Financial institutions are those whose assets are predominantly financial (i.e., claims against other sectors and equities

[7] This is a simplified formulation which disregards difficulties introduced by valuation changes, difficulties that are discussed in some detail in Chapter 2.

TABLE 2

MAIN CAPITAL MARKET INSTRUMENTS, 1958

		Order of Magnitude (billion dollars)	Per Cent of Total
1.	Money (monetary metals, currency, checking deposits)	222	11
2.	Nonmonetary short-term claims against financial institutions	150	7
3.	Other marketable short-term claims (Treasury securities with maturity of less than one year, commercial paper)	69	3
4.	Other nonmarketable short-term claims (bank loans, loans on securities, other loans, trade receivables, consumer receivables, other intangible assets)	295	14
5.	Marketable long-term claims (marketable Treasury securities with maturity of more than one year, state and local government securities, publicly offered corporate bonds)	223[a]	11
6.	Nonmarketable long-term claims against financial institutions (represented by assets of life insurance companies and private and government pension funds)	200	10
7.	Other nonmarketable long-term claims (other U.S. government securities, other bonds, mortgages, bank term loans, investments in rest of world)	351[a]	17
8.	Marketable equities (corporate stock including corporate stock listed on exchanges or actively traded in over-the-counter markets)	372	18
9.	Nonmarketable equities (equities in financial nonprofit organizations and in unincorporated nonfarm business, other corporate stock)	200	10
10.	All financial assets	2,082	100

Source: All table references below are to National Balance Sheet, Vol. II, unless otherwise specified.

Line 1: Table I, line II-1.
Line 2: Table I, line II-2.
Line 3: Table I, line II-13a, and Table III-5ℓ-a, col. 1.
Line 4: Short-term bank loans are from Table I, line II-9, minus bank term loans (Table IV-c-9b) and Table III-5ℓa, sum of cols. 3, 7, and 10 (commercial paper held by banks). Other items are from Table I, lines II-6, 7, 8, and 10, and Table IV-b-20, line 11.
Line 5: U.S. government securities are from Treasury Bulletin, February 1959, p. 25, minus Table I, line II-13a. State and local government securities from Table I, line II-14. Publicly offered corporate bonds represent 60 per cent of other bonds and notes (Table I, line II-15) minus other commercial paper (Table III-5ℓ-a, sum of cols. 4, 8, and 11).
Line 6: Table I, lines II-3, 4, and 5.
Line 7: U.S. government securities are from Table I, line II-13, minus Table I, line II-13a, and U.S. government securities included in line 5. Other bonds are 40 per cent of other bonds and notes (Table I, line II-15) minus other commercial paper (Table III-5ℓ-a, sum of cols. 4, 8, and 11). Mortgages are from Table I, lines II-11 and 12. Bank term loans are from Table IV-c-9b. Investments in rest of world are from Table IV-b-20, lines 9 and 10.

NOTES TO TABLE 2 (concluded)

Line 8: 25th Annual Report, SEC, pp. 62 and 67.
Line 9: The sum of equities in other business (Table I, lines II-18 and II-19), corporate stock (Table I, lines II-16 and II-17) minus marketable corporate stock (line 8 of this table).

[a]If government-insured mortgages were considered marketable long-term claims, line 5 would equal $278 billion and line 7 (excluding government-insured mortgages) would equal $296 billion, since FHA- and VA-insured mortgages equal $55 billion (Tables IV-b-11a-6 and IV-b-11a-4).

of other business enterprises not their own subsidiaries and affiliates), and whose liabilities are in general regarded as liquid assets by the creditors, predominantly nonfinancial business enterprises and households. Ultimate economic units are distinguished from both financial institutions and nonfinancial business enterprises in that their net worth cannot under present legal arrangements become the property of another economic unit as does that of business enterprises.

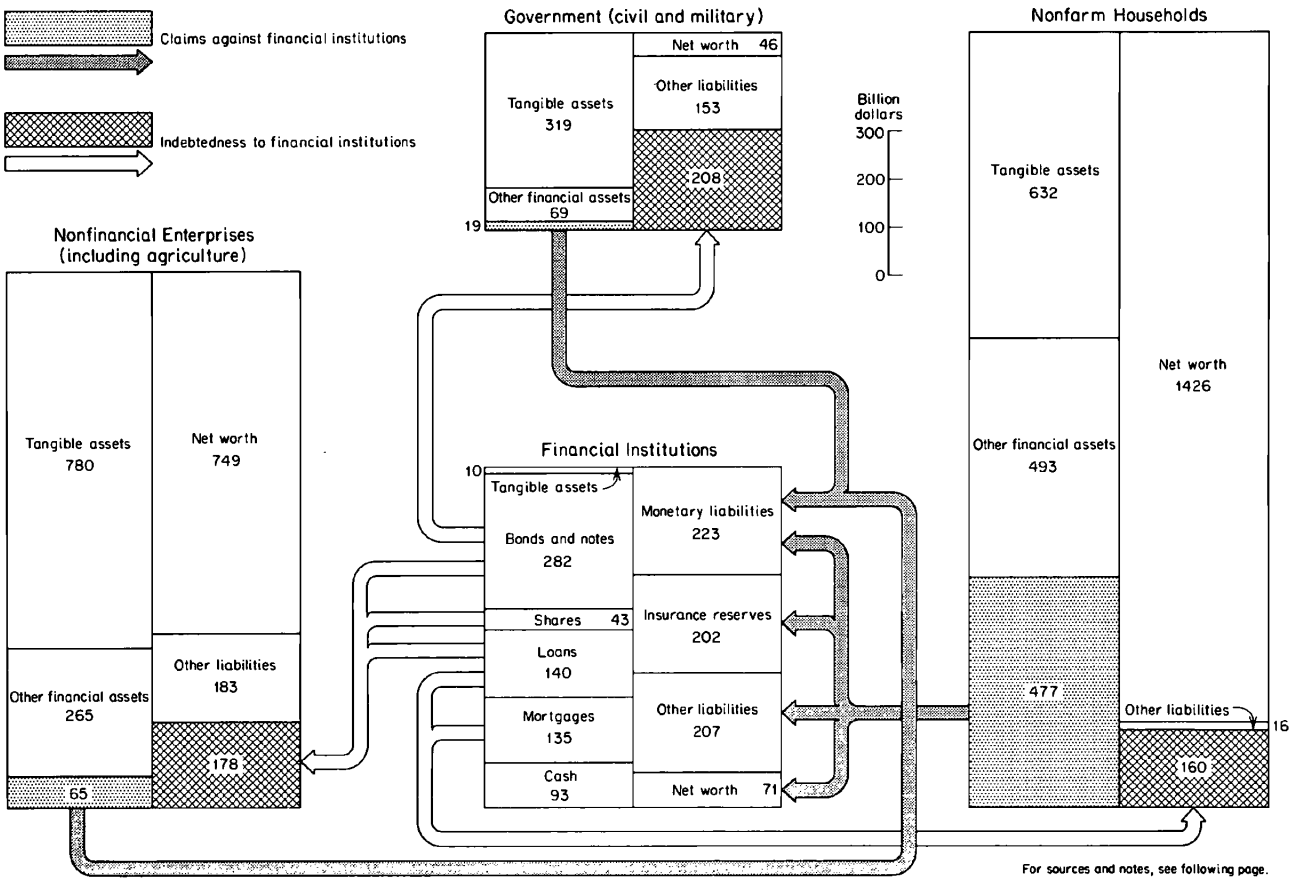
In a modern economy financial institutions hold a considerable proportion of all financial assets outstanding, even excluding claims against other financial institutions. In the United States the share of financial institutions in such financial assets (chiefly business and consumer loans, mortgages, and securities) is now on the order of two-fifths.[8] At the same time the liabilities of financial institutions constitute a large proportion of the financial assets and a substantial share of the total assets of nonfinancial business enterprises as well as of household and governments. These relationships are illustrated in Chart 3 for the end of 1958.

This chart shows that claims against financial institutions represent three-tenths of the total assets of households and account for almost one-half of nonfarm household financial assets. At the same time liabilities to financial institutions represent nine-tenths of all nonfarm household debt. The link to financial institutions is less pronounced in business enterprises (including farm business). Claims against financial institutions constitute about one-fifth of financial assets and about 6 per cent of total assets, while liabilities to financial institutions (including bonds and stocks held by financial institutions) represent about one-half of the total debt of nonfinancial enterprises, and financial institutions hold one-twentieth of their equity. In the case of federal, state, and local governments, claims against financial institutions

[8] Raymond W. Goldsmith, Robert E. Lipsey, and Morris Mendelson, *Studies in the National Balance Sheet of the United States,* Vol. II: *Basic Data on Balance Sheets and Fund Flows,* Princeton for NBER, 1963, Table I (1958).

CHART 3

BALANCE-SHEET RELATIONS BETWEEN FINANCIAL INSTITUTIONS AND NONFINANCIAL SECTORS, 1958



NOTES TO CHART 3

Source: *National Balance Sheet,* Vol. II, Table I, 1958; and, for federal government, also Table III-7a. The following detailed explanation refers to the columns and lines in Table I, 1958, unless otherwise specified.

Nonfarm Households

Net worth: Col. 1, line IV.
Other liabilities: Col. 1, line III-14, less indebtedness to financial institutions.
Indebtedness to financial institutions: Sum of col. 1, lines III-8, III-9, and III-10, and col. 5, lines II-6 through II-11a.
Tangible assets: Col. 1, line I-7.
Other financial assets: Col. 1, line II-21, less claims against financial institutions.
Claims against financial institutions: Sum of col. 1, lines II-1, II-2, II-3, II-4, II-5, II-10, and II-18, and col. 5, line IV.

Nonfinancial Enterprises

Net worth: Cols. 2, 3, and 4, line IV, less col. 5, lines II-16 and II-17. (Lines II-16 and II-17 of col. 5 are treated as indebtedness of nonfinancial corporations to financial institutions.)
Other liabilities: Cols. 2, 3, and 4, line V, less net worth and indebtedness to financial institutions.
Indebtedness to financial institutions: Sum of col. 5, line II-7; cols. 2, 3, and 4, line III-9; a quarter of col. 5, line II-10; col. 5, line II-11b and II-12; col. 5, line II-15 less line III-12; and col. 5, lines II-16 and II-17.
Tangible assets: Cols. 2, 3, and 4, line I-7.
Other financial assets: Cols. 2, 3, and 4, line II-21, less claims against financial institutions.
Claims against financial institutions: Cols. 2, 3, and 4, lines II-1, II-2, and II-3.

Financial Institutions

Net worth: Col. 5, line IV.
Monetary liabilities: Col. 5, line III-1.
Other liabilities: Col. 5, line III-14, less monetary liabilities and insurance reserves.
Insurance reserves: Col. 5, lines III-3, III-4, and III-5.
Tangible assets: Col. 5, line I-7.
Shares: Col. 5, lines II-16 and II-17.
Bonds and notes: Col. 5, lines II-13, II-14, and II-15.
Mortgages: Col. 5, lines II-11 and II-12.
Loans: Col. 5, line II-21, less shares, bonds and notes, mortgages, and cash.
Cash: Col. 5, line II-1.

Government

Net worth: Sum of col. 6, line IV, and Table III-7a, line IV.
Other liabilities: Cols. 6 and 7, line III-14, less indebtedness to financial institutions.
Indebtedness to financial institutions: Sum of col. 7, line III-9, and col. 5, lines II-13 and II-14.
Tangible assets: Sum of col. 6, line I-7, and Table III-7a, line I-7.
Other financial assets: Cols. 6 and 7, line II-21, less claims against financial institutions.
Claims against financial institutions: Cols. 6 and 7, lines II-1 and II-2.

are relatively unimportant, accounting for one-fifth of financial and about 5 per cent of total assets.

Financial institutions thus are of particular importance among capital market participants. A summary picture of the main types of financial institutions operating in the United States in 1958 is, therefore, given in Table 3.

At that time all financial institutions, broadly defined, had $800 billion of assets, which was more than one-fifth of the total national assets, i.e., the aggregate of the assets of all independent economic units in the United States. Use of the narrower definition, which is employed in most of this report and excludes personal trust funds and a few other minor types of financial institutions, reduces the amount and the share to slightly below one-fifth. Since the assets of financial institutions consist primarily of claims, their share in these

TABLE 3

SYNOPSIS OF FINANCIAL INSTITUTIONS, 1958 AND 1945

	Type of Institution	Total Assets 1958 (billion dollars) (1)	Total Assets 1945 (billion dollars) (2)	Annual Rate of Growth (per cent) (3)
1.	Monetary authorities	79.2	69.8	1.0
2.	Commercial banks	241.3	160.4	3.2
	Demand deposit business	167.7	128.0	2.1
	Time and saving deposit business	73.6	32.4	6.5
3.	Mutual savings banks	38.1	17.0	6.4
4.	Savings and loan associations	55.4	8.8	15.2
5.	Credit unions	4.4	0.4	20.0
6.	Life insurance organizations	111.6	46.6	7.0
	Companies	108.8	44.9	7.0
	Fraternal orders	2.8	1.7	3.9
7.	Private pension funds	27.8	2.7	19.7
8.	Govt. insur. and pension funds	66.1	25.8	7.5
	Federal	49.9	22.8	6.2
	State and local	16.2	3.0	13.9
9.	Fire and casualty insurance	25.6	7.6	9.8
10.	Investment companies	20.4	3.6	14.3
11.	Finance companies[a]	20.8	2.0	19.7
12.	Security brokers and dealers	6.3	5.0	1.8
13.	Govt. lending agencies	29.9	18.4	3.8
14.	Personal trust departments	55.4	29.0	5.1
15.	Miscellaneous finance[b]	6.6	2.5	7.8
16.	Total	788.9	399.6	5.4

Source: National Balance Sheet, Vol. II, Tables III-5a through III-5m, III-1a, and III-7c.

[a] Includes mortgage companies.

[b] Includes banks in possessions, agencies of foreign banks, agricultural credit organizations, group health insurance, and savings bank life insurance.

is, of course, considerably higher. It amounted in 1958 to about one-third of the national total for short-term claims and to half of all long-term claims. In contrast, financial institutions held only one-tenth of corporate stock outstanding and less than 1 per cent of tangible assets.

As a comparison of columns 1 and 2 in Table 3 shows, the assets of financial institutions grew rapidly during the postwar period, nearly doubling. This increase is in line with the expansion of gross national product during the postwar period, but is somewhat smaller than the rise in the market value of national assets. The relative size of financial institutions in 1958 thus was equal to or, in comparison to national assets, slightly below the level of 1945. It was, however, throughout the postwar period above the predepression level.[9]

The doubling of the assets of all financial institutions resulted from considerable differences in growth among the main types of institutions. On the one hand, money-issuing institutions, i.e., the Federal Reserve System and the demand deposit departments of commercial banks, increased their assets only by one-fourth between the end of World War II and 1958. All other financial institutions together expanded their assets by 170 per cent, or even by 180 per cent if personal trust funds are excluded. Among these other financial institutions, two groups need to be distinguished. Growth was relatively moderate, amounting to between 115 and 140 per cent over the postwar period, for the saving departments of commercial banks, mutual savings banks, life insurance companies, and federal insurance and pension funds. At the other extreme, savings and loan associations, investment companies, and state and local government insurance and pension funds increased their assets by from 400 to over 500 per cent. Trusteed private pension funds, credit unions, and finance companies were even able to expand their assets tenfold. Some of these differences reflect stagnation or shrinkage during World War II, for instance, in the case of finance companies and savings and loan associations. Other institutions may be regarded as still being in the early phases of development during which the rate of growth is usually considerably more rapid than among old established institutions.

[9] For a comparison of the share of financial institutions in national assets since the turn of the century, see my *Financial Intermediaries in the American Economy Since 1900,* Princeton for NBER, 1958, Chapter IX, e.g., Table 95, p. 319.

Historical Background

Developments in the capital market and in the financial structure of the United States in the postwar period cannot be understood without consideration of the earlier history of the system, at least as far back as World War I. Tables 4 through 6 are intended to provide in summary form the information required on financial institutions and tie in with similar data provided earlier for the postwar period. Obviously an adequate discussion of the trends in the American capital

TABLE 4

ASSETS OF FINANCIAL INSTITUTIONS, SELECTED DATES, 1900-58
(billion dollars)

		1900 (1)	1929 (2)	1939 (3)	1945 (4)	1958 (5)
1.	Federal Reserve System		5.5	21.0[a]	69.8	79.2
2.	Commercial banks	10.0	66.2	66.3	160.4	241.3
	Demand deposit business[b]	8.4	37.6	47.7	128.0	167.7
	Saving and time deposit business[b]	1.6	28.6	18.6	32.4	73.6
3.	Mutual savings banks	2.4	9.9	11.9	17.0	38.1
4.	Savings and loan associations	0.5	7.4	5.4	8.8	55.4
5.	Credit unions		0	0.2	0.4	4.4
6.	Finance companies		2.6	3.0	2.0	20.8
7.	Mortgage companies	0.2	0.8	0.4		
8.	Life insurance companies	1.7	17.5	29.2	44.9	108.8
9.	Fraternal order insurance	0	0.8	1.2	1.7	2.8
10.	Private pension funds		0.5	1.0	2.7	27.8
11.	Property insurance companies	0.5	4.7	4.8	7.6	25.6
12.	Other private insurance	0	0	0	0.2	1.1
13.	Investment companies		3.0	1.6	3.6	20.4
14.	Govt. insur. and pension funds		1.5	6.3	25.8	66.1
15.	Govt. lending agencies		0.4	9.8	18.4	29.9
16.	Other finance[c]	0.6	10.0	2.0	7.3	11.8
17.	Total	15.9[d]	130.8[d]	164.1[d]	370.5	733.5

Source: 1900-39: Goldsmith, Financial Intermediaries, Table 10, p. 73; subdivision of line 2 derived from ibid., Table A-3c. 1945 and 1958: National Balance Sheet, Vol. II, Tables III-5a through III-5m, III-1a, and III-7c.

[a] Including $2.0 billion in Exchange Stabilization Fund.

[b] Allocated in proportion to total deposits of commercial banks.

[c] Includes security brokers and dealers.

[d] The difference between these figures and the corresponding ones in National Balance Sheet, Vol. II, Table III-5o, may be partly accounted for as follows: First, Table III-5o includes monetary metals held by the Treasury (A Study of Saving, Vol. III, Table W-43, line 9), which are not included in this table. Second, Table III-5o includes assets only of unincorporated security brokers and dealers (A Study of Saving, Vol. III, Table W-37, line V), while this table includes assets of all security brokers and dealers.

Note: A blank space indicates that the given type of financial institution did not exist in that year (see my Financial Intermediaries, Chart 3, p. 61).

TABLE 5

DISTRIBUTION OF ASSETS OF FINANCIAL INSTITUTIONS, SELECTED DATES, 1900–58
(per cent)

		1900 (1)	1929 (2)	1939 (3)	1945 (4)	1958 (5)
1.	Federal Reserve System		4.2	12.8[a]	18.8	10.8
2.	Commercial banks	62.9	50.6	40.4	43.3	32.9
	Demand deposit business[b]	52.8	28.7	29.1	34.5	22.9
	Saving and time deposit business[b]	10.1	21.9	11.3	8.7	10.0
3.	Mutual savings banks	15.1	7.6	7.3	4.6	5.2
4.	Savings and loan associations	3.1	5.7	3.3	2.4	7.6
5.	Credit unions		0	0.1	0.1	0.6
6.	Finance companies		2.0	1.8	0.5	2.8
7.	Mortgage companies	1.3	0.6	0.2		
8.	Life insurance companies	10.7	13.4	17.8	12.1	14.8
9.	Fraternal order insurance	0	0.6	0.7	0.5	0.4
10.	Private pension funds		0.4	0.6	0.7	3.8
11.	Property insurance companies	3.1	3.6	2.9	2.1	3.5
12.	Other private insurance	0	0	0	0	0.2
13.	Investment companies		2.3	1.0	1.0	2.8
14.	Govt. insur. and pension funds		1.1	3.8	7.0	9.0
15.	Govt. lending agencies		0.3	6.0	5.0	4.1
16.	Other finance[c]	3.8	7.6	1.2	2.0	1.6
17.	Total	100.0[d]	100.0[d]	100.0[d]	100.0	100.0

For source and notes, see Table 4.

market in the half century before the end of World War II is not intended.[10] Similar brief sketches of the historical background will be found in Chapters 3 and 4 about capital market flows and the participation of sectors other than financial institutions.

It will immediately be seen from these figures that the rate of growth of the assets of financial institutions during the postwar period of 5.4 per cent was not extraordinary in historical perspective. In fact, this rate was considerably lower than that observed from 1900 to 1929, when it averaged 7.5 per cent, and was below the average rate of 6.7 per cent for 1929–45 (see Table 4). Similarly it is seen that differences in the rates of growth of the different types of financial institutions during the postwar period are not more pronounced than, but generally are in the same direction as, differences in the two earlier periods. This is evident from the character of the changes in the distribution of total assets among financial institutions in Table 5.

The outstanding development of the postwar period—the decline in the share of monetary organizations (Federal Reserve Banks and de-

[10] More detailed figures and some discussion of the trends may be found in my *Financial Intermediaries.*

mand deposit business of commercial banks) from 53 to 34 per cent of the assets of all financial institutions—is found to agree in direction with the decline between 1900 and 1929 from 53 to 33 per cent. The rate of decline, however, was considerably less rapid, at 0.7 percentage points per year, during the first three decades of the century than during the postwar period, when it averaged 1.5 percentage points per year. The increase in the share of monetary organizations between 1929 and 1945 may be regarded as an interruption of a long-term trend, caused primarily by the extraordinary expansion of the money supply during World War II. The upward movement in the share actually is greater during the war period though the share stood at about 42 per cent in 1939, which represents a considerable increase over 1929 and 1958. Thus the decline during the postwar period to a certain extent counteracted the upswing during World War II. It remains to be seen whether the downward trend observed between 1900 and 1929, as well as during the second half of the nineteenth century, will continue.

The postwar increase in the share of thrift institutions (savings departments of commercial banks, mutual savings banks, savings and loan associations, and the credit unions) from 16 to 23 per cent only restored their position to the 1939 level, which was still 6 percentage points below the level of 1900 and 13 percentage points below that of 1929. Considerable shifts, however, occurred in the distribution of the total share among the four types of thrift institutions. The savings departments of commercial banks and savings and loan associations gained between 1900 and 1929; the latter also gained in the postwar period. Mutual savings banks continued declining: their share in the total declined from more than one-half in 1900 to not much over one-fifth in 1929 and remained at about one-fifth in 1958, with only a temporary interruption between 1929 and 1945 when their share climbed back to 33 per cent.

On the other hand, the sharp advance in the share of life insurance companies and pension organizations from one-fifth to over one-fourth between 1945 and 1958 continued an upward trend which had been in evidence since 1900, when their share stood at only one-tenth of the assets of all financial institutions. While the increase in the postwar period was about equally distributed among life insurance companies, private pension funds, and government insurance and pension funds, any rise between 1929 and 1945 was attributable to government insurance and pension funds, whereas the larger increase be-

tween 1900 and 1929 was accounted for almost exclusively by life insurance companies.

Table 6 confirms that the tendency for the assets of financial institutions to grow without a substantial increase in the number of units, which can be observed in most branches for the postwar period, was also in effect for the half century before World War II. The

TABLE 6

TRENDS IN GROWTH OF MAIN FINANCIAL INSTITUTIONS, 1900-58

	Commercial Banks (1)	Mutual Savings Banks (2)	Savings and Loan Assoc. (3)	Life Insurance Companies (4)	Fire and Casualty Insurance Companies (5)
		I. NUMBER OF ENTERPRISES (THOUSANDS)			
1900	12.9	0.6	5.4	0.1	0.7
1912	26.3	0.6	6.3	0.3	n.a.
1929	24.3	0.6	12.3	0.4	1.4
1945	14.1	0.5	6.1	0.5	n.a.
1958	13.5	0.5	6.2	1.4	n.a.
		II. NUMBER OF PERSONS EMPLOYED (THOUSANDS)			
1900	25	n.a.	11	70	
1912	90	n.a.	12	180	
1929	328	n.a.	48	242	291
1945	314	n.a.	14	293	277
1958	605	n.a.	51	510	530
		III. ASSETS (BILLION DOLLARS)			
1900	10.0	2.4	0.5	1.7	0.5
1912	21.8	4.0	1.0	4.4	1.0
1929	66.2	9.9	7.4	17.5	4.7
1945	160.4	17.0	8.8	44.9	7.6
1958	241.3	38.1	55.4	108.8	25.6

Source

Section I
1900, 1929: Goldsmith, Financial Intermediaries, p. 65.
1912: Historical Statistics, 1960, pp. 399, 630, 631, 672. Averages of June 30 of current and following year.
1945, 1958: Statistical Abstract, 1959, pp. 440, 456, 472.
Section II
1900, 1912: Values for 1929 extrapolated on basis of unpublished estimates by S. Lebergott.
1929, 1945, 1958 (except col. 3): S. M. Robbins and N. E. Terleckyj, Money Metropolis, Cambridge, Mass., 1960, p. 266; for 1958, Survey of Current Business, July 1960, Table 52 (columns 4 and 5 divided in accordance with 1956 ratio shown in Robbins and Terleckyj).
1929, 1945: For savings and loan associations, a rough estimate.
1958: Savings and Loan Fact Book, 1961, Chicago, U.S. Savings and Loan League, 1961, p. 101.
Section III
1900, 1912, 1929: Goldsmith, Financial Intermediaries, pp. 73-74.
1945, 1958: National Balance Sheet, Vol. II, Table II.

number of commercial and mutual savings banks in the United States in 1958 was hardly larger than at the turn of the century. Even the number of savings and loan associations, whose assets increased approximately a hundredfold between 1900 and 1958, was in 1958 less than one-fifth above that of 1900. Only in the case of life insurance companies was the number of independent units in 1958 considerably larger than in 1900 or 1929, but the increase consists primarily of very small companies.

Two measures of the growth of financial institutions compared to that of the entire economy are available—total assets and total employment. By both measures, financial institutions have gained in importance within the economy.[11] The share of financial institutions in total assets (excluding personal trust funds and government lending agencies) increased from approximately one-tenth in 1900 to one-seventh in 1929 and to one-fifth in 1939. By 1958 the share had returned to the 1939 level, after a slight bulge during World War II which left the ratio slightly below one-fourth in 1945.

In the case of employment, an increase in the share of financial institutions occurred between 1900 and 1929 when the proportion of the labor force employed by financial institutions rose from 0.5 to 2.6 per cent.[12] By the end of World War II, the share had declined to 2 per cent. Thereafter the upward trend resumed and increased the share to about 3.5 per cent by 1958. Thus the postwar increase was about in line with that observed during the first decades of the century when financial institutions underwent a rapid extensive and intensive development.

[11] For more detail, see my *Financial Intermediaries,* Chapter IX.

[12] These are rough estimates based on data in *Historical Statistics of the United States, Colonial Times to 1957,* series D-65, D-57, D-4; Sidney Robbins and Nestor Terleckyj, *Money Metropolis,* Cambridge, Mass., 1960, p. 266; and *Statistical Abstract of the U.S.: 1960,* pp. 205 and 211.