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FACTORS AFFECTING VOLUME AND STABILITY OF PRIVATE INVESTMENT

MATERIALS ON THE INVESTMENT PROBLEM

ASSEMBLED BY THE

STAFF OF THE SUBCOMMITTEE
ON INVESTMENT

JOINT COMMITTEE ON THE ECONOMIC REPORT

SEPTEMBER 15 (legislative day, JULY 20), 1950.—Ordered to be printed

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JOINT COMMITTEE ON THE ECONOMIC REPORT

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SENATE RESOLUTION NO. 348

[Reported by Mr. GREEN]

IN THE SENATE OF THE UNITED STATES,
September 15 (legislative day, July 20), 1950.

Resolved, That the committee print of the Joint Committee on the Economic Report entitled "Factors Affecting Volume and Stability of Private Investment" be printed as a Senate document.

Attest:

LESLIE L. BIFFLE, *Secretary.*

ACKNOWLEDGMENTS

Pursuant to a request of the Subcommittee on Investment of the Joint Committee on the Economic Report, the staff assembled important factual and background material already available in various departments of Government. The splendid cooperation of a number of Departments and agencies is hereby gratefully acknowledged.

Director Ernest S. Griffith, Legislative Reference Service, Library of Congress, made available the services of Julius W. Allen, who prepared in substantially present form chapters I and II. Raymond E. Manning of the Legislative Reference Service prepared the study, Depreciation Tax Policy and Its Impact on Investment, comprising chapter VII of this document.

The assistance of the various divisions of the Department of Commerce was equally generous. Chapter III: Investment and Its Financing, consisting of four sections, was prepared in the Office of Business Economics. Section 1 was prepared by the National Income Division, George Jaszi, Chief, by Carl P. Blackwell; sections 2 and 4 by the Business Structure Division, Irwin Friend, Chief, by Loughlin F. McHugh and Lawrence Bridge; and section 3 by the National Economics Division, S. Morris Livingston, Chief. Chapter V; The Current Position and Financial Problems of Sm ll Business, was written by James C. Dockeray and Lyle C. Bryant, Office of Domestic Commerce, Small Business Division, of which C. F. Hughitt is Chief.

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INTRODUCTION

In its report of March 1, 1949, to the Congress the Joint Committee on the Economic Report recommended that "a thorough-going study of the investment problems of our modern economy be undertaken, including new developments in the role played by our great investment institutions not only in the investment markets but in industry and in the economy generally. Above all, regular, systematic, and prompt information should be made available concerning the investment plans and requirements of agriculture, commerce, railroads, public utilities, and industry generally."

In implementing this recommendation the Eighty-first Congress on May 6 of this year passed Senate Concurrent Resolution 26 authorizing, among other things, a study of—

(1) The problem of investment, including, but not limited to, (A) the role of investment institutions in the investment markets, in industry, and in the economy generally; (B) changes in sources of investment funds and the reason therefor; (C) availability and character of investment funds for national, local and independent enterprise and the effect of such investment or lack of investment upon different classes or size groups in industry; (D) and needs, by industry, for various types of capital.

(2) The problem of the effectiveness and coordination of monetary, credit, and fiscal policies in dealing with general economic policy.

(3) The problem of low-income families in relation to economic instability.

(4) The problem of unemployment trends and their significance in current economic analysis.

The joint committee was allotted $30,000 to complete these inquiries and ordered to make a full report by December 31 of this year. Initial and exploratory hearings on investment problems were held September 27 and 28. In later hearings careful and intensive examination is planned of all of the items named by the Congress in its mandate.

The purpose of this committee print is to put together in one volume for the use of the committee, of the witnesses, and of the public such modicum of facts and evidence as is now available specifically bearing on those aspects of the investment problem assigned by the Congress to this committee for inquiry. The materials do not necessarily represent the views of the subcommittee, or all of its members or staff, individually.

VARIABILITY OF PRIVATE INVESTMENT

In 1929 gross private domestic investment, which includes outlays for new construction, for producers' durable equipment, and for addi-

tions to inventories, amounted to 15.8 billion dollars or 15.2 percent of gross national product.[1] From that level it sank to only 886 million dollars in 1932, rose to 11.4 billion dollars in 1937, fell to 6.3 billion dollars in 1938, reached a figure of 18.3 billion dollars in 1941, fell to 5.7 billion dollars in 1943 (due to the war) and reached the phenomenal peak of 45.0 billion dollars in 1948.[2]

This enormous variation can be explained in part by changes in the value of the dollar, and in part it is an accompaniment of fluctuations in national income. But that is true only in part. Even when full allowance is made for these items, the relative variability of private investment is extraordinary.

Table I below expresses the major categories of private domestic investment and the construction component of public investment as percentages of total gross national product.

TABLE I.—*Gross private domestic investment and new public construction as percentages of gross national product, selected periods*

	1929	1932	1939	1948
1. Gross private domestic investment, total	15.2	1.5	10.8	17.2
(*a*) New private construction activity	7.5	2.9	5.4	6.8
(*b*) Producers' durable equipment, domestic sales	6.2	3.1	5.0	7.9
(*c*) Change in business inventories after inventory revaluation adjustment	1.5	−4.4	.4	2.5
2. New public construction activity	2.3	3.1	2.8	1.6

Note that inventories constitute by far the most variable item, fluctuating from a positive to a negative item. While gross private domestic investment fell 90 percent between 1929 and 1932, the sum total of construction and producers' durables fell just a bit more than half.

Should business investment in the fifties continue to vary to the same relative extent as in the past, the annual rate of total plant and equipment outlays (including farm) might well fluctuate within the limits, say, of $4,000,000,000 to $30,000,000,000. Such would unavoidably be attended by great instability in levels of national income and employment.

WILL THIS INVESTMENT BOOM LAST?

Since VJ-day the economy has experienced the exhilaration of an unparalleled investment boom. How long will it last? Will the total volume of business investment again collapse as it did in the past? Or will it stabilize at levels adequate to maintain high level employment and sustained prosperity? If so, Why? How?

Such general questions obviously break down into more detailed and incisive questions such as:

Why is there such a great variability in private investment expenditures both for replacement and for expansion?

What facts or forecasts are used by businessmen in making their investment decisions?

[1] Gross national product amounted to 103.8 billion dollars, including in addition to investment, personal consumption expenditures amounting to 78.8 billion dollars or 75.9 percent of the total, net foreign investment equal to 800 million dollars or 0.8 percent, and Government purchases of goods and services of 8.5 billion dollars or 8.2 percent.

[2] For detailed figures see pp. 48–49.

When are investment plans and decisions made in relation to peaks of product demand: Before, after, or at the top of the boom in sales, production, and profits?

How long a time usually elapses between the time a decision to invest is made and the time when production from the facilities is available for meeting market demands?

What can be done by business and by government to minimize not only this variability in gross investment but the accompanying disturbance of economic stability generally?

If government is to act at all, at what point in the business cycle would its efforts most likely succeed in aiding private capital expenditures to stabilize at steady and adequate levels?

What are the dangers that such governmental efforts will be partly or wholly offset by discouragement of private investment plans and by the relaxation of incentive on the part of business managers to solve their own problems?

What portion of total investment is made by those entering into business for the first time? What encourages and what deters individuals to go into business? What is the minimum access to raw materials, skilled labor, markets, or funds required to make a start? In what industries? At what times? In how far does lack of freedom of entry in fact (as opposed to theory) constitute a factor limiting new enterprise? In what industries? Is access to know-how restricted? By whom? How?

What is the role of intermediary institutions in the making of direct investments or in generating added investment? In how far is the form of the investment contract a vital factor? Of what importance as a factor is the state of the market for old securities or that for new securities issued primarily for the purpose of shifting ownership in existing plant and equipment?

What are the methods and procedures whereby existing businesses decide to increase their own investment? Are they the same at all phases of the cycle? Where do plans for additional or new plant, equipment, and processes originate? Who screens them? How? Who makes the ultimate decision? How? What is the relative role played (*a*) by a persistent flow of orders in excess of ability to deliver, (*b*) by inventions, patents, and improvements in technique, (*c*) by increases or shifts in the population, (*d*) by discovery of new sources of supply, (*e*) by need or desire to get ahead of, or keep abreast of, competitors, (*f*) by changes in governmental tax, tariff, fiscal, or regulatory policies, (*g*) by debt-equity ratios or liquidity or ready availability of funds, (*h*) by interest rates and costs of financing, (*i*) by cost levels of labor, building materials, and equipment, (*j*) by prices and market prospects for the industry, (*k*) by stock-market activity and the general business outlook, and other factors? [3]

NO SIMPLE ANSWER

The problem of keeping private investment at high and steady levels is one of extraordinary complexity. Many influences are at work. Many economic and political factors, general and specific, tend to

[3] For a selected list of questions on which information might well be sought, see appendix A, item 1.

affect investment decisions. Theories abound: classical, Keynesian, anti-Keynesian, etc.

Basically there is an inadequacy of complete statistical evidence for most of them. Uniformly they fail to consider the component parts of such aggregates as capital formation, savings, and income. How varied the movements of some of these component parts during the decade from 1929 to 1939 were in the United States is well expressed by Prof. Arthur F. Burns, director of the extensive research on business cycles in the National Bureau of Economic Research. (See table II.) He finds that the following measurable changes took place in that decade:

A growth of population but a drop in the rate of growth; some decline in the number of active corporations and a severe slump in the formation of new ones; consumer outlay in constant prices up 11 percent, gross 29 percent, on durable goods down 20 percent; public construction unchanged, residential construction down 24 percent, business construction down 67 percent; the flow of income payments reduced but the inequality of personal incomes apparently lessened; technological progress making rapid strides over a wide range of industries; the cost of living down 19 percent, the average hourly earnings of factory workers up 12 percent, their hours worked per week down 18 percent, and the number of them employed down 6 percent; a still greater improvement in the real hourly earnings of coal miners but not in their employment; a sharp deterioration of farm wages; a vast growth of trade-unionism and industrial strife; wholesale commodity prices in general down 19 percent, but prices of "finished" products down only 15 percent, of building materials 5 percent, and of business capital goods 1 percent; corporate profits much reduced and new security issues down to a trickle; the stock market in a bad slump, particularly the prices of railroad and public-utility stocks; interest rates on the highest grade loans sharply down but the spread among different types of interest rates very much widened; bank deposits up 6 percent but their rate of turn-over much reduced; currency in the hands of individuals and firms up 68 percent; foreign trade a shadow of its former self; the Federal income tax pressing much harder, especially on the upper brackets, yet the Federal debt sharply up; the output of agriculture up 11 percent, of coal down 27 percent, of manufacturing up 3 percent, of railroads down 25 percent, of electric light and power up 52 percent.[4]

TABLE II.—*Conspectus of economic changes, United States, 1923–39*

[All figures are expressed as relatives on a 1929 base]

Series No.	Series	1923	1929	1937	1939
	POPULATION				
1	Total	92	100	106	107
2	Annual increment	158	100	69	83
	GROSS NATIONAL PRODUCT [1]				
3	Total	81	100	97	103
	Consumer outlay:				
4	Total	81	100	103	111
5	Perishable goods	84	100	122	129
6	Semidurable goods	83	100	84	95
7	Durable goods	75	100	83	80
8	Services	79	100	99	111
	Gross capital formation:				
9	Total	82	100	71	73
10	Producer durable goods	77	100	88	81
11	Residential construction	103	100	51	76
12	Private nonresidential construction	69	100	40	33
13	Public construction	58	100	88	100

[1] Adjusted for changes in prices.

[4] Burns, Arthur F., Economic Research and the Keynesian Thinking of Our Times, Thirty-sixth Annual Report of the National Bureau of Economic Research, pp. 8, 16–17.

TABLE II.—*Conspectus of economic changes, United States, 1923-39*—Continued

Series No.	Series	1923	1929	1937	1939
	LABOR FORCE [1]				
14	Total	90	100	110	112
	Number employed:				
15	Total	90	100	98	97
16	Civil nonagricultural	86	100	97	95
17	Number unemployed	175	100	485	590
	OUTPUT AND EMPLOYMENT IN MAJOR INDUSTRIES				
	Agriculture:				
18	Output	92	100	106	111
19	Number employed	105	100	91	89
20	Output per worker	87	100	116	124
	Coal mining:				
21	Output	111	100	80	73
22	Number employed	132	100	90	82
23	Hours per worker	88	100	76	70
24	Output per man-hour	96	100	116	126
	Manufacturing:				
25	Output	77	100	103	103
26	Number employed	98	100	102	94
27	Hours per worker	104	100	84	82
28	Output per man-hour	76	100	121	133
	Steam railroads:				
29	Output	98	100	81	75
30	Number employed	112	100	68	60
31	Hours per worker	103	100	94	94
32	Output per man-hour	85	100	127	132
	Electric light and power:				
33	Output	50	100	136	152
34	Number employed	67	100	96	93
35	Hours per worker	98	100	86	85
36	Output per man-hour	72	100	164	192
	INCOME OF INDIVIDUALS				
	Income payments:				
37	Total	82	100	86	85
38	Wages and salaries	83	100	91	90
39	Entrepreneurial withdrawals	84	100	84	85
40	Dividends, interest, and rent	79	100	73	69
	Relative share going to highest:				
41	1 percent of income recipients	85	100	90	82
42	5 percent of income recipients	88	100	92	90
	Net income after Federal income tax, for incomes of—				
43	$5,000	99	100	99	99
44	$10,000	97	100	97	97
45	$25,000	96	100	94	94
46	$100,000	91	100	80	80
47	$500,000	78	100	50	50
48	$1,000,000	76	100	42	42
	LABOR MARKET				
	Average hourly earnings:				
49	Manufacturing	92	100	110	112
50	Coal mining	116	100	120	125
51	Steam railroads	92	100	106	112
52	Average daily wage: Farm laborers	100	100	72	69
53	Trade-union membership	106	100	195	239
54	Number of workers on strike	262	100	644	405
	COMMODITY PRICES				
	Wholesale:				
55	All commodities	106	100	91	81
56	Raw materials	101	100	87	72
57	Semimanufactured goods	126	100	91	82
58	Finished goods	105	100	92	85
59	Building materials	114	100	100	95
60	Business capital goods	104	100	99	99
61	Cost of living	100	100	84	81

[1] Relatives for 1923 are not strictly comparable with those for 1937 and 1939.]

TABLE II.—*Conspectus of economic changes, United States, 1923-39*—Continued

Series No.	Series	1923	1929	1937	1939
	STATUS OF CORPORATIONS				
62	Number active	78	100	99	97
63	New incorporations		100	63	57
	Profits:				
64	Total	62	100	48	62
65	Dividends paid	61	100	82	67
66	Income retained	65	100	−93	43
67	Depreciation and depletion	61	100	85	86
	SECURITIES MARKET				
	Prices of common stocks:				
68	All	36	100	58	47
69	Industrial	35	100	69	55
70	Public utility	31	100	40	36
71	Railroad	49	100	33	19
72	Shares traded	21	100	36	23
73	Corporate security issues	32	100	24	22
	INTEREST RATES				
74	Commercial paper rate	86	100	16	12
	Customers' rate:				
75	New York City	88	100	41	[3] 39
76	Southern and western cities	97	100	68	[3] 67
77	Spread: (76)-(75)	288	100	669	[3] 685
	Corporate bond yields:				
78	Moody's Aaa bonds	108	100	69	64
79	Moody's Baa bonds	123	100	85	84
80	Spread: (79)-(78)	181	100	151	167
	SUPPLY AND TURN-OVER OF MONEY				
81	Currency in public circulation	103	100	155	168
82	Deposits	75	100	99	106
83	Turn-over of deposits	70	100	54	45
	Bank debits:				
84	Total	54	100	51	46
85	New York City	39	100	33	28
86	Outside New York City	72	100	74	69
	FOREIGN TRADE				
87	Imports	86	100	70	53
88	Exports	80	100	64	61
	FEDERAL FINANCE				
89	Receipts [2]	97	100	141	120
90	Expenditures [2]	97	100	242	277
91	Total debt	132	100	211	238

[1] Relatives for 1923 are not strictly comparable with those for 1937 and 1939.
[2] Computed from data for 1938.

Source: Burns, Arthur F., Economic Research and the Keynesian Thinking of our Times, Twenty-sixth Annual Report of the National Bureau of Economic Research, pp. 14-16.

The importance of breaking down aggregates to help explain investment trends is commented on by Burns as follows:

> Suppose, for example, that "investment" goes up. This may be a sign that business will soon improve materially, as when extensive new construction gets under way; or it may be a sign that business will soon get worse, as when goods pile up beyond dealers' intentions. The ambiguity can be cleared up a little by examining investment in inventories apart from investment in structure and equipment. But the cyclical behavior of inventories, or of net changes in inventories, is itself a resultant of highly diverse patterns. For example, the stocks held by manufacturers tend to lag about 9 months on the average at the cyclical turns in production; this lag covers up the tendency of goods in process to move synchronously with production, of raw material stocks to lag about 2 months more than a year. * * * Why is the adjustment of stocks of finished staples retarded so long? This question naturally impels an investigator to examine the behavior of production, shipments, and prices.[5]

[5] Ibid., pp. 24-25.

THE DOCTORS DIFFER

To select among so many the one or two strategic variables is not only difficult, but inevitably produces honest differences of opinion among observers equally unbiased, thoroughly competent, and well informed.

Says Prof. Sumner Slichter, of Harvard University:

> Considerable evidence exists that turning points are started, not by decisions of consumers, investors, or governments, but by the decisions of businessmen to expand or contract their commitments.[6]

Says Dr. Harold G. Moulton, president of the Brookings Institution:

> The outlook for profits is favorable only when the flow of funds into consumptive channels is large and increasing. Expanding consumption is the controlling factor.[7]

Prof. Paul Douglas of the University of Chicago (now Senator Douglas and a member of this committee) in answering "Where the Trouble Seems to Lie", identifies as "fundamental generating causes":

> (1) The failure of industry, because of "friction" monopoly and quasi-monopoly, to reduce prices commensurately with the reduction in costs so that undue profits were piled up and undue profits made. (2) The failure of industry and society to increase wages, salaries, and farm incomes commensurately with the increase of output in the mass production industries.[8]
>
> The pegging of prices by management was largely responsible for both the initiation and the continuation of the depression.[9]

SPECIAL PROBLEM: RISK CAPITAL FOR SMALL BUSINESS

There is no aspect of the investment problem that has received more public attention in recent years than the need of small business for risk capital. Existing financial machinery to provide short-term loans is fairly adequate. But small and medium-sized businesses have for years had difficulty in securing equity capital, either locally or nationally, except at high cost or serious risk of dilution of management control.

In 1929 the New England Banker's Committee published a study, which summarizes the situation in the twenties in language no less appropriate today. It said:

> The small company which has made good on a small scale and which wants to grow probably always has been and always will be a difficult problem. It often has no security except its own future possibilities to offer; it may rent its manufacturing surplus tied up in materials or receivables. It needs additional capital for expansion of plant or operations and feels that it is entitled to capital. Nevertheless, the furnishing of such help is considered in many quarters as outside the bank's function, making it necessary for the company to go without the needed capital or to sell stock, or to find additional private capital. If it chooses to sell stock, it often pays a prohibitive price for its capital; if it succeeds in interesting private capital, this ordinarily necessitates surrendering control of the business—in many cases into hands less expert in its actual management.[10]

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[6] Slichter, S., The Period 1919-36 in the United States: Its Significance for Business-Cycle Theory, Review of Economic Statistics, February 1937, vol. 19, p. 5.

[7] Moulton, Harold G., Controlling Factors in Economic Development, the Brookings Institution, Washington, D. C., 1949, p. 101.

[8] Douglas, Paul, Controlling Depressions, W. W. Norton & Co., Inc., New York, 1935, p. 77.

[9] Ibid., p. 64.

[10] Current Banking Services, a report prepared by Freeland and Warren, Inc., at the instigation of the New England Banker's Committee cooperating with the New England Council in 1928 and 1929. Charles F. Mills, vice president of the First National Bank of Boston, was chairman of the committee.

LOCAL ENCOURAGEMENT TO SMALL BUSINESS

A series of developments have caused small business needs for risk capital to grow beyond the means of local venture capital. The amount of funds required for adequate expansion to meet Nation-wide demand is in some instances more than a hundred times that needed at the turn of the century. Savings institutions, life insurance companies and the like, increasingly have drawn funds from the localities where most needed. The rise of national systems of distribution has made Nation-wide the area of risk.

Hence localities have increasingly sought means of making local business grow. In the twenties a number of community industrial financing agencies were developed. The Chamber of Commerce of the United States, reporting information received up to 1932,[11] describes in some detail those operating in such cities as Akron, Ohio; Baltimore, Md.; Danbury, Conn.; Danville, Ill.; Fort Wayne, Ind.; Johnstown, Pa.; Lansing, Mich.; Louisville, Ky.; Lowell, Mass.; Minneapolis, Minn.; Omaha, Nebr.; Portland, Oreg.; Rochester, N. Y.; and Tulsa, Okla.

These plans fall into three general types, i. e., the credit fund plan, the cash fund plan, and the financing service plan.

Under the credit fund plan, a group of individuals lend their credit to an organization needing money, which is then able to secure the necessary funds from the bank. The Easton Guarantee Fund of Easton, Pa., is given as an example of this type of community industrial financing organization.

Under the cash fund plan, capital is subscribed to a revolving fund from which loans are made to industrial establishments. An example frequently cited is the Louisville Industrial Foundation, of Louisville, Ky.

Under the financing service plan, capital is provided through the purchase of common stock in an industrial company which is then used for loans to approved industries. An example of this type of plan is the Industrial Corp., of Baltimore, Md.

The United States Chamber of Commerce reported that there were 47 active community plans in existence, some of them very small, some at the time of the report having made no loans, and some with a limited number of loans in existence. In some cases, the plans are used to attract industries to the community; in others, funds are used to assist the expansion of industries already located in a community.

FREEDOM OF ENTRY

The difficulty of getting long-term equity capital is, of course, particularly great for new business.

> Failure to start a new business on a scale that permits economical operation often means that the business will perish. * * * Too many entrepreneurs probably fail to question the assumption that they can start small and grow large.
>
> The ease with which new firms obtain financial assistance varies in large measure directly with their size. * * * There are no banking institutions that are established to finance "sure thing" small business. The costliness of collecting information regarding the probable future experience of an enterprise makes the investigation of new firms unprofitable unless the funds to be raised are large. Proving a small business to be a "sure thing" might involve so much time and

[11] Chamber of Commerce of the United States, Community Industrial Financing Plans, Washington, D. C., 1936.

money that a banker would have to charge a prohibitive rate of interest to cover the cost of investigation alone.[12]

Barriers to entry include patents held by actual or potential competitors, contracts governing the sale of finished products, labor contracts, product differentiation, oligopoly, scarcity of factors of production, financial coventry by capital suppliers, and legal restrictions upon entry, including licensing provisions, taxation, and legal price fixing.

With diagnoses of the risk capital problem of new and small business so much at variance, it is but to be expected that remedial proposals are equally numerous.[13] Far too numerous to summarize, they range all the way from Federal establishment of permanent industrial loan corporations, or Federal capital credit banks, to establishment of a Federal Investment Bank Board with 12 to 20 federally incorporated investment banks specializing in advancing developmental funds to new enterprises and purchasing the stocks for expansion of worthy established enterprises not able elsewhere to get funds on reasonable terms.

SPECIAL PROBLEM AREA: FOREIGN INVESTMENT

In the economic sense, the free world already is one world. Not only do standard articles of American consumption contain products and services that come from every accessible corner of the earth, but all recent booms and depressions have been world-wide. Prosperity, like peace, is indivisible. Unemployment and capital investment are not merely national but organically international problems.

Contrary to popular impression, the total of American-owned assets in foreign countries has grown steadily and by the end of 1947 reached a new high of approximately $29,000,000,000. Between July 1, 1945, and June 30, 1948, the net outflow of United States investment funds to foreign countries, exclusive of public and private grants (gifts), totaled approximately $9,400,000,000. The table below gives the major facts:

TABLE III.—*Estimates of American-owned assets in foreign countries, 1939, 1945, 1947* [1]

[In millions of dollars]

	1939	1945	1947
Private investments:			
Long-term:			
Direct investments	$7,280	$8,120	$9,400
Other	4,105	5,555	5,700
Total, long-term	11,385	13,675	15,100
Short-term	1,060	915	1,600
Total, private investments	12,445	14,590	16,700
U. S. Government assets:			
Long-term	35	1,585	11,700
Short-term		585	400
Total, U. S. Government assets	35	2,170	12,100
Total, American-owned assets	12,480	16,760	28,800

[1] Source: Based on data released by the U. S. Department of Commerce.

[12] Oxenfeldt, Alfred R., New Firms and Free Enterprise: Prewar and Postwar Aspects (Washington) American Council on Public Affairs, 1943, p. 13.

[13] The Department of Commerce in 1943 published a digest of no less than 390 bills proposed in Congress in behalf of small business. See appendix A, item 2.

Complete and comparable figures for 1948 are not yet publicly available. Total private investments, however, increased to about $17,000,000,000, of which $11,300,000,000 represented direct investments, i. e., funds devoted to establishing or improving branch plants abroad by large American corporations. The flotation of foreign securities in the United States market has all but ceased.

Approximately 36 percent of American privately held direct investments abroad are located in Latin America and the remainder primarily in Canada and Europe.

TABLE IV.—*Total United States direct investments abroad by area, 1929, 1940, 1948*

[In billions of dollars, end of year]

	1929	1940	1948
Area:			
Latin America	3.6	2.6	4.1
Canada	2.0	2.1	3.3
Europe	1.4	1.9	2.3
All other	.7	.7	1.6
Total	7.7	7.3	11.3

A good deal of postwar direct investment abroad has resulted from activities of the petroleum industry. A comparison with 1943, for example, shows that the value of American-controlled enterprises abroad amounted to approximately $7,800,000,000. Of this, $2,300,000,000 was in manufacturing enterprises, $1,400,000,000 in petroleum, $1,100,000,000 in mining establishments, and $1,400,000,000 in public utilities.

Since 1943 the largest increase has been in petroleum investment in Latin America and the Near East, amounting in the 3 years 1945, 1946, and 1947 to over $700,000,000. In fact, it accounts for nearly three-fourths of the increase in direct private investment in that period ($906,000,000).

Direct investment in mining and smelting declined in 1945 and 1946 (by $16,000,000) but increased by $18,000,000 in 1947.

GOVERNMENT "INVESTMENT"

It is obvious that Government loans (and grants-in-aid) like private investments all represent the transfer of private United States wealth abroad. The Government has no funds of its own to invest. Every dollar made available to a foreign country, whether by choice of individual investors or by the proceeds of taxation, comes out of the pockets of individuals in the United States. During the postwar period, funds flowing abroad in response to ordinary commercial motives have been substantially supplemented by funds channeled from taxpayers via Government.

Postwar aid to foreign countries amounted, in the period July 1, 1945 to June 30, 1948, to the staggering total of almost $20,000,000,000.[14]

[14] This does not include the disbursements of the International Bank for Reconstruction and Development and the International Monetary Fund which amounted to $1,085,000,000. A large proportion of this, of course, represents the United States contribution to the funds of these organizations.

Net outflow of United States funds July 1, 1945–June 30, 1948

[In millions]

Grants (gifts)		$10, 140
U. S. Government	$8, 423	
Private	1, 717	
U. S. Government loans		8, 310
Private investment (net)		1, 107
Direct investments 1,142.		
Portfolio investments (decrease of 35).		
Total		19, 557

The magnitude of this financial outlay can be brought into focus by comparing it with the total of American-owned assets in foreign countries in 1939, which amounted to some $12,500,000,000. Whereas practically all of these investments were then privately held, by 1947 over 40 percent of a much larger total, $28,800,000,000, were held in the name of the United States Government.

Whether such loans should even be called "investments" is debatable. They are certainly quite different from private loans in motivation, terms of repayment, and in some of their effects upon the world economy. When made at rates of interest so low as to make it impossible for private capital to compete with them, as has been the case with most recent intergovernmental lending, governmental "loans" discourage lending on private account. For private capital will not move across international boundaries unless the return gives promise of compensating for the risks involved. And foreign countries can hardly be expected to pay the price necessary to induce the importation of private capital if they find it possible to secure loans from United States Government agencies under much more favorable returns.

Traditionally, the problems relating to private foreign investment have involved such issues as colonialism, imperialism, domination of weaker countries by stronger ones, or by powerful corporate groups.

Today, however, the problems are quite different. A vigorous nationalism, a fear of taking sides in the "cold war," cultural pride and other factors have created a political climate quite hostile to investment on private account. Thus outright expropriation of foreign-held rights in natural resources has not been unknown. Numerous regulations designed to limit the earnings and currency-transfer rights of foreigners exist almost everywhere.

Whether the restrictions will be relaxed, through international agreement or otherwise, is an important and basic question. Upon its answer depends whether the development of nations will follow the paths of individual self-interest fundamental to the private enterprise system or whether economic development will continue to be directed for other reasons by the actions of governments.

IS INVESTMENT CONTROLLED BY A FEW?

Extensive documentation has been produced by the Temporary National Economic Committee and other notable investigations by Congress and the executive departments have established the fact that the level of investment in crucial areas of the economy is in the hands of a relatively small group of men. Historically, as Dr. Moulton

has documented in his book on Controlling Factors in Economic Development:

> Instead of producing all the goods possible and pressing them into consumption businessmen were in the main holding production in leash, adjusting output to the volume of current orders.

In fact, he goes on to say—

> in a highly developed, concentrated industrial economy business trends depend almost entirely upon the outlook as gaged by the managements of [these] large enterprises; marginal establishments are of negligible proportions in this connection.

In the same vein he observes somewhat later:

> If a few hundred major corporations, whose combined output is of overwhelming importance, should pursue systematically a policy of reducing prices whenever technological progress permits a stabilizing influence would be exerted.

The question is: Will they? Or, instead, will they continue shrewdly to set the volume of new capacity and investment at the level where profits can be made a maximum? If so, private capital investment may soon begin to fall short of the target levels needed by the economic system as a whole to assure ample opportunity for high level employment without inflation. If the technique of "adjusting production to consumption" is continued, the economy may be deprived of economic safety valves or margins of capacity such as arise under competition, by virtue of which producers are continuously under pressure to explore the vast new markets attainable by continuously reducing profit margins and prices. Total productive capacity, and total effective demand, except in case of war or inflation, may be kept below that necessary for high-level employment opportunity.

The late Gen. Leonard C. Ayres, of the Cleveland Trust Co., has made famous an analysis of the economics of war, according to which following the period of postwar inflation there always has occurred a short, primary readjustment. Capital shortages and backlogs of consumer durables disappear. Business activity is stabilized, often for years, on a plateau relatively high compared with prewar. This in turn is followed by a secondary, postwar depression of considerable magnitude.

The pattern since VJ-day has not differed markedly from that of General Ayres' analysis. The period of stabilization on a high plateau of prices may now have begun. Whether this time by unusual application of scientific intelligence and cooperative action steady progress will be made toward achievement of continuous high-level employment is perhaps the most fundamental immediate problem facing the Joint Committee on the Economic Report.

CHAPTER I

THE ROLE OF PRIVATE INVESTMENT IN THE BIG DEPRESSION

Among the big unanswered riddles of economic history none, so far as the problem of investment is concerned, is so puzzling as the big depression of 1929–32. What caused it? Many items currently stressed as deterrents to investment did not then exist. Relative to the present, labor unions were weak; taxes were low; all governmental budgets were in balance; there was no problem area beyond the iron curtain nor menacing socialism elsewhere, nor programs of reform at home; security markets were unregulated, the stock market at new highs; corporate profits zooming, and political administrations here and abroad entirely favorable to business. Why then the collapse? This riddle has evoked a more extensive literature than any other economic phenomena of comparable duration in American history.[1] Since 1937 many notable and extensive projects to provide more exact data have been undertaken, especially by the National Bureau of Economic Research, the Cowles Commission for Research in Economics, and the Bureau of Business and Economic Research of the University of California.

PRESENT LACK OF DETAILS OF 1929 ECONOMIC DEVELOPMENTS

Despite the effort expended many vital questions remain unanswered. In the words of Professor Gordon:

> We still know distressingly little about the causes of economic fluctuations in the United States in the period between the two Great Wars.[2]

Some of the questions to which, in his view, satisfactorily detailed answers are still lacking are:

1. What were the most important secular forces operating upon the American economy during the interwar period, and how were these secular forces related to both the boom of the twenties and the depression of the thirties?
2. For each major industry, what was the nature of the market situation and the prospect for further investment in 1928–29, and how did the changes which occurred during the twenties affect developments from 1929 on?
3. What were the facts regarding the relations between income and consumption, in the aggregate and for significant segments of the economy, both for the twenties as a whole and for the 1929 downturn?
4. What, specifically, was the role of the various causes which have been cited as contributing to the length and severity of the great depression?

[1] As early as 1937, the serious literature devoted to the events of 1929-31 was so large that Prof. Robert A. Gordon's, A Selected Bibliography of the Literature on Economic Fluctuations, 1930-36, published in the Review of Economic Statistics for February 1937 was 32 pages long.

[2] Gordon, Robert A., Business Cycles in the Interwar Period: The Quantitative Historical Approach, American Economic Review, May 1949, pp. 47-63.

5. What happened after 1929 to each of the main sources of investment in the twenties? In what industries was investment particularly deficient, and what can we say about the causes of these deficiencies?

Prof. Joseph Schumpeter also makes the important point that although national totals or averages for the 1920's indicate general prosperity, such prosperity was essentially spotty. In theory, he noted, if in a given year, one industry makes $100,000,000 and another loses $100,000,000, these figures do not add up to zero, or, more precisely, the course of subsequent events generated by this situation is quite different from that which would follow if both had made zero profits. This is one reason why theories that work with aggregates only are so misleading.[3]

The importance of breaking down aggregates, such as consumption and investment, has also been stressed by Thomas Wilson, of Oxford University,[4] and by Prof. Arthur F. Burns, of Columbia University.[5] Thus, even though more complete data are probably available for the United States for the period following World War I than are available for almost any other country, we still lack detailed break-downs of basic aggregates of production, investment, consumption, savings, unemployment, etc.

Such figures as exist, however, that are pertinent to the problem in hand, are given in the tables below.

Almost all of the economic time series maintained during the years before and after 1929 will reflect some aspect of the business reversal which occurred at that time. Those in table I are representative. Among the more striking developments reflected in this table may be mentioned the boom in construction, particularly residential construction, in the middle and late 1920's and the drop to less than 15 percent of the 1923–25 average value of construction from 1932 through 1934; the enormous spurt of trading on the New York Stock Exchange in 1928 and 1929; the parallel changes in the interest rate on renewals of call loans; and the sizable number of bank failures throughout most of the 1920's but increasing sharply after 1930, continuing through early 1933.

The drop in investment construction, in plant and equipment, and in other capital additions is clearly shown in table II. From 1922 through 1929 gross capital formation was always close to 20 percent of gross national product. In 1930 this drop to 16.6 percent, went as low as 6.6 percent in 1932 and wasn't up to 19 percent again until 1936. Table III gives the component parts of gross capital formation for the 20-year period 1919–38. The sharp drop in residential construction and in business inventories after 1929 is particularly conspicuous.

What the expenditures for durable goods, both by producers and by consumers, were for this same 20-year period is reflected in table IV. To a large extent these figures naturally parallel those of gross capital formation.

The extent to which business investments were financed internally and to what extent securities were issued is shown in table V. Net savings of business were most sharply affected by the 1929 business reversal.

[3] Schumpeter, Joseph A., The American Economy in the Interwar Period; The Decade of the Twenties, American Economic Review, May 1946, p. 5.
[4] Fluctuations in Income and Employment, third edition, London, 1948.
[5] Economic Research and the Keynesian Thinking of Our Times, New York, National Bureau of Economic Research, 1946.

TABLE I.—*Selected indicators of business trends, 1919–48*

Year	Index of industrial production (1935–39 average=100)	Construction contracts awarded index of value (1923–25 average=100)		Employment in manufacturing (annual average)	Factory average weekly earning (dollars)	Index of wholesale prices (1926=100)			Bank debits (monthly average in billions of dollars)			Volume of trading on New York Stock Exchange (millions of shares of stock)	Average interest rate on call loans renewals (percent)	Commercial failures [2]		Bank failures	
		Total	Residential			Combined	Farm products	Non-farm products [1]	Total	New York City	Outside New York City			Number (monthly average)	Liabilities (thousands of dollars)	Number	Deposits (thousands of dollars)
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)
1919	72	63	44	[3]	23.29	138.6	157.6	131.6	37.9	20.3	17.6	318	6.32	538	9,441	62	[3]
1920	75	63	30	[3]	[3]	154.4	150.7	154.8	40.3	20.1	20.1	228	7.74	740	24,594	167	[3]
1921	58	56	44	[3]	[3]	97.6	88.4	100.1	33.3	17.3	16.0	173	5.97	1,638	52,284	505	172,188
1922	73	79	68	[3]	[3]	96.7	93.8	97.3	36.6	20.0	16.6	261	4.29	1,973	51,991	366	91,182
1923	88	84	81	[3]	25.13	100.6	98.6	100.9	38.6	19.9	18.8	236	4.85	1,560	44,949	646	149,601
1924	82	94	95	[3]	25.24	98.1	100.0	97.1	41.0	22.0	19.0	284	3.08	1,718	45,269	775	210,151
1925	90	122	124	[3]	25.71	103.5	109.8	101.4	47.5	26.1	21.4	460	4.18	1,768	36,979	618	167,555
1926	96	129	121	[3]	26.00	100.0	100.0	100.0	50.7	28.3	22.4	452	4.50	1,814	34,103	976	260,378
1927	95	129	117	[3]	26.10	95.4	99.4	94.6	56.2	32.6	23.5	532	4.06	1,929	43,342	669	199,329
1928	99	135	126	[3]	26.34	96.7	105.9	94.8	67.2	41.7	25.5	931	6.04	1,987	40,797	498	142,386
1929	110	117	87	31,041	26.40	95.3	104.9	91.6	77.9	50.3	27.7	1,125	7.61	1,909	40,271	659	230,643
1930	91	92	50	29,143	24.53	86.4	88.3	85.2	55.2	32.1	23.1	811	2.94	2,196	55,690	1,350	837,096
1931	75	63	37	26,383	22.02	73.0	64.8	75.0	40.1	22.0	18.1	577	1.74	2,357	61,359	2,293	1,690,232
1932	58	28	13	23,377	17.86	64.8	48.2	70.2	26.9	14.0	12.9	425	2.05	2,652	77,359	1,453	706,188
1933	69	25	11	23,466	17.36	65.9	51.4	71.2	25.7	13.5	12.2	655	1.16	1,655	38,127	4,000	3,596,698
1934	75	32	12	25,609	18.93	74.9	65.3	78.4	27.6	13.8	13.8	324	1.00	1,008	27,830	57	36,937
1935	87	37	21	26,792	20.13	80.0	78.8	77.9	31.2	15.3	15.8	382	.56	1,020	25,882	34	10,015
1936	103	55	37	28,802	21.78	80.8	80.9	79.6	35.7	17.4	18.3	496	.91	801	16,931	44	11,306
1937	113	59	41	30,718	24.05	86.3	86.4	85.3	36.1	16.5	19.6	409	1.00	791	15,271	59	19,723
1938	89	64	45	28,902	22.30	78.6	68.5	81.7	31.1	14.1	17.1	297	1.00	1,070	20,542	54	10,532
1939	109	72	60	30,287	23.86	77.1	65.3	81.3	32.5	14.3	18.2	262	1.00	1,231	15,210	42	34,908
1940	125	81	72	32,031	25.20	78.6	67.7	83.0	34.0	14.3	19.7	208	1.00	1,135	13,890	22	5,943
1941	162	122	89	36,164	29.58	87.3	82.4	89.0	41.0	16.5	24.5	171	1.00	987	11,342	8	3,726
1942	199	166	82	39,697	36.65	98.8	105.9	95.5	47.9	18.9	29.0	126	1.00	784	8,397	9	1,702
1943	239	68	40	42,042	43.14	103.1	122.6	96.9	59.6	24.7	35.0	279	1.00	268	3,778	4	6,223
1944	235	41	16	41,480	46.08	104.0	123.3	98.5	67.3	28.8	38.5	263	1.00	102	2,638	1	405
1945	203	68	26	40,069	44.39	105.8	128.2	99.7	73.7	33.7	40.0	378	1.00	68	2,533	0	0
1946	170	153	143	41,494	43.74	121.1	148.9	109.5	78.7	34.8	43.9	364	1.16	94	5,862	0	0
1947	187	157	142	43,970	49.25	152.1	181.2	135.2	[4] 83.8	[4] 33.8	[4] 50.0	254	1.38	290	1,842	1	167
1948	192	190	162	45,131	53.15	165.1	188.3	151.0	[4] 93.1	[4] 37.4	[4] 55.7	302	1.55	438	2,588	0	0

[1] 1919–28 not strictly comparable to subsequent data.
[2] Years beginning with 1933 not strictly comparable with figures of earlier years.
[3] Not available.
[4] Not strictly comparable with earlier years.

Source: Columns 1–3: Board of Governors of the Federal Reserve System, in Survey of Current Business, 1942 and 1947 supplements, and Federal Reserve Bulletin. Columns 4–8: U. S. Bureau of Labor Statistics, in Survey of Current Business 1942 Supplement and Midyear Economic Report of the President, July 1949. Columns 9–11: Board of Governors of the Federal Reserve System, in Survey of Current Business, 1942 and 1947 supplements, and March 1948 and March 1949 issues. Column 12: New York Stock Exchange, 1949 Year Book. Column 13: Board of Governors of the Federal Reseve System, in Survey of Current Business, 1942 and 1947 supplements, and Federal Reserve Bulletin. Columns 14–15: Dun & Bradstreet, Inc., in Survey of Current Business, 1942 and 1947 supplements, and Dun's Statistical Review, July 1949. Columns 16–17: Board of Governors of the Federal Reserve System, Banking and Monetary Statistics (1943), and Federal Reserve Bulletin.

TABLE II.—*Gross national product and capital formation, 1919–38*

Year	Gross national product (in billions of dollars)	Gross capital formation		Year	Gross national product (in billions of dollars)	Gross capital formation	
		Amount (in billions of dollars)	Percent of gross national product			Amount (in billions of dollars)	Percent of gross national product
1919	68.8	19.3	28.1	1929	93.6	20.3	21.7
1920	82.8	22.1	26.7	1930	82.7	13.7	16.6
1921	66.1	11.5	17.4	1931	64.8	8.5	13.1
1922	67.2	13.3	19.8	1932	47.1	3.1	6.6
1923	78.2	18.2	23 3	1933	46.0	3.7	8.0
1924	79.8	15.2	19.0	1934	55.2	5.5	10.0
1925	83.4	19.2	23.0	1935	61.6	9.4	15.3
1926	88.8	19.0	21.4	1936	72.7	13.8	19.0
1927	86.8	18.2	21.0	1937	80.0	17.5	21.9
1928	90.1	17.8	19.8	1938	70.3	12.7	18.1

Sources: Kuznets, Simon, National Income and Capital Formation 1919–35 (1937), p. 8, 40; Kuznets, Simon, Commodity Flow and Capital Formation in the Recent Recovery and Decline, 1932–38 (1939).

TABLE III.—*Kuznet's estimates of gross capital formation, 1919–38*

[In millions of dollars]

Year	Gross capital formation									Total construction	Total construction and durable goods
	Total	Business				Residential construction	Public construction	Changes in metal stocks	Net change in foreign balance		
		Total	Construction	Durable goods	Change in inventories						
1919	19,341	13,128	2,762	6,234	+4,132	1,732	1,422	−256	+3,315	5,916	12,150
1920	22,100	16,681	3,129	6,177	+7,375	1,493	1,714	−42	+2,254	6,336	12,513
1921	11,488	6,166	2,186	3,926	+54	2,241	1,678	+775	+628	6,105	10,031
1922	13,282	7,165	2,783	3,848	+534	3,524	2,076	+302	+215	8,383	12,231
1923	18,199	11,583	3,300	5,267	+3,016	4,422	1,921	+351	−78	9,643	14,910
1924	15,245	7,558	3,513	4,962	−917	4,713	2,264	+264	+446	10,490	15,452
1925	19,211	11,137	4,062	5,287	+1,788	5,202	2,546	−102	+428	11,810	17,097
1926	19,037	11,668	4,366	5,716	+1,586	4,757	2,470	+98	+44	11,593	17,309
1927	18,208	10,402	4,477	5,461	+464	4,524	2,786	−110	+606	11,787	17,248
1928	17,824	9,916	4,385	5,852	−321	4,255	2,932	−236	+957	11,572	17,424
1929	20,298	13,903	4,581	6,908	+2,414	3,010	2,928	+145	+312	10,519	17,427
1930	13,662	8,152	3,800	5,480	−1,128	1,805	3,023	+311	+371	8,628	14,108
1931	8,464	4,393	2,232	3,536	−1,375	1,262	2,615	−132	+326	6,109	9,645
1932	3,061	655	1,097	2,019	−2,461	444	1,869	+53	+40	3,410	5,429
1933	3,749	1,858	936	2,051	−1,129	392	1,383	−182	+298	2,711	4,762
1934	5,526	2,771	1,180	3,138	−1,547	458	2,100	+1,065	−868	3,738	6,876
1935	9,355	6,156	1,463	3,957	+736	923	1,995	+2,173	−1,892	4,381	8,338
1936	13,817	9,022	1,854	5,429	+1,739	1,580	3,265	+1,285	−1,335	6,699	12,128
1937	17,497	12,463	2,555	6,828	+3,080	1,956	2,889	+1,643	−1,454	7,400	14,228
1938	12,744	6,510	1,952	5,164	−606	1,746	3,455	+1,932	−899	7,153	12,317

Sources: Kuznets, Simon, National Income and Capital Formation, 1919-35 (1937); Kuznets, Simon, Commodity Flow and Capital Formation in the Recent Recovery and Decline, 1932-38 (1939).

TABLE IV.—*Estimated expenditures for new durable goods*

[In millions of dollars]

Year	Public and private			Private									Public plant
	Total	Plant	Equipment	Producers and consumers			Producers			Consumers			
				Total	Plant	Equipment	Total	Plant	Equipment	Total	Plant	Equipment	
1919	15,455	6,048	9,407	14,543	5,136	9,407	7,095	3,166	[1] 3,929	7,448	1,970	5,478	[2] 912
1920	17,933	6,898	11,035	16,721	5,686	11,035	8,327	3,738	[1] 4,589	8,394	1,948	6,446	[2] 1,212
1921	14,131	6,313	7,818	12,606	4,788	7,818	5,233	2,475	[1] 2,758	7,373	2,313	5,060	[2] 1,525
1922	16,908	8,102	8,806	15,251	6,445	8,806	5,784	2,644	3,140	9,467	3,801	5,666	1,657
1923	21,582	9,699	11,883	19,984	8,101	11,883	7,902	3,280	4,622	12,082	4,821	7,261	1,598
1924	21,908	10,398	11,510	20,046	8,536	11,510	7,650	3,307	4,343	12,396	5,229	7,167	1,862
1925	23,834	11,499	12,385	21,726	9,341	12,385	8,189	3,591	4,598	13,537	5,750	7,787	2,108
1926	25,284	11,833	13,451	23,171	9,720	13,451	9,126	4,185	4,941	14,045	5,535	8,510	2,113
1927	24,602	11,858	12,744	22,234	9,490	12,744	8,777	4,133	4,644	13,457	5,357	8,100	2,368
1928	24,920	11,584	13,336	22,458	9,122	13,336	8,846	4,103	4,743	13,612	5,019	8,593	2,462
1929	25,532	10,734	14,798	23,121	8,323	14,798	10,157	4,562	5,595	12,964	3,761	9,203	2,411
1930	20,443	8,836	11,607	17,666	6,059	11,607	8,340	3,768	4,572	9,326	2,291	7,035	2,777
1931	14,771	6,494	8,277	12,194	3,917	8,277	5,123	2,182	2,941	7,071	1,735	5,336	2,577
1932	8,650	3,695	4,955	6,856	1,901	4,955	2,799	1,192	1,607	4,057	709	3,348	1,794
1933	7,607	2,655	4,952	6,277	1,325	4,952	2,371	867	1,504	3,906	458	3,448	[3] 1,330
1934	10,386	3,687	6,699	8,349	1,650	6,699	3,436	1,129	2,307	4,913	521	4,392	[3] 2,037
1935	12,639	4,005	8,634	10,805	2,171	8,634	4,349	1,258	3,091	4,456	913	5,543	[3] 1,834
1936	17,654	6,470	11,184	14,370	3,186	11,184	5,783	1,650	4,133	8,587	1,536	7,051	[3] 3,284
1937	19,993	6,991	13,002	17,204	4,202	13,002	7,570	2,294	5,276	9,634	1,908	7,726	[3] 2,789
1938	16,378	6,952	9,426	13,019	3,593	9,426	5,389	1,776	3,613	7,630	1,817	5,813	[3] 3,359

[1] Excludes ships built for the Emergency Fleet Corp.
[2] Excludes special wartime military construction.
[3] Includes work-relief construction.

Source: Federal Reserve Bulletin, September 1939 and February 1940.

TABLE V.—*Financing business investments in plant and equipment, 1923–39*

Year	Gross saving			Productive security issues [3]	Outlays for plant and equipment [4]
	Net saving [1]	Depreciation and depletion [2]	Total		
1923	2,432	3,190	5,622	1,624	7,902
1924	1,463	3,282	4,745	1,941	7,650
1925	2,851	3,976	6,827	1,824	8,189
1926	2,223	4,551	6,774	1,801	9,126
1927	996	4,487	5,483	1,781	8,777
1928	2,830	4,799	7,629	1,495	8,846
1929	2,390	5,145	7,535	1,787	10,157
1930	−4,954	5,118	164	1,939	8,340
1931	−7,781	4,897	−2,884	796	5,123
1932	−8,446	4,550	−3,896	203	2,799
1933	−2,488	4,354	1,866	106	2,371
1934	−828	4,265	3,437	63	3,436
1935	377	4,291	4,668	94	4,349
1936	1,152	4,414	5,566	379	5,783
1937	946	4,609	5,555	635	7,570
1938	−1,285	[5] 4,350	3,065	417	5,389
1939	829	[5] 4,550	5,379	191	6,135

[1] Refers only to nonfinancial business enterprises. Net saving as reported by the Department of Commerce, Survey of Current Business, June 1940. Data for financial enterprises and data for 1923-28 are unpublished.

[2] All business enterprises. From Solomon Fabricant, Capital Consumption and Adjustment, New York, National Bureau of Economic Research, 1938, pp. 32–33, 38. Estimates for 1936 and 1937 are preliminary, and are used with permission of Dr. Fabricant and the National Bureau.

[3] Compiled by Moody's Investors Service. Productive issues are those adding to capital goods, by raising funds for new construction, additions, improvements, and purchase of new equipment.

[4] Estimates by George Terborgh. See Federal Reserve Bulletin, September 1939 and February 1940.

[5] Estimated.

Source: Adapted from hearings before the Temporary National Economic Committee, part 9, p. 4041.

The expansion from 1921 to 1929 was concentrated into two periods: The first 2 years of sharp recovery and the last year's final spurt. During the five intervening years, from 1923 to 1928, it took the form of a continued rise in consumption but with little expansion in investment.

STATISTICAL TRENDS

Consumption and investment—the two component parts of money income—usually rise and fall together, though in 1929 the downturn in investment preceded the downturn in consumption, and in the recovery of the thirties investment started up first. The various components of total investment show varying fluctuations. Inventories, for example, shift from a positive to a negative figure while outlays on plant and equipment went down in 1933 to one-fourth their 1929 figure. New housing construction began starting as early as 1925, reaching a high point of 5.2 billion dollars in that year. By 1928 they amounted to about 4 billion dollars. In 1929 there occurred a further decline of 1.2 billion dollars.[6]

NO SINGLE EXPLANATION VALID

A multitude of reasons have been given for the collapse of 1929, far too numerous even to be mentioned here. No single explanation has yet been agreed upon nor proved generally acceptable. Some stress the cumulative effect of a great variety of forces to explain the depth and extent of this great depression. Observers differ primarily in emphasis, some giving primary weight to monetary and fiscal policy,

[6] See Hansen, Alvin, Fiscal Policy and Business Cycles, p. 57.

others to business investment, consumer spending, or even less tangible psychological factors.

Like other historical phenomena, the 1929 depression is explained both by ultimate and immediate events. Among the ultimate forces technological developments and wars, particularly, of course, World War I, have received the most attention. According to the technological and innovational theory, the electrification and motorization of the American economy dominated the period from the late 1890's to 1929. The rate of growth of automobile production, highway construction, and the electrical and chemical industries gradually slowed down. As Alvin Hansen expressed it:

> Just as the railroad expansion came to an end (during the 1890's), so also the buoyant era of 1900–1929. Street railway development was largely completed in the first decade, te'ephone and automobile expansion in the third. Electric power alone remains with large prospects for further growth. The great era of expansion was over by 1930. * * * Technological developments making for expansion had temporarily spent their force.[7]

It should be remembered that it takes a reduction merely in the rate of expansion to bring about an absolute decline in the volume of new investment required in the plant and equipment of subsidiary industries.

WORLD WAR I AS A CAUSE OF THE DEPRESSION

The severity of the 1929 decline is generally ascribed to World War I and attendant dislocations. War brought about an inflated price level which influenced all postwar banking and credit development.

As Professor Lionel Robbins has pointed out:

> As an influence on economic activity, the war, and the political changes which followed the war, must be regarded as a vast series of shifts in the fundamental conditions of demand and supply, to which economic activity must be adapted. The needs of war called a huge apparatus of mechanical equipment into being. The resumption of peace rendered it in large part superfluous. The fact of war involved a disruption of the world market. The settlement which came after, created conditions which aggravated this disruption.[8]

Long before World War I ended, Prof. A. C. Pigou, in 1916, made the following acute observation on the probable effect of that war on the business cycle:

> After the first few months of transition (after the end of the war) * * * it is practically certain that, to make good the havoc and the waste of war, there will be a strong industrial boom. This boom, if history is any guide, will generate in many minds an unreasoning sense of optimism leading to much wild investment. The result, some years afterwards, will be failures, crisis, and depression. If this danger is to be obviated or mitigated, it is imperative that the Government and the banks should so act as to restrain and keep within limits the initial peace boom.[9]

In actual fact the banking and fiscal policies of the Government accentuated and prolonged the postwar boom. The expansion of bank credit was not opposed until shortly before the peak of the boom had been reached.

World War I inevitably brought about sharply mounting costs of government in most countries, which prevented the attainment of

[7] Hansen, Alvin, Fiscal Policy and Business Cycles, p. 41.
[8] Robbins, Lionel, The Great Depression (1934), p. 3.
[9] Pigou, A. C., The Economy and Finance of the War (1916), pp. 87–88.

fiscal stability, notwithstanding increases in taxes. Unbalanced budgets made difficult the problem of maintaining monetary and foreign exchange stability. Both public and private financing were resorted to by European countries to hasten recovery and reconstruction.

A major part of this borrowing came, of course, from the United States. The flow of sustaining credit from the United States to Europe reached its maximum in 1928, declining sharply in 1929. American foreign loans and investments during the period 1920 to 1929 enabled American exports to exceed imports by $10,600,000,000 in that period. But there were no corresponding improvements in the ability of continental debtors to meet obligations out of their own resources. According to Irving Fisher, American loans abroad were promoting or aggravating "the same unhealthy boom which was putting both our neighbors and ourselves in position for a slump. The reconstruction to which we contributed included much extravagance." [10]

The overindebtedness became more serious when American tariff policy (the Smoot-Hawley tariff) made it increasingly difficult for foreign countries to obtain dollars to make payments on their indebtedness, and quickly led to reprisals, further cutting American exports.

LENGTH OF BUSINESS CYCLES AS A FACTOR IN 1929 ECONOMIC TRENDS

Besides fluctuations in technological progress and wars, the theory of the coincidence or conjuncture of longer and shorter business cycles as a cause of the severity of the depression following 1929 should be mentioned. Various rhythms in economic phenomena have been observed and measured from time to time. In the United States these include a minor cycle of about 3⅓ years duration (discovered through the work of Warren M. Persons and Wesley C. Mitchell), a major cycle averaging about 80 months (first indicated by Clement Juglar in 1860); cycles in construction, livestock, and other industries of about every 16 to 17 years, and finally a long-wave cycle extending over a period of from 45 to 60 years (pointed out by N. D. Kondratieff). In 1932 Alvin Hansen noted:

> Now the year 1930, as Prof. Joseph Schumpeter has pointed out, fell not only in the downswing of the long cycle (Kondratieff), but also formed a part of the down grade of the major cycle (Juglar), and at the same time a part of it (probably the second half) fell in the trough of the minor 40-month cycle (Persons-Mitchell). The convergence of all three cycles upon the years 1930–31 accounts in part for the severity of this depression.[11]

Of the more immediate causes which have been considered as contributing to the 1929 boom and the subsequent depression, most can be classified into those emphasizing monetary, banking, or fiscal causes and those stressing maladjustments in production and consumption. They will be considered in this order. These two groupings are, of course, not mutually exclusive. Most of those who stress one cause as predominating would not deny the contributory importance of others.

[10] Fisher, Irving, Booms and Depressions, Some First Principles (1932), p. 76.
[11] Hansen, Alvin H., Economic Stabilization in an Unbalanced World (1932), p. 95.

BANKING AND FEDERAL RESERVE POLICY

The banking system in general and Federal Reserve policy in particular have received heavy criticism. Professor Schumpeter places the responsibility as follows:

> It was the—avoidable—three bank epidemics that occurred during the years of the crisis (July-December 1930; September 1931-January 1932; and November 1932-March 1933) which broke the morale of the public, spread paralysis through all sectors of the business organism, turned retreat into rout and thus were the most important reasons, speaking quantitatively, for the prevailing distress and unemployment which would not have been half as bad without them, and for the prevalence of a feeling that the world had come to an end.[12]

The study by Profs. C. A. Phillips, T. F. McManus, and R. W. Nelson, Banking and the Business Cycle; a Study of the Great Depression in the United States (1937), blames the depression primarily on the operations of the Federal Reserve System. Their position is made clear by the following passage:

> The pattern of the depression was shaped by Federal Reserve credit policy in the postwar years and by the secondary inflation of bank credit engendered by that policy. Federal Reserve policy, however, was undoubtedly conditioned by the disordered state of finance, production, and prices which the war left behind it * * *. During the years beginning with 1922 the Federal Reserve banking authorities embarked on a misguided attempt to prop up that (inflated) price level (produced by the war inflation) artificially by a further inflation of bank credit, in consequence of which the war inflation was carried over to the depression which began in 1929. Hence the proximate cause of the depression was Federal Reserve banking policy following 1921 and the inflation of bank credit induced by that policy; the ultimate controlling influence was the war and the wartime inflation.[13]

To a certain extent the same approach was taken by Lionel Robbins when he wrote:

> In the last analysis, it was deliberate cooperation between Central bankers, deliberate "reflation" on the part of the Federal Reserve authorities, which produced the worst phase of this stupendous fluctuation.[14]

While Professor Schumpeter maintained that the bank failures following the break in the stock market in 1929 were major factors in accounting for the seriousness of the depression, he discounts the role of Federal Reserve policy in fostering the boom of the 1920's:

> Federal Reserve policy is not entitled to such praise as we may feel disposed to bestow on maintaining the "Coolidge prosperity"; on the other hand, it seems to me plainly absurd to blame it for "not having prevented the depression." The Board was in no position to do either and its policy turns out, on analysis, to have been but little affected by the theories forged in glorification or criticism of its policy.[15]

STOCK-MARKET DEVELOPMENTS

Even more than the banking system, the stock market has been blamed for the 1929 downturn. As an immediate cause, stock-market operations, and the psychology surrounding them, seemed plausibly to be at fault. To quote Professor Schumpeter again:

> In itself stock and land speculation is a "natural" and even "necessary" concomitant of every business propsperity. But those wild excesses (of the specula-

[12] Schumpeter, Joseph A., The American Economy in the Interwar Period: The Decade of the Twenties, American Economic Review, May 1946, p. 9.
[13] Phillips, C. A., McManus, R. F., and Nelson, R. W., Banking and the Business Cycle; A Study of the Great Depression in the United States, New York, 1937, pp. 35-36.
[14] Robbins, L., The Great Depression (1934), p. 54.
[15] Schumpeter, Joseph A., The American Economy in the Interwar Period: The Decade of the Twenties, American Economic Review, May 1946, p. 5.

tive mania of 1927-29) and the attendant financial practices were clearly abnormal; they can be explained only by a specifically American mass phychology and could not have been foretold from anything within the range of statistical fact or reason. They were bound to issue in catastrophe and, once this catastrophe had occurred, in distortion of the course of subsequent events particularly owing to the annihilation of that part of consumers' demand that had been financed from capital gains —and, in many cases, unrealized ones.[16]

Professor Slichter has stated that the situation in the stock market may be considered "the most plausible explanation for the beginning of the downturn in 1929." The stock market situation was widely recognized as dangerous by April 1929. As Professor Slichter pointed out:

On February 7, 1929, the Federal Reserve Board issued its famous warning against excessive extension of speculative credit by the banks. A break occurred in stock prices late in March, and the call rate rose to 20 percent. Many businessmen began to fear that there might be a more or less serious collapse in the market and that this might produce some recession in business. Consequently, they began to adopt more cautious policies and made moderate reductions in their commitments. This seems to have started the downturn.[17]

There can be no doubt that the stock market was exceedingly vulnerable at that time. Any substantial decline in the market was in danger of becoming a rout. A reaction could be produced whenever any considerable number of large investors or speculators decided that the time had come to sell, even to sell short.

MORTGAGE SITUATION

Somewhat parallel with stock market speculation was the speculation in real estate, both urban and rural, leading to a mortgage situation potentially dangerous. The most serious features of the mortgage situation, both urban and rural, were:

* * * entirely due to reckless borrowing and lending; that is to say, to avoidable deviations from normal business practices. * * * Direct effects upon business and banks were serious enough; but still more serious were the psychological effects upon the community, for nothing is so apt to get on a man's nerves as will a threat to the roof over his head. * * * It was only the mortgage situation that made the plight of the farmers so serious. On the unencumbered farm, people will, of course, live less comfortably when prices break than when prices rise, but they are able to weather any economic storm without permanent injury.[18]

CREDIT EXPANSION

In general, as has already been shown in the discussion of banking policy, the stock market, and the mortgage situation, there was a vast expansion of credit. In addition to these forms of credit expansion, the growth of consumer credit should be noted. To an extent never contemplated before World War I, consumer credit was developed during the 1920's. It enabled people to become titular owners of houses, automobiles, and other durable goods at an earlier date than otherwise, even though consumers do not increase their incomes merely by borrowing. Total consumer credit outstanding rose from an estimated $2,600,000,000 in 1920 to $8,200,000,000 in 1929 and,

[16] Schumpeter, Joseph A., The American Economy in the Interwar Period: The Decade of the Twenties, American Economic Review, May 1946, p. 9.
[17] Slichter, Sumner, The Period 1919–1936 in the United States: Its Significance for Business-Cycle Theory, Review of Economic Statistics, February 1937, p. 13.
[18] Schumpter, Joseph A., The American Economy in the Interwar Period: The Decade of the Twenties, American Economic Review, May 1946, pp. 9–10.

until World War II, never dropped again below $4,800,000,000 (in 1933).[19]

This overexpansion of credit, in all its manifestations, both public and private, created "a highly vulnerable situation, once a business recession, for whatever reason, got underway." [20]

UNDERLYING FACTORS OF STOCK MARKET ACTIVITY

The relationship of speculative activity on the stock exchange and the underlying economic trends during the 1930's has been aptly summarized by R. G. Hawtrey, as follows:

> The real explanation of the great stock market speculation in the United States, which culminated in 1929, was the belated discovery that the prices of stocks and shares had not been adequately adjusted to the enormous change in the value of money. The national income (and therefore general demand) had more than doubled since 1914, and, if the price level had not doubled, that was only because technological progress had steadily reduced real costs; the economic activity which received a national income more than doubled in terms of monetary units produced 40 or 50 percent more goods than in 1914 * * *. It is noteworthy that even now (February 1937) when the recovery from the depression is hardly half accomplished, and the national income is still probably one-fourth less than in 1929, the index (of industrial shares) has risen to 152 (1926=100), and exceeds the average for the first half of 1928, when the speculation was almost at its maddest.
>
> What brought the speculation to an end in October 1929 was not the high rates of interest charged on call money or any other deterrent on speculative borrowing. The speculators were sublimely indifferent to such obstacles. It was the industrial activity which showed signs of slackening in the summer of 1929. That meant that general demand was declining. If bank rate policy has any meaning, the purpose of the measures of credit restriction systematically applied from July 1928, to November 1929, can only have been to cause a decline in general demand. Only after this slackening of activity had been in progress for several months did the stock market speculation collapse.[21]

Already in an earlier volume, Trade Depression and the Way Out, (1933), Hawtrey contended that the primary explanation of the unparalleled severity of the depression could be found in the fact that the credit restriction of 1928–29 was imposed at a time when there was no inflation to be corrected. Prices, as he pointed out, had not been rising, and had indeed fallen since 1925:

> By restricting those lending operations by which incomes are generated, the banks induced a reduction in demand for goods and services of all kinds. The reduction of demand led to a reduction of activity and of incomes and so to a further reduction of demand.[22]

CUT-BACKS BY PRODUCERS

From the foregoing, the conclusion has often been expressed, by Prof. Sumner Slichter and others, that it was the producers who began the downturn early in 1929 by reducing their commitments, in the face of an increasing consumer demand and rising profits. The reasons for these decisions at just that point, are, of course, much harder to get at. The problem is formulated by Professor Slichter as follows:

> Considerable evidence exists that turning points are started, not by decisions of consumers, investors, or governments, but by the decisions of business men to expand or contract their commitments. These decisions may involve, not primar-

[19] Altman, Oscar L, Saving, Investment, and National Income (Temporary National Economic Committee Monograph No. 37), p. 83.
[20] Moulton, Harold J., Controlling Factors in Economic Development (1949), p. 65.
[21] Hawtrey, R. G., Capital and Employment (1937), p. 129.
[22] Hawtrey, R. G., Trade Depression and the Way Out (1933), pp. 25–26.

ily changes in the relationship of business enterprises to the general money market, but rather changes in the size and turnover of working balances. The theory of turning points needs to rest upon an intensive analysis of the determinants of the budget policies of business concerns. In 1929, for example, enterprises apparently began reducing their commitments about March or April. They did it when consumer demand was still increasing and profits were still rising. The profits of industrial and mercantile enterprises reached a peak in the second quarter of the year and the profits of all corporations in the third quarter. What considerations led enterprises to begin cutting commitments in the spring of 1929? An understanding of their budget policies during this period seems essential to an understanding of how and why the downturn started.[23]

During the late 1920's the rate of production of capital goods had become so great that, sooner or later, it became generally apparent to all producers that the immediate demand for these goods would be substantially filled, and capital maintenance rather than capital expansion would be smarter business policy. As Alvin Hansen observes:

The boom is a period in which we exploit to the full all the available new developments which the progress of science and technology, together with the growth of population, have up to that point made economically possible. Once all factories have installed the new machines, once a city has been equipped with the municipal utilities which technology has so far made available, once the construction of houses, apartments, office buildings, hotels, school buildings, and the like has caught up with the growth of the population, there remains little that can profitably be done except to maintain the capital plant already constructed. When this point is reached, the boom dies a natural death.

This is essentially what happened in 1929. Nearly all over the world, England excepted, there had been going on for some years a gigantic construction boom. This was true not only of the United States, but of Germany, France, Canada, Latin America, and even the Orient. The vigor of this boom was due, in part, to the backlog of housing requirements which had accumulated by reason of the cessation of building during the war; in part, it was due to the impetus to the industrialization of backward countries which the war itself had caused; and, in part, it was due to the growth of new industries.

The boom of the twenties was a gigantic spurt in capital formation, in capital outlays * * *. New developments are exploited to the full, and then the boom dies. It peters out because a saturation point has temporarily been reached. The spurt cannot last at the pace set.[24]

Professor Hansen refers in particular to the boom in construction:

It is reasonable to suppose that the most important single explanation for the speed of the recovery from the 1921 depression was the phenomenal upturn in building construction which began in 1921 and which rose to an unprecedented crest in 1925 and remained at an extraordinarily high level until 1928, when a drastic curtailment of constructional activity set in. No explanation of the boom of the twenties or the severity and duration of the depression of the thirties is adequate which leaves out of account the quite extraordinary record in building activity. Probably at no time in our history had we reached as complete a temporary saturation in building construction, including apartment houses, residences, office buildings, and other commercial structures, as was the case in the late twenties. Under these circumstances it was to be expected that it would take a long time to work through this period of oversaturation.[25]

This saturation of the demand for capital goods dovetails neatly with the theory that there were excess funds available for investment, notably developed by Harold Moulton. In fact, Dr. Moulton attributes the financial collapse of 1929 primarily to a superabundance of investment money and concomitantly to an inadequate flow of funds into consumption. In his words:

The rapid growth of savings as compared with consumption in the decade of the twenties resulted in a supply of investment money quite out of proportion to

[23] Slichter, S., The Period 1919–1936 in the United States: Its Significance for Business-Cycle Theory, Review of Economic Statistics, February 1937, vol. 19, p. 5.
[24] Hansen, Alvin, Fiscal Policy and Business Cycles, pp. 344–345.
[25] Hansen, Alvin, Fiscal Policy and Business Cycles, p. 25.

the volume of securities being floated for purposes of expanding plant and equipment, while at the same time the flow of funds through consumptive channels was inadequate to absorb—at the prices at which goods were offered for sale—the potential output of our existing productive capacity. The excess savings which entered the investment market served to inflate the prices of securities and to produce financial instability. A larger relative flow of funds through consumptive channels would have led not only to a larger utilization of existing productive capacity, but also to a more rapid growth of plant and equipment.[26]

This conclusion, which he published in 1935, is reemphasized in his 1949 book, Controlling Factors in Economic Development, in the following words:

While an abundance of funds was available with which to construct new plant and equipment, it was evidently clear to business enterprisers that prospective consumptive demands were not sufficiently large to warrant as much expansion as the available funds made possible. The evidence shows conclusively that the volume of money savings seeking investment was very much greater than could be absorbed by security flotations for purposes of plant construction.[27]

Dr. Moulton then proceeds to relate both the overabundance of investment funds and the inadequate consumers' demand to the fact that an increasing percentage of the national income during the 1920's was going into savings, which was due in turn to an increasing concentration of national wealth. The dollar income of farm population was declining and the income of wage earners failed to keep pace with the increase in national income. The greatest increase occurred in high-income groups, including salaried officials and receivers of profits from business enterprise. Dr. Moulton summarized in 1935, and reiterated in 1949, the results of a detailed investigation on the distribution of wealth, conducted from 1932 to 1935, by the Brookings Institution, as follows:[28]

As to income distribution and its results, we found * * * the proceeds of the Nation's productive efforts going in disproportionate and increasing measure to a small percentage of the population—in 1929 as much as 23 percent of the national income to 1 percent of the people. We found the unsatisfied wants—needs according to any good social standard—of the 92 percent of all families who are now below the level of $5,000 annual income sufficient to absorb the product of all our unused capacity under present conditions of productivity and still demand much more from such unexplored potentialities as might thereafter be opened up. We found the incomes of the rich going in large proportion to savings and these savings strongly augmented by others impounded at the source by corporations through the practice of accumulating corporate surplus. These savings, after providing for such increase of capital goods as could be profitably employed, we found spilling over into less fruitful or positively harmful uses, ranging from foreign loans (bad as well as good) to the artificial bidding up of prices of domestic properties, notably corporate securities.[29]

LACK OF PURCHASING POWER

A somewhat different explanation of the inadequacy of mass buying power is given by Professor (now Senator) Paul Douglas in his Controlling Depressions. He states:

An examination of the actual facts of industry during the period 1922 to 1929 tends to show that it was not excessively high wages but rather rigid prices in the face of falling costs, which were probably the chief initiating causes of the present depression.[30]

[26] Moulton, Harold G., The Formation of Capital (1935), p. 159.
[27] Moulton, Harold G., Controlling Factors in Economic Development, p. 70.
[28] Results of the study, The Distribution of Wealth and Income in Relation to Economic Progress, were published in four volumes, America's Capacity to Produce, America's Capacity to Consume, The Formation of Capital, and Income and Economic Progress.
[29] Moulton, Harold G., Income and Economic Progress (1935), pp. 156-157.
[30] Douglas, Paul, Controlling Depressions (1935), p. 55.

Hourly earnings did not keep pace with output per man hour. Thus labor costs per unit were appreciably reduced. But there was no corresponding fall in prices. Price rigidity was helped by widespread development of trade-marked and branded goods. A relatively rigid price level accompanied by lower labor costs per unit logically brought about a sizable increase in profits. According to Frederick Mills, profits increased by 84 percent from 1922 to 1929, although production was only increased by 37 percent.[31]

Taking all these factors into account, Professor Douglas concludes:

> The cause for these price rigidities and the consequent inflation of profits was not merely the "frictions" of the competitive market which impede automatic adjustments. It was to a much greater degree due to the growing power of monopolies, industrial combinations, and trade associations, which through various devices such as outright price-fixing and open price agreements were able to peg prices at a much higher level than that to which they would otherwise have sunk.
>
> Three very serious consequences of this policy should be noted: (1) The profit inflation which it created led to the reinvestment of most of these profits, and hence to the piling up of a large capital plant. At the same time, the large profits caused the banks to create credit for investment purposes. Both of these forces enormously stimulated the great stock-market boom of 1925–29. (2) These high profits not only stimulated investment based upon rational considerations but also a speculative pouring in of capital into producers' goods so that a top-heavy development was built up in these lines. (3) In order to peg prices, it was necessary to exercise some control over production and to restrict it somewhat. For, if this had not been done, the greater quantities would have compelled a reduction in prices. But this restriction of production was at the same time a restriction of employment. With output per worker rising more rapidly than total production expanded, the inevitable result was a slight diminution in the total numbers employed in manufacturing, mining, and transportation. And, what was even more important, there was a failure on the part of the basic industries to absorb the increased numbers of those who entered the labor market during the decade. These workers had to spill over into other occupations, and it is probable that observers were right who, prior to 1929, noted some increase in the numbers of the unemployed * * * (If such was the case) then by far the major responsibility for it must be laid at the doors of those American industrial combinations which by keeping prices up and dampening down production created an inflation of profits which both helped on wild speculation and threw considerable numbers out of work. High wages to labor certainly cannot be blamed for throwing men out of work during this period, since the plain facts are that the increase in wages lagged very far behind the increase in per capita output * * *.[32]

CONCLUSION

The boom of the twenties which culminated in 1929 and the subsequent depression of the thirties, when considered together, cannot be explained by any single factor. In the foregoing, there has been brought together what leading economists have considered to be major explanations, but the very lack of agreement makes objective evaluation virtually impossible.

Among the ultimate forces emphasized, two stand out: the changing, and perhaps cyclical, rate of technological progress and the profound effects of World War I, not only on this country but on the entire globe.

Most immediate and most easily discernible were, no doubt, the spectacular booms in the stock market, in real estate, and in construction. These called forth and were backed by an overextension of credit on both public and private levels. Under such circumstances,

[31] Mills, Frederick, Economic Tendencies in the United States, p. 290.
[32] Douglas, Paul, Controlling Depressions, pp. 58–59.

when recession began, whatever the reason, serious collapse was virtually inevitable.

The downturn in 1929 may have originated with the decision of various producers to curtail their commitments. This occurred while profits and consumer demand were still on the upswing. The reasons for these business decisions cannot be identified with certainty, but probably the feeling of an adequate supply of capital goods and a belief that further expansion was no longer necessary to meet current demand were important motivating factors. At the same time, the supply of funds available for investment was increasing, funds for which there were then no outlet. The increase in availability of investment money was due in part to the increasing concentration of national wealth. Farm income was declining, and labor wages were not keeping pace with increases in productivity. Prices tended to be more rigid, and profits increased substantially. As a result, there was inadequate purchasing power for the Nation's product. A major factor in the increasing rigidity of prices was the growing power of monopolistic industrial combinations.

The fact that observers have looked at the 1929 business reversal in so many different ways and have offered such diverse diagnoses and prescriptions is no doubt to be accounted for by the many different aspects of the particular business cycle which reached its peak in 1929. Differences may be due in part to the particular field of specialization or interest of the observer, to the data available to him, and to the significance he attaches to such data. The different methodologies used—business judgment, empirical, mathematical, historical, psychological, for example—will also make for substantially different analyses.

No two business cycles are identical. There are always different factors and combinations of factors that contribute to the length and severity of a particular business downturn. The search for such causes must be carried on from many different points of view if results are to be obtained that are dependable and that can be used as a basis for remedial action within the framework of that system of values which we wish to preserve.

CHAPTER II

BUSINESS INVESTMENT AND HIGH-LEVEL EMPLOYMENT

Any survey of the more important schools of thought on the relation of business investment to high-level employment must from the very abundance and diversity of literature on the subject necessarily and somewhat arbitrarily select only those that seem outstanding. In trying to present highly complicated analyses in brief compass, one inevitably oversimplifies, omits vital portions from, and does injustice to the viewpoints mentioned.

Attention was called in the previous chapter to the large number of interacting and divergent forces that play a role in the ups and downs of business. Most of these elements are mutually interdependent. Time, area, intra- and inter-industry status, and phase of the cycle are both cause and effect intermittently and simultaneously. The problem of unraveling so tangled a skein of interrelationships is consequently beset with difficulties.

To assert that the investment decisions of business play a more initiatory and independent role than other major classes of business decisions, and to maintain that investment constitutes a particularly strategic part of the economic process of maintaining stability, is not to minimize the importance of all the other variables. Nor does the assignment of first priority to investment spending imply any peculiarly powerful leverage on other spending via the "investment multiplier." There is little reason to believe that the total effect of an additional dollar of investment spending is any greater than the total effect of an additional dollar of consumer expenditure.

Selection of investment as a "strategic factor" is based on the well-documented empirical principle that the disposition to invest varies somewhat independently of the current level of spending or income. The reasons in brief are (1) private investment decisions rest upon long-range forecasts of expenditures, prices, and costs, and are, therefore, only loosely related to the current behavior of such other economic variables; (2) public investment decisions are even more loosely related to current expenditures, prices and costs; (3) net investment is quantitatively geared to increases in over-all activity rather than to the level of such activity (the acceleration principle), so that the inducement to invest often varies abruptly; and (4) as a result of the characteristics already mentioned, and the elastic life of capital goods, investment expenditure for replacement is highly deferrable in slack times.

Thus, investment fluctuates much more widely, percentagewise, than consumption expenditure and in any short-run view usually is antecedent rather than subsequent to the levels of consumption and realized saving. In general, there are three important schools of thought on the relationships between consumption and investment. Consequently, there will be briefly presented in this chapter the views

of those that give priority (1) to variations in consumer buying power; (2) to variations in business investment, and (3) to lack of balance in price-wage-profits relationships.

WHAT IS THE ROLE OF CONSUMPTION?

The demand for capital goods is a derived demand—derived, that is, from the demand for consumption goods. While the expansion of capital goods may, here and there, run ahead of current demand for the products which the new capital could turn out, aggregate capital formation is on the whole closely adjusted to the demand for consumption goods. In fact, the construction of machinery and equipment is, under modern conditions, usually undertaken largely on the basis of orders from the consumer goods' industries. The base of the economic pyramid is consumption.[1]

In these words Dr. Harold G. Moulton epitomizes in his most recent book three decades of careful study of the relation of investment to consumption in four propositions or theses:

1. "Money savings, market investment, and actual capital formation are independent variables."[2]

He thus rejects the concept that capital formation and money savings are identical. A mere increase in the amount of funds may or may not result in increased capital formation. There is no necessary relationship. The process of creating new capital involves at least three types of decisions, usually made by different persons. Money savings are made by income recipients and result from decisions to protect loved ones, or accumulate from sheer surplus over needs in the upper-income brackets, or are put by for a rainy day by management in those years when the fortunes of war or of cyclical fluctuations bring in their harvest of profits. Market investment is the purchase of securities with the money saved which represents ownership transfer of capital goods already in existence. Such ownership transfer takes place continuously according to the mercurial hopes and fears of those who own or deal in securities. Capital formation means building new plant and equipment. Dr. Moulton contends that the motivating factors in these three states are largely independent: there is no reason for assuming that the volume of money savings, or of stock-market activity, or of capital formation bear any functional relationship to each other.

2. "Capital formation expands rapidly when consumption is also expanding, not when it is contracting."

In earlier historical studies he states, "It was shown that the only periods of rapid capital expansion in our history had been periods of so-called extravagant consumption."[3]

3. "The growth of productive capital is adjusted not to the volume of money savings available for investment but to the growth of consumption demand."

By careful statistical analysis he shows that even in the twenties not more than a third of money savings went into new capital construction financed through corporate issues and mortgages. Very large amounts were used in new issues which were used to buy control of existing enterprises.

4. "The rapid growth of money savings as compared with consumer expenditures in the twenties retarded rather than accelerated the growth of productive

[1] Moulton, Harold G., Controlling Factors in Economic Development, the Brookings Institution, Washington, D. C., 1949, p. 115.
[2] Ibid., p. 117.
[3] Ibid., p. 114.

capital. The 'excess' savings which entered the investment market served to inflate prices of existing capital goods and to produce financial instability. A larger relative flow of funds through consumptive channels would have led to a larger utilization of existing productive capacity and also to a more rapid growth of plant and equipment."

The stress on increasing consumption at a time when there appears to be a lack of investment outlets for savings has the double merit of increasing the demand for capital goods in order to produce the added units for consumption and also, as an immediate even if not long-run effect, to curb the volume of savings.

The growing disparity between consumption and saving, he emphasized, cannot be corrected by a Government spending program.

> An expansion of income resulting from Government activity would have precisely the same effect as an increase of income flowing from private activity * * *. Moreover, there is no reason to assume that a substitution of Government-capital expansion for private-capital expansion would overcome the inevitable tendency toward declining productivity. The additional units of public capital might well be even less productive than new units of private capital.[4]

Finally, Dr. Moulton emphasizes that the cutting edge of economic progress has been improvements in the quality of capital instruments. This constitutes, he states, the essence of technological progress. The new machine is not only more efficient but costs less than the one it replaces. Mass-production methods, better technical lay-out, scientific management, improved industrial relations—all contribute to the final goal of greater output per unit of physical capital employed.

One of the most striking statements emphasizing the role of consumption was that made by the editors of Fortune in April 1940.

> The tools and extension of industrialization do not exist for their own sake. They exist for * * * the consumer. The central economic problem is not * * * a revival in "investment" in the old sense of the word. The central economic problem is simply the conversion of a high potential power to consume into an actual power to consume: a wider distribution of progress.
>
> Emphasis has been put on the need for confidence in making new investment * * * but this emphasis is both unrealistic and academic. The realistic requirement is, rather, that the businessman should have confidence in the consumer; he must have confidence that if he decreases his prices and his profit margins he will get a corresponding rise in volume.
>
> In the consumer lies the frontier. By industrialization we built a new civilization. And during the last 15 or 20 years, by further industrialization, we have created the possibility of a new era for mankind. It is now time to get to work and make that era a reality.

IS INVESTMENT THE STRATEGIC VARIABLE?

"No high level of employment and income has ever, in a noninterventionist society, been achieved without a large outlay on inventories, equipment, plant, and new residential and commercial construction."[5] This statement, regarded as applicable to a society adjusted to a high level of capital expenditures, is typical of the views of those commonly known as Keynesians, who give business decisions concerning investment top responsibility for the level and stability of national income and employment. By investment, they usually mean capital expenditures—namely, expenditures on plant and equipment, residential and commercial construction, and inventories.[6]

[4] Ibid., pp. 135–136.

[5] Hansen, Alvin H., Fiscal Policy and Business Cycles (1941), p. 343.

[6] Consumers' durable goods, such as automobiles, refrigerators, stoves, and electrical appliances, occupy a middle ground between capital goods used for production and the semidurable goods (such as clothing) and other consumer goods. They are not considered capital goods for purposes of this report, primarily because, in general, investment funds are not required for their purchase. The increased per capita consumption of such goods, however, has an important bearing on the savings habits of the Nation and thus on the extent of funds available for investment.

It is a truism, as Adam Smith pointed out more than a century ago, that the ultimate purpose of all production is consumption.[7] To use his phraseology: Consumption is the sole end of production, and the interest of the producer ought to be attended to only insofar as it may be necessary for advancing the interest of the consumer.

To be sure, the demand for capital goods is derived from the level of consumer demand for the things those capital goods can produce. Thus capital-goods expenditures are subject to much wider fluctuations than are consumption expenditures, at least in modern industrial societies which have been free from substantial government intervention. The reason is simple. Capital goods are manufactured both for replacement and for expansion.

In the movement of business cycles, investment and consumption generally fluctuate together. When industry is operating at capacity, you must have the machines before you can have the goods which machines make. This is seen most clearly, statistically, in Simon Kuznets' study, National Income and Capital Formation, 1919–35. It is illustrated in table I:

TABLE I.—*Gross national product, capital formation, and consumers outlay, 1919–35*

[In billions of dollars]

Year	Gross national product	Gross capital formation	Consumers' outlay	Year	Gross national product	Gross capital formation	Consumers' outlay
1919	68.8	19.3	49.5	1928	90.1	17.8	72.3
1920	82.8	22.1	60.7	1929	93.6	20.3	73.3
1921	66.1	11.5	54.6	1930	82.7	13.7	69.0
1922	67.2	13.3	53.9	1931	64.8	8.5	56.3
1923	78.2	18.2	60.0	1932	47.1	3.1	44.0
1924	79.8	15.2	63.6	1933	46.0	3.7	42.3
1925	83.4	19.2	64.2	1934	55.2	5.5	49.7
1926	88.8	19.0	69.8	1935	61.6	9.4	52.2
1927	86.8	18.2	68.6				

Source: Kuznets, Simon, National Income and Capital Formation, 1919-35.

In the table note that the recovery of 1921 began with an increase in investment expenditures. Gross investment rose by 1.8 billion dollars from 1921 to 1922 while consumption continued to fall (though at a diminished rate) by 0.7 billion dollars. In the following year both moved strongly upward together. Again, in the recovery of the 1930's, investment started up first, rising by 0.7 billion dollars from 1932 to 1933, while consumption was still falling by 1.8 billion dollars. In the downturn of 1929 both investment and consumption declined simultaneously. It should be noted, however, that investment fell sharply from 1929 to 1930, while consumption receded by a relatively small amount.

[7] To a certain extent, it may be true that in a modern industrial nation considerable production takes place not to meet consumer demand but simply to increase production and wealth. In the opinion of Frank H. Knight: "The increase in wealth is to a large extent an end in itself as well as a means to the increase of income, and this is also again to a rapidly increasing degree as the standards of life are advanced. Men work 'to get rich' in a large proportion of cases, not merely in addition to, but in place of, consuming larger amounts of goods. It is a grave error to assume that in a modern industrial nation production takes place only in order to further consumption. It is true to a great and ever-increasing degree that consumption is sacrificed to increase production. Whatever our philosophy of human motives, we must face the fact that men do 'raise more corn to feed more hogs to buy more land to raise more corn to feed more hogs to buy more land,' and, in business generally, produce wealth to be used in producing more wealth with no view to any use beyond the increase of wealth itself." (Knight, Frank H., Risk, Uncertainty, and Profit (1935). p. 319.)

The volatile character of investment expenditures and the fact that changes in expenditures by smart businessmen generally precede expenditures by consumers has led many economists to the conclusion that investment, while dependent on consumption, is not an invariable function thereof but is tied to it with a long tether.

To gain insight, however, into the dynamics of investment requires brief examination of the relationship between income, consumption expenditures, savings, and investment expenditures. In simplest terms, total income in society, is either spent for consumption goods or is saved and spent for investment goods. Under a flexible price and banking system savings equal investment. Two important contingencies should, however, be remembered: (1) That money can be hoarded and dishoarded, and (2) that money savings can be absorbed or augmented by decreases and increases in the money supply. This is in line with Dr. Moulton's analysis that money savings, market investment, and actual capital formation are independent variables.[8]

In a static economy, one in which there is no growth of population nor improvement in the average level of living (this was generally assumed in classical economic analysis), the production and consumption process may be described as one of "circular flow." In a "circular flow" economy costs incurred in producing total output, that is, the outlays for wages, interest, rent, and so on, including profits, are equal to the total sales proceeds and provide the buying power sufficient to take total output off the market. Thus the economy can continue to operate at full employment. The pricing process ensures the reproduction of both the capital and the labor supply required for production without either growth or contraction. In such an economy consumption equals net output, or total demand equals total supply. Savings take the form of a share of the gross product needed for capital replacement. In such a society the whole of the net real income is consumed and aggregate saving is directed exclusively to capital replacement. The level of consumers' demand determines the volume of investment.[9]

As Alvin Hansen pointed out, this classical theory recognized that the price system per se could not generate economic progress, since no matter how flexible or how perfectly competitive, it could not of itself provide any net investment outlet. Thus "already in early classical doctrine net investment and net savings were regarded as a function not of the operation of the price system, but rather as a function of progress in the arts.[10] Through the development of technology, the exploitation of new resources, and territorial and population growth, the price system moves away from this "circular flow" economy in which consumption equals production to one of increasing capital. As viewed by the Keynesian economists, in a dynamic economy investment becomes the determining element of economic activity, with consumption, in large measure, rising and falling with the fluctuations in the rate of investment. It is the dy-

[8] Keynesian analysis reverts to the classical definition of savings being equal to investment by a rigorous income and expenditure approach. The hoarding (or dishoarding) of savings and the decrease (or increase) in the money supply will immediately affect the total community income to the extent of the hoarding (or dishoarding) and the decrease (or increase) in the money supply. We find thus that gross national income at any time is at the level that equalizes savings and investment. Any attempt by the Nation to save more out of a given level of income than is being spent as investment must lower the gross national income to the point at which the Nation's savings will not be in excess of current investment. (See Chandler, Lester V. The Economics of Money and Banking (1948), p. 642.)

[9] See Hansen, Alvin H., Fiscal Policy and Business Cycles, p. 301.

[10] Ibid., p. 302.

namic factors of economic progress and growth—inventions, technological developments, population growth, territorial expansion—which bring forth net investment and net saving.

In brief, "in the 'circular flow' economy the level of consumption determines the level of replacement investment. But in the dynamic economy it is net investment, generated by innovational developments, that raises and determines the new level of consumption." [11]

A similar difference between the classical monetary theorists and the newer doctrines adopted by Keynes and some of his followers, including Hansen, is found in the relationship between interest, savings, and investment.

According to the former, the interest rate plays an important part in bringing about adjustments between savings and investment. If there is an inadequate supply of savings for investment purposes, according to this theory an increase in the interest rate will cause more people to save their money instead of spending it on consumer goods; whereas if there is an overabundance of savings, a decrease in the interest rate will discourage savings and encourage consumer spending.

This theory has been subject to increasing criticism for nearly half a century. Oscar Altman summarizes this criticism as follows:

> The prospective rate of return on savings * * * probably has only a very slight effect upon the volume of savings * * *. The volume of savings is affected much more by a change in the national income than by a change in interest rates. There is always more saving with a high level of national income and low interest rates than with a low national income and high interest rates. The last few years (before 1941) have indicated that even substantial declines in interest rates at levels of national income characterized by considerable amounts of unemployment have been unable to effect any decline in the rate of saving.
>
> Even with any given national income, concentration of income, and tax structure, it must not be assumed that savings increase as rates of interest increase. It may be true that some individuals will save more at a given level of income when interest rates rise, but others who have agreed to save through life insurance and other contractual plans may unnoticeably be finding themselves saving less. On the other hand, as interest rates fall, dividends on life insurance contracts decrease, and policyholders are expected to increase their premium payments.[12]

Dr. Hansen, therefore, comes to the conclusion opposite to that of Dr. Moulton, that since, by and large, consumption rises and falls as income rises and falls, it is necessary to rely on private investment as the means to secure full employment if intervention by the Government is to be avoided. In order for consumption to play a more active role to supplement the role of private investment, it appears necessary to invoke the aid of government. "Community consumption expenditures, or publicly financed private consumption expenditures (such as relief for the unemployed), need not be conditioned by the level of currently received private income. Thus, through government action, consumption can be made to play an active, dynamic role in income creation." [13]

With or without the intervention of government, private investment has thus far been the prime factor determining movements of the business cycle. Until the New Deal it was customary for public expenditures, whether for public investment or for consumption, to follow the lead of private investment. Public projects were embarked upon when private investment was on the upswing, and curtailed when the

[11] Hansen, Alvin H., Fiscal Policy and Business Cycles, p. 305.
[12] Altman, Oscar, Saving, Investment, and National Income (Temporary National Economic Committee Monograph No. 37), p. 26.
[13] See Hansen, Alvin H., Fiscal Policy and Business Cycles, p. 341.

economy was depressed. It was widely believed that public works could only be afforded when prosperity prevailed, and that they would necessarily have to be curtailed in a depression. Even though this philosophy has been largely abandoned in favor of compensatory spending by the Government in case of a depression, private investment still determines, more than any other single force, the level at which the economy is to operate.

As already pointed out, a society which requires extensive capital plant and capital equipment to satisfy its wants, will, on the basis of past developments, experience severe fluctuations in the level of its economic activity. What has always tended to happen is that the production of capital goods has proceeded at such a pace during the upswing of the business cycle that the immediate need for capital goods becomes filled and a sharp drop in highly profitable investment opportunities ensues. This will be more readily understood when the course of a typical business cycle is followed.

In every boom period the flow of savings is expended on capital outlays for new plant, equipment or inventory goods of some kind. The optimism prevalent in such a period (due in large measure, of course, to the favorable profit outlook) makes the demand for these capital goods especially large. To the regular flow of savings is frequently added further funds created by an expansion of bank credit. At some point, the capital plant, equipment, and inventories required to meet consumer demand reach a level where business anticipates that further increases may become less profitable. Then capital expenditures are reduced and the downturn begins, sometimes quite abruptly. Keynes considers this the point where there is "a sudden collapse in the marginal efficiency of capital." [14]

Moreover, Keynes continues:

> The dismay and uncertainty as to the future which accompanies a collapse in the marginal efficiency of capital naturally precipitates a sharp increase in liquidity preference—and hence a rise in the rate of interest. Thus the fact that a collapse in the marginal efficiency of capital tends to be associated with a rise in the rate of interest may seriously aggravate the decline in investment. But the essence of the situation is to be found, nevertheless, in the collapse in the marginal efficiency of capital, particularly in the case of those types of capital which have been contributing most to the previous phase of heavy new investment. Liquidity preference, except those manifestations of it which are associated with increasing trade and speculation, does not increase until after the collapse in the marginal efficiency of capital.[15]

During the downturn, savings fail to find profitable investment outlets; there are too few borrowers who will use such savings to purchase plant, equipment, and other capital goods. The income stream dwindles and unemployment increases in the capital-goods industries. This fall in employment tends to lower the stream of consumption expenditures still further. In the ensuing depression, even if it is severe, total capital outlays, including plant replacement and renewal of equipment, will not sink to zero, but it is possible that total capital expenditures may amount to less than depreciation allowances, which would mean that in such a period plant expansion would not require new savings.

The unemployment caused by a reduction in capital expenditures contributes to the drop in consumption expenditures and thus lowers

[14] Keynes, J. M., General Theory of Employment, Interest, and Money, p. 315.
[15] Ibid, p. 316.

the income stream further. In other words, the income stream is reduced not only by an amount equal to the decline in investment, but also by the induced decline in consumption. Every dollar of capital expenditures has a multiplier or leverage effect on income; thus every dollar of savings or depreciation allowance which is not spent on capital outlays drives down income with amplified effect.

The upturn will occur when businessmen again anticipate that new capital outlays will be profitable; that such outlays will be needed to make the goods necessary to meet consumer demand in the near future.

Thus we come to the following conclusion, as stated by Alvin Hansen:

* * * a society geared to a high peak load of capital-goods production is likely to experience violent fluctuations in income and employment. A high savings economy will remain a highly dynamic economy as long as it is able to experience periodically great bursts of capital outlays on plant and equipment. It is then a dynamic, rapidly expanding, and progressive economy, despite its instability. But if such an economy fails to find adequate investment outlets for its new savings and for its depreciation allowances, it will lose its dynamic quality and become a depressed economy, with a large volume of chronic unemployment, unless, indeed, the Government assumes a more positive role. The high savings economy, barring Government intervention, can escape a fall in income and employment only through the continuous development of new outlets for capital expenditures. As far as private-investment outlets are concerned, this requires continuous technological progress, the rise of new industries, the discovery of new resources, the growth of population, or a combination of several or all of these developments.[16]

The conclusion reached by Hansen, in the last sentence quoted, has been severely criticized, among others, by Howard Ellis. He has maintained that it is unrealistic to believe that technological progress, new industries, new resources, expansion into new territory or population growth are the places to look for new investment outlets. Technological progress has been phenomenal but has been frequently accompanied by technological unemployment. The variety and quality of goods produced now is almost beyond comprehension. He sees the solution primarily in successfully coping with institutional obstacles.[17]

R. H. Hawtrey's explanation of the greater volatility of capital expenditures over consumption expenditures is based on a somewhat different argument. He accounts for the fact that capital goods industries experience greater cyclical fluctuations than consumer industries by stating—

* * * that activity brings a more than proportional increase in profits; and as profits (whether reinvested by corporations or distributed to shareholders) are the principal source of savings, the funds available from savings for capital outlay are similarly increased. The disproportionate fluctuations in the instrumental industries are therefore a consequence of changes in consumers' income and outlay, and are not due (as many writers believe) to any repercussions which credit expansion may have—directly or indirectly through changes in long-term-interest rates—on investment in fixed capital. That credit expansion has a certain effect on investment in fixed capital is not altogether denied by Mr. Hawtrey; but he holds it to be unimportant as compared with the direct influence on the merchant and on working capital.[18]

A few aspects of J. M. Keynes' influential work, the General Theory of Employment, Interest, and Money, not referred to above in the

[16] Hansen, Alvin H., Fiscal Policy and Business Cycles, pp. 346–347.
[17] Ellis, Howard, Monetary Policy and Investment, American Economic Review, March 1940, vol. 30, p. 37; reprinted in Readings in Business Cycle Theory (1940), pp. 418–419.
[18] Cited by Haberler, Gottfied von, Prosperity and Depression (1939), p. 26.

discussion of Hansen and other "Keynesians" should be briefly mentioned.

Keynes contended that the rate of new investment is determined by the following three factors in conjunction: (1) the physical conditions of supply in the capital-goods industries; (2) the state of confidence concerning the prospective yield; and (3) the psychological attitude to liquidity and the quantity of money (preferably calculated in terms of wage units).[19] This follows closely along the lines already discussed. If the supply of capital goods—plant, equipment, and inventories—is adequate to meet prospective demands, in the judgment of producers, and where additional expansion would not be expected to yield an adequate return, expansion would be curtailed. The judgment of producers would, of course, be determined in large measure by how confident they were of future sales in relation to future costs. From the lenders' point of view, the degree of confidence they possessed in the profitability of future business operations plus the extent of their real income would determine the extent of their willingness to make investment.

Keynes argued, contrary to classical economics, that a high propensity to consume does not deter increases in capital formation, but actually encourages such increases, unless a situation of full employment obtains. In his words:

> Up to the point where full employment prevails, the growth of capital depends not at all on a low propensity to consume but is, on the contrary, held back by it; and only in conditions of full employment is a low propensity to consume conducive to the growth of capital. Moreover, experience suggests that in existing conditions savings by institutions and through sinking funds is more than adequate, and that measures for the redistribution of incomes in a way likely to raise the propensity to consume may prove positively favorable to the growth of capital.[20]

The reasoning that Keynes used in support of this proposition that a high rate of consumption will encourage capital formation, up to the point that full employment is reached, is the following:

> * * * an increase (or decrease) in the rate of investment will have to carry with it an increase (or decrease) in the rate of consumption; because the behavior of the public is, in general, of such a character that they are only willing to widen (or narrow) the gap between their income and their consumption if their income is being increased (or diminished). That is to say, changes in the rate of consumption are, in general, in the same direction (though smaller in amount) as changes in the rate of income. The relation between the increment of consumption which has to accompany a given increment of saving is given by the marginal propensity to consume.[21]

Keynes was inclined to doubt that fluctuations in interest rates would be sufficient, with markets organized and influenced as they are now, to offset the wide fluctuations in the market estimation of the marginal efficiency of capital. He concludes therefore that:

> In conditions of laissez-faire the avoidance of wide fluctuations in employment may, therefore, prove impossible without a far-reaching change in the psychology of investment markets such as there is no reason to expect. I conclude that the duty of ordering the current volume of investment cannot safely be left in private hands.[22]

[19] Keynes, J. M., General Theory, p. 248.
[20] Keynes, J. M., General Theory of Employment, Interest, and Money, pp. 372-373.
[21] Ibid, p. 248.
[22] Ibid., p. 320.

More specifically along this line, Keynes made the following recommendations:

> Whilst aiming at a socially controlled rate of investment with a view to a progressive decline in the marginal efficiency of capital, I should support at the same time all sorts of policies for increasing the propensity to consume. For it is unlikely that full employment can be maintained, whatever we may do about investment, with the existing propensity to consume. There is room, therefore, for both policies to operate together—to promote investment and, at the same time, to promote consumption, not merely to the level which with the existing propensity to consume would correspond to the increased investment, but to a higher level still.[23]

Keynes' theories, as expressed in his General Theory of Employment, Interest and Money, have been the subject of extensive comment, amendment, and analysis, critical and uncritical, in the 13 years since they first were published. His justification for positive governmental action to regulate and when desirable, to stimulate, private investment has been the point around whch most of the critical interest has centered As Prof. Arthur F. Burns puts it:

> The "Keynesians" believe that investment is the key dynamic variable, and they draw a gloomy picture of the course of events if that timid variable is not fortified by governmental loan expenditure.[24]

UNBALANCED PRICE-WAGE-PROFIT RELATIONSHIPS

> We have thus traced the fundamental generating causes of the present depression to two sources; namely, (1) the failure of industry, because of "friction" monopoly and quasimonopoly, to reduce prices commensurately with the reduction in costs so that undue profits are piled up and undue investments made; (2) the failure of industry and society to increase wages, salaries, and farm incomes commensurately with the increase in output in the mass-production industries. This gave rise to large profits and to the investment of large amounts of capital which in turn increased actual and potential production. The purchasing power in the pockets of the buyers of mass-production goods and services was insufficient to purchase these goods at the existing price level.[25]

In these words, Senator Paul Douglas, after examining masses of evidence, neatly summarized the price-wage dilemma. It goes without saying that by far the most important, if not the sole, guide to investment decisions that the business community can safely follow is the price and profits mechanism. For it is a truism that the system of free private competitive enterprise cannot function unless prices cover costs plus a margin of profit sufficient for survival, security, and growth. On the other hand, it likewise requires a vigorous, sustained total demand sufficient to take total output off the market at prices covering such costs and profits. Such a vigorous demand must come primarily from mass consumption. Since normally two-thirds or more of mass income consists of wages and salaries, mass buying power is provided for the most part by business pay rolls.

In an economy of booms and busts, as Wesley Mitchell so often demonstrated in his famous studies, prices rise first and foremost, interest and wage cost lag behind, and there is an increasing differential of profits. In recession the reverse takes place. Thus prosperity profits are needed to weather depression losses. Yet they undermine the very type of high-volume, high-wage, low-profit-margin economy needed to sustain high level employment. For in a high-

[23] Keynes J. M., General Theory of Employment, Interest, and Money, p. 325.
[24] Burns, Arthur F. Economic Research and the Keynesian Thinking of our Times, pp. 16-17.
[25] Douglas, Paul, Controlling Depressions, W. W. Norton & Co., New York, 1935, p. 77.

level or full-employment economy the ratio of consumption to national income is higher than it is at the peak of prosperity in a boom-and-bust economy. Competition in a sustained full-employment economy is bound to reduce prices and raise factor costs so that boom levels of profits are lowered.

The proposition is sometimes defended that all that is needed to guarantee high-level production is profits and that depressions are due to lack of profits. Yet depressions always start in years of highest profits. In fact, if large profits were the sole prerequisite and efficient guaranty of the continuance of prosperity, no boom in the past would ever have ended.

Thus business always feels that years of high profits are too good to last. Hence the emphasis on "not rocking the boat." Most businessmen are acutely aware of the fact that mass buying power is not keeping step with current output at current prices. Possibly, if each could feel perfectly sure that business activity would be maintained at a high level, he might dare to risk lowering his profit margin, dare raising his break-even point to a higher percentage of capacity, and venture lowering prices to consumers. But he hestitates to incur the odium of being called a chisler in initiating such a price cut lest the lower price he quotes do nothing else than cause consumers to wait for the bottom. The market will have been upset with advantage to no one.

The prudent course in years of boom is, therefore, to pursue those policies which enable enterprise best to weather a depression—that is, to "make hay while the sun shines," to charge as prices "what the traffic will bear," to resist wage increases except where pressured through by militant unionism, to lobby for tax reduction even if it means a deficit in government finance, and to amass reserves—all of which means constricting the mass market, the failure of which, both historically and conceptually, inevitably has brought on the catastrophe feared. Such is the dilemma of the price-wage relationship in the modern economy.

This is the dilemma that the Council of Economic Advisers had in mind when (after noting that the lack of balance in 1948–49 has not yet resulted in mass unemployment precisely because of war backlogs, etc.) it warns:

> * * * the proportion of resources currently being devoted to productive facilities as a whole is somewhat higher than the level that will be required on a sustained basis over the next few years to meet maximum production objectives in a self-sustaining and steadily growing economy. Additions to capital equipment in the past were accomplished in spurts, and periods in which they exceeded long-run requirements were followed by periods in which they fell far short. These violent fluctuations in private capital outlays have been a major factor in generating booms and depressions.
>
> In an economy of steady growth moving from postwar to peacetime conditions, the output of consumer goods and services should increase not only in absolute amounts but also in ratio to total production. In 1948, consumers were receiving about 70 percent of gross output, compared with 76 percent in 1929 and 75 percent in 1939. Even allowing for the contingency that Government expenditures and net exports may hereafter account for a larger portion of the Nation's economic budget than in previous periods of high employment, it is felt that final consumers should absorb at least 75 percent of all goods and services within a few years. Coupling this with the growth of the economy as a whole, the result would increase total consumption per year by about 4 percent and per capita consumption by about 3 percent above present levels.

This higher consumption pattern must be brought about by a substantially equivalent increase in total consumer income. It will require improvements in the distribution of that income not only to avoid areas of want in a land of plenty, but also to avoid higher saving than is necessary to permit the expansion of investment needed for stable growth.[26]

The problem as envisaged by the Council of Economic Advisers in the quotation just cited is somewhat broader than that of securing an adequate proportion of consumption. It is rather that of securing a flow of total effective demand sufficient for the maintenance of adequate opportunities for high-level employment in a private-enterprise economy.

Now total demand represents not only the sum of all purchases for personal consumption but also new business investment in plant, equipment, construction, and inventory together with net foreign investment and governmental purchases of goods and services. Total demand not only determines but depends on the total volume of employment.

Demand can thus be generated in many ways, not only by spending that which is not saved of consumer incomes, but by installment purchases, by loan-financed government expenditure, and by private capital investment. There have even been those who have sought to underwrite prosperity almost entirely by pushing exports and foreign loans.

OBTAINING THE "RIGHT" AMOUNT OF INVESTMENT

The maintenance of high-level employment requires, however, not only an adequate effective total demand but the maintenance of physical productive capacity sufficient to employ available manpower. It is this second requirement that determines the appropriate level of private investment. The role of investment is not primarily to generate sufficient effective demand for high-level employment today—i. e., in the period during which investment takes place—but to provide sufficient plant and facilities to utilize the maximum feasible portion of the labor force tomorrow, i. e., in the next period.

The amount of such required capital equipment depends not only on consumption but on other factors. First of all, the increase in the number of the working population, whether due to natural growth, social forces, or economic conditions. Second, it depends on the increase in the productivity of existing establishments, especially that due to capital-saving innovations. This determines the amount of released labor power per annum together with the amount of capital used per employee in new plant and equipment.

If private investment fails to provide adequate plant, while consumer buying power remains vigorous, the first effect is a more and more intensive use of existing facilities. But high-level employment soon becomes impossible even though total effective demand is inadequate. There being insufficient capacity and tools, shortages relative to demand appear, wholesale prices and then wages will rise, cumulatively increasing the danger of acute inflation. What the appropriate fiscal, monetary, and if need be price, wage, and rationing policies may then be is a topic too broad to be taken up here. Suffice it to point out that historically the fact that private investment, despite every inducement of favorable credit policy, continues to fail to meet

[26] The Economic Report of the President, January 1949, p. 61.

the target for a considerable period compels governments, notably in underdeveloped countries (and even in developed countries at times of critical shortages—war and serious inflation) to take measures directly and indirectly expanding plant and equipment investment in critical areas in order to alleviate shortages of capacity.

On the other hand, when, as sometimes happens in developed countries, the rate of private investment runs in excess of the level necessary to provide the physical facilities required for high-level employment, then, even if total effective demand is adequate, rates of plant capacity utilization go down, excess capacity appears, private investment is discouraged, idle funds accumulate, surpluses pile up, unemployment mounts. At such times frequently considerable pressure is brought to bear on governments to create adequate "offsets to savings." The range of policies—fiscal, monetary, and other—then urged is likewise divergent and controversial.

What clearly emerges is the need for balance. The target for private capital investment, being determined by the need for providing a balanced increase in productive capacity, should be neither too high nor too low. The amount of investment required may or may not be equal to the level of saving at high-level employment.

The pattern of booms and busts which has dominated the last century of economic history demonstrates that there is no automatic thermostat which turns on or diminishes investment precisely to the extent required to provide the physical facilities for high-level employment. As Professor Taussig at Harvard used to say (at whose feet so many modern economists began their study of economics), business cycles are periods of malinvestment, malproduction, and spurts of technological change.

In boom years the spurt of capital formation exceeds the normal rate of growth such that additional plant and equipment cannot be added to some industries without inflicting bankruptcy on the owners of existing properties or precipitating a struggle for consumer patronage so severe as to end in elimination of efficient small business, the survival of oligopolies with big checkbooks, and monopolistic cartel or other agreements in restraint of trade. The high-profit economy of boom years thus is propelled headlong into a period of low investment activity during which the country catches up with or grows up to the capacity that had been constructed. In this way American population increases and higher standards of living in the latter half of the nineteenth century grew up to the railroad mileage that had been "streaks of rust in the wilderness."

The problem of readily getting the "right" volume of investment into the "right" industries at the "right" time has thus far not been solved. The price-and-profits mechanism, the policies and plans of profit makers, when cumulated, has not provided stability of private capital investment, nor has the volume of investment been sufficient to provide high-level employment except in periods of war and sporadic or general inflation.

MONOPOLY POWER AND INVESTMENT

One of the most highly controversial in all the tangle of problems involving investment is that raised by Senator Douglas concerning the impact of monopoly. In testimony before the Joint Committee

on the Economic Report in February 1949, Mr. Paul Raver, of the Bonneville Power Administration, phrased the issue as follows:

A margin of extra capacity provides a powerful impulse to market development through new products and lower prices. In truly competitive industries, there necessarily is a margin of extra capacity because no producer can control the market, and each tries to get as lrage a share as possible. This situation was more prevalent in the nineteenth century in this country than now. A number of our basic industries are now largely controlled by a small group of producers who determine the size of their industry. In some cases they are aided by the lack of availability to competitors of new ore bodies and other sources of raw materials. Their motives were demonstrated in World War II when they were reluctant to expand for fear of excessive capacity at the end of the war. Generally, businessmen would prefer to keep capacity below effective demand so that they can enjoy a sellers' market. As national policy, this country has relied on the antitrust laws and competition to prevent businessmen from accomplishing this purpose. It should be clear that, with the growth of concentrated control in certain industries and the following of policies of certain industrial leaders, the country has lost some of the protection of a freer competitive system. Instead of relying upon competition of many businessmen, we now rely on the less expansion-minded leadership of less competitive industries.

This situation raises the question whether the national interest is adequately protected by the decisions of industrial leaders whose main obligation is to their stockholders and whose instincts work toward achievement of a sellers' market, avoidance of excessive capacity, and avoidance of price competition. In industries where these conditions exist, it seems proper for Government to promote production or expanded capacity through measures such as the President had proposed.

The alternatives are few. Where competition truly exists, we can rely on it to provide expanding capacity. Where it does not eixst, business leaders ought to be willing to have the Government share with them decisions on expansion in order to protect the public interest by providing, through margins of extra capacity, the continuous pressure needed to build new markets, new products, and to reduce prices.

Nowhere is the amount of definite information less and the need for probing more urgent than in the study of the effect of monopolistic power on investment. There have been numerous studies of the extent to which and the devices by which power over prices, production, and sales has been concentrated.[27] But the essential facts concerning the production of new capital—i. e., investment—concerning the actual division of responsibility for initiating and making investment decisions among inventors, bankers, managers and directors, and accurate documentation of the locus of power, of the why, how, when, and how much of total inevstment determination by bankers and business executives is for the most part not to be had.

There is a widespread consensus that investment policy for a substantial part of American industry may depend primarily on the information, attitudes, and decisions of as few as 300 business executives who with solidarity of selfish interest act more or less as a unit, move in the same social circles, belong to the same clubs, read the same newspapers and trade journals, and by and large share the same economic ideology and political convictions. It is felt that businessmen themselves by their very emphasis on confidence (their confidence in the economic or political outlook) implicitly reveal their key position.

[27] See, e. g., the extensive documentation produced by the Temporary National Economic Committee the large literature on cartels, the evidence in antitrust cases, and recent studies of the Federal Trade Commission.

In an epoch-making book, Dr. Edwin G. Nourse (then director, Institute of Economics, the Brookings Institution, and now Chairman of the Council of Economic Advisers) wrote as follows:

> When the price-making executive sets a price objective and directs a controlled productive mechanism toward attainment of that price level [he] takes over from the Unseen Hand as guide and regulator of the economic process in a considerable part of our business world. He takes upon himself the responsibility for the standard of living for an ever larger proportion of our people. Much as he generally hates the phrase, he becomes in fact the economic planner for our society rather than merely the adapter of his personal affairs as best he can to a largely automatic price mechanism.[28]

Another economist, in summarizing the evidence available at that time, observes:

> When the individual business, instead of being governed by market conditions which reflect the actions of countless anonymous competitors, guides its activities, on the one hand, by its expectations of what specific rivals may do and, on the other, by a schedule of anticipations of probable effects which its own actions may have on the market, the profit governor is essentially abolished by private collectivism. For when prices are maintained profits no longer serve as an objective economic device for eliminating inefficient concerns. Nor do they guide investment away from industries earning a low rate of return to those earning a high rate so as to bring about an optimum distribution of natural resources, labor, and capital. The direction of the flow of investment and of expansion of plant facilities is determined more by business strategy and love of business aggrandizement and power than by economic considerations and cold cash calculations of profit.[29]

REGIONAL INVESTMENT PROBLEMS

The impact of concentration of investment on the development of regional areas is probably one of the most controversial of all investment problems. Within the United States the South and the West have for decades seethed with criticism of the "money power" of Wall Street. World-wide agitation, especially in less developed areas, against colonialism, imperialism, finance capitalism, and the like has likewise been extensive. Again, however, there is a singular dearth of facts.

Recent notable activity by the National Planning Association has plowed the first furrow toward developing concrete evidence. In their study on industrialization of the South they state:

> The southern industrialism of the future will die a-borning if it beocmes the victim of monopolistic practices * * * whether imposed from within or without, the net effect of these practices has been the same—to hold back industrialization of the South, to raise the prices paid for products by southern consumers, to force down the prices paid to southern farmers and other primary producers, to restrict production and employment in southern industries, to withhold scientific and technological advances from the South, and in general to retard the economic development of the region.

After citing a number of concrete examples of monopolistic activity adverse to investment, the report observes:

> The total effect of monopolistic practices in discouraging business enterprise, both old and new, is of course impossible to measure. It is obviously impossible to estimate either the number of businesses which never opened or those which quietly folded because of the real or assumed existence of monopolistic practices.[30]

[28] Nourse, Edwin G., and Drury, Horace E., Industrial Price Policies and Economic Progress, the Brookings Institution, Washington, D. C., 1938, p. 254.

[29] Kreps, Theodore J., Some Price Problems, Economic Problems in a Changing World, pp. 191-365, edited by Willard L. Thorp, Farrar & Rinehart, Inc., New York, 1939, p. 288.

[30] Study of Agricultural and Economic Problems of the Cotton Belt, hearings before the Special Subcommittee on Cotton of the Committee on Agriculture, House of Representatives, 80th Cong., 1st sess., July 7 and 8, 1947, Government Printing Office, 1947, pp. 593-594.

THE POTENTIALITIES OF MORAL SUASION

The potentialities which moral suasion possesses, either as a device to control or lower prices or to affect investment decisions, obviously depend on the extent to which private investment is subject to large-scale and long-range administrative business planning. It may be tacitly assumed that businessmen possessing such power are deeply concerned about the economic consequences of their decisions.

Virtually all experience to date in this country has involved direct suasion to check a drop in investment, without any quantitative formulation of economic goals. After the stock-market crash in the fall of 1929 the administration used this device in an attempt to forestall a drastic curtailment of investment spending. As early as November 15, 1929, President Hoover announced a series of meetings with business leaders designed to expand construction, maintain employment, and sustain wages. His reliance was on voluntary, but concerted, action of industry and finance, in which Government—Federal, State and local—would aid with building projects.[31] Several such meetings were held [32] at which the President urged maintenance or increase of investment outlays and the industry representatives generally pledged their cooperation. The American Telephone & Telegraph Co. proposed in 1930 to spend more on construction than the $600,000,000 of 1929; other utilities would follow suit; the automobile industry was less confident, but steel companies would replace obsolete plants.[33]

The evidence seems to indicate that the President's appeals did have some positive effect in stretching the investment boom for another year or so in certain fields, primarily utilities. While residential and industrial construction fell off abruptly from 1929 to 1930, the outlays of public utilities actually rose and reached a peak in the latter year. This was true in electric utilities and also telephones. Public construction likewise was maintained at approximately 1929 levels. It would be going too far to ascribe the whole of the difference to behavior between utilities and industrial construction to the effects of the President's conferences, since the nature of demand for utility services and the sensitiveness of those types of investment to construction costs (which fell by a few percent from 1929 to 1930) and interest rates were considerably greater than for manufacturing. In any event the stimulus does not appear to have lasted long. In 1931 there was in all fields of private construction a substantial decrease, and by 1932 the collapse was general. The promises of industry for expanded employment, spelled out in dollars when leaders had canvassed their colleagues, were not borne out in the event. Instead, contractions were the rule.[34]

The effect of moral suasion is probably confined to those areas of industry where big business and administered prices are the rule, notably public utilities (including railroads and communications), most of the primary metals industries, automobiles, and the like. In the main it can affect investment in plant and equipment, to a lesser

[31] Mitchell, Broadus, Depression Decade, p. 82.
[32] Railroads, November 19; major industries and labor leaders (separately), November 21; building and construction, November 22; farm organizations, November 25; utilities, November 27. See Myers, W. S., and Newton, W. H., the Hoover Administration, pp. 24–31.
[33] Mitchell, Broadus, Depression Decade, p. 84.
[34] Mitchell, Broadus, Depression Decade, p. 84.

extent business inventories. These are, of course, the largest and most important parts of private-capital investment, which by their leverage and marginal effect may in considerable measure account for most of the increase or decrease in total effective demand, except during periods of highly active foreign trade or heavy Government expenditures such as takes place in times of war.

CHAPTER III

INVESTMENT AND ITS FINANCING

SECTION 1. NATIONAL INCOME DATA ON SAVING AND INVESTMENT

SIGNIFICANCE AND LIMITATIONS OF THE DATA

The most comprehensive information available on saving and investment in the United States is that compiled by the Department of Commerce in connection with its measurement of national income and product. This information is summarized by the Department in the form of a consolidated statement, based upon an interrelated set of accounts for each major sector of the economy, of the sources and uses of gross savings.

This statement, for the years 1929 through 1948, is presented in the attached table I. The data show, on the one hand, the aggregate of gross private saving in the United States, broken down by major sources, and, on the other, the Nation's utilization of private savings for gross private domestic investment in new construction, producers' durable equipment, and business inventories, for net foreign investment, and for the financing of Government deficits.

The significance of these summary statistics is twofold. It arises, in the first place, from the importance of saving and investment transactions in explaining the level of economic activity; and, secondly, it grows out of the indication given by such data of changes in wealth in the United States.

The key role of statistics of this type in the analysis of employment and production trends is generally recognized. Their importance is attested by the emphasis placed upon the saving and investment process in most theories of the business cycle. One critical determinant of levels of employment, production, and business activity, for example, is the rate of domestic investment, and great interest attaches not only to its aggregate volume, but to the particular types of capital formation making up the total. Dynamic effects are also very widely attributed to Government deficits and to the net foreign balance. At the same time, correlated clues to the functioning of the economic mechanism are revealed through analysis of the various sources of private savings. Both the volume of saving and its distribution among various economic groups exert a profound influence upon economic developments. Summary quantitative expression of all these factors and their interrelationships is provided by the statistics under consideration.

The other significant aspect of the data is that they reflect changes in the Nation's wealth. There is considerable interest in the growth of wealth as such; its increase, especially when it takes the form of new productive equipment, carries important implications with respect to long-term productivity, income, and standards of living.

Over extended time periods, saving and investment data may be of more fundamental significance in this context than in the context of business cycle analysis.

Proper interpretation and use of the information given in table 1, either as an analytical tool or as a frame of reference for more specialized investigations of particular types of investment or saving, require a clear understanding not only of the significance of the data, but of their limitations. Many minor limitations will be apparent only upon careful perusal of the detailed definitions contained in a subsequent section, but those of a general nature are emphasized in the following outline.

TABLE I.—*Sources and uses of gross savings, 1929–48*

[Millions of dollars]

	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938
Gross private saving	15,528	11,156	8,357	2,760	2,728	5,591	7,941	11,104	10,817	8,910
Gross personal saving	3,902	3,077	2,000	−1,215	−1,006	−72	1,934	3,757	4,114	1,136
Personal saving (net)	3,723	2,899	1,824	−1,389	−1,181	−247	1,758	3,580	3,934	952
Institutional depreciation	179	178	176	174	175	175	176	177	180	184
Gross business saving	11,706	8,784	5,169	2,538	2,499	4,799	6,353	6,485	7,753	7,865
Net business saving	3,069	215	−2,967	−4,951	−4,571	−2,244	−840	−1,022	−39	57
Undistributed corporate profits	2,597	−3,045	−5,381	−5,998	−2,428	−1,619	−613	−284	−8	−906
Corporate inventory valuation adjustment	472	3,260	2,414	1,047	−2,143	−625	−227	−738	−31	963
Capital consumption allowances	8,637	8,569	8,136	7,489	7,070	7,043	7,193	7,507	7,792	7,808
Business depreciation charges	7,374	7,475	7,307	6,776	6,433	6,351	6,401	6,430	6,658	6,710
Corporate	3,874	3,989	4,004	3,695	3,499	3,367	3,355	3,288	3,343	3,354
Noncorporate	3,500	3,486	3,303	3,081	2,934	2,984	3,046	3,142	3,315	3,356
Farm	1,273	1,231	1,047	890	805	830	870	936	1,039	1,048
Nonfarm residential dwellings	1,310	1,336	1,357	1,365	1,371	1,379	1,391	1,413	1,440	1,468
Other noncorporate	917	919	899	826	758	775	785	793	836	840
Accidental damage to fixed business capital	413	389	351	329	275	237	236	381	304	387
Capital outlay charged to current expense	850	705	478	384	362	455	556	696	830	711
Statistical discrepancy [1]	−80	−705	1,188	1,437	1,235	864	−346	862	−1,050	−91
Uses of gross private savings	15,528	11,156	8,357	2,760	2,728	5,591	7,941	11,104	10,817	8,910
Gross investment	16,595	10,899	5,559	1,055	1,456	3,236	6,092	8,225	11,502	7,420
Gross private domestic investment	15,824	10,209	5,362	886	1,306	2,807	6,146	8,318	11,440	6,311
New construction [2]	7,824	5,566	3,561	1,668	1,142	1,420	1,890	2,783	3,687	3,309
Producers' durable equipment	6,438	4,926	3,162	1,781	1,783	2,531	3,351	4,531	5,444	3,975
Change in business inventories	1,562	−283	−1,361	−2,563	−1,619	−1,144	905	1,004	2,309	−973
Net foreign investment	771	690	197	169	150	429	−54	−93	62	1,109
Government deficit (+) or surplus (−) on income and product transactions	−1,067	257	3,798	1,705	1,272	2,355	1,849	2,879	−685	1,490
Federal	−1,185	−276	2,093	1,465	1,310	2,850	2,538	3,475	176	1,960
State and local	118	533	705	240	−38	−495	−689	−596	−861	−470

	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948
Gross private saving	12,672	16,005	22,951	41,829	47,381	56,977	48,534	29,287	25,819	38,509
Gross personal saving	2,888	3,881	9,952	25,774	30,394	35,607	28,184	10,544	5,265	12,220
Personal saving (net)	2,701	3,691	9,760	25,579	30,197	35,407	27,981	10,336	5,054	12,005
Institutional depreciation	187	190	192	195	197	200	203	208	211	215
Gross business saving	8,409	10,500	11,406	13,718	15,863	17,528	15,446	14,619	19,555	26,561
Net business saving	495	2,250	2,304	3,932	5,380	5,841	3,239	2,903	6,086	11,072
Undistributed corporate profits	1,209	2,398	4,921	5,136	6,153	6,128	3,803	8,132	12,073	13,242
Corporate inventory valuation adjustment	−714	−148	−2,617	−1,204	−773	−287	−564	−5,229	−5,987	−2,170
Capital consumption allowances	7,914	8,250	9,102	9,786	10,483	11,687	12,207	11,716	13,469	15,489
Business depreciation charges	6,895	7,038	7,686	8,517	9,307	10,384	10,682	9,398	10,694	12,228
Corporate	3,444	3,522	3,907	4,473	5,075	5,843	5,926	4,264	4,871	5,555
Noncorporate	3,451	3,516	3,779	4,044	4,232	4,541	4,756	5,134	5,823	6,673
Farm	1,088	1,095	1,235	1,365	1,532	1,847	2,046	2,194	2,703	3,307
Nonfarm residential dwellings	1,509	1,557	1,620	1,651	1,693	1,726	1,756	1,816	1,923	2,069
Other noncorporate	854	864	924	1,028	1,007	968	954	1,124	1,197	1,297
Accidental damage to fixed business capital	222	246	273	484	399	360	381	408	575	593
Capital outlay charged to current expense	797	966	1,143	785	777	943	1,144	1,910	2,200	2,608
Statistical discrepancy [1]	1,375	1,624	1,593	2,337	1,124	3,842	4,904	4,124	999	−272
Uses of gross private savings	12,672	16,005	22,951	41,829	47,381	56,977	48,534	29,287	25,810	38,509
Gross investment	10,805	15,458	19,458	10,666	3,464	5,615	9,295	34,127	39,988	46,909
Gross private domestic investment	9,917	13,949	18,334	10,873	5,709	7,714	10,733	29,455	31,090	45,008
New construction [2]	4,899	5,566	6,784	3,951	2,549	2,817	3,934	10,258	13,812	17,892
Producers' durable equipment	4,577	6,108	7,676	4,857	4,082	5,706	7,545	12,486	17,207	20,661
Change in business inventories	441	2,275	3,874	2,065	−922	−809	−746	6,711	71	6,455
Net foreign investment	888	1,509	1,124	−207	−2,245	−2,099	−1,438	4,672	8,898	1,901
Government deficit (+) or surplus (−) on income and product transactions	1,867	547	3,493	31,163	43,917	51,362	39,239	−4,840	−14,169	−8,400
Federal	2,213	1,409	4,889	32,949	46,389	54,004	41,819	−2,834	−13,541	−9,176
State and local	−346	−862	−1,396	−1,786	−2,472	−2,642	−2,580	−2,006	−628	776

[1] Includes excess of wage accruals over disbursements.

[2] Construction data for the years 1929–38 are not fully comparable with those for 1939–48; for the latter period, the series includes estimates of the following items which have not yet been incorporated in the earlier data: Major additions and alternations to residential buildings, profit margins of residential builders, residential land development costs, settlement and allied charges, engineering and architectural fees, and the value of construction of a few minor types of nonresidential structures. (See table 5 for annual magnitudes of this group of items.)

Perhaps the most important reservation is that the consolidated saving and investment account is intended to be used in conjunction with the related current accounts for the various sectors of the economy which underlie the national income and product estimates; much significant information is lost if it is viewed in isolation from them. For example, table I may tell us that personal savings doubled from 1947 to 1948, but it does not indicate whether the increase resulted from higher incomes, or from reduced consumption, or from some combination of changes in both personal income and expenditure. Again, table I may show a sharp drop in undistributed corporate profits from 1944 to 1945, but it gives no clue as to whether the drop was due to reduced profits before tax, to higher tax rates, to payment of larger dividends, or to some combination of these (or other) factors. Such relationships, both with respect to business-cycle analysis and in connection with wealth studies, can be seen only through judicious reference to all of the available complementary statistics.

Many limitations arise from the fact that table I is a consolidated statement for the economy as a whole, and thus conceals numerous types of transactions which cancel in the process of consolidation. In this category are all changes in intangible claims and liabilities as between elements of the domestic business system and as between businesses and individuals. Thus the consolidated statement of sources and uses of gross savings in itself conveys no indication whatever of the influence—which may be of the utmost significance—of monetary and credit policies.

For example, let us suppose that for some year table I shows business investment in durable equipment of $20,000,000,000 and personal saving of $20,000,000,000 (with all other items zero). To take two extremes, this might involve either of the following sets of transactions: (*a*) Individuals invest their entire current saving in common stocks of corporations which acquire the equipment; or (*b*) businesses finance the investment wholly through borrowing from banks, and the increment in individuals' savings accumulates in the form of demand deposits.

The two situations convey drastically different implications with respect to subsequent economic developments, yet which of them (or what other alternative) prevails is not apparent from the consolidated saving and investment account. Ideally, the answers would be found in separate, deconsolidated capital accounts for various types of economic units.[1] Unfortunately, these are not available on a systematically integrated basis; nevertheless, the analyst has access to a vast amount of relevant information on monetary and credit developments, and such data should be used to supplement the summary record presented in table I.

Another restriction imposed by consolidation is the failure of the data to reflect transactions involving land and second-hand fixed assets (except in the case of international transfers). In general,

[1] An example of the type of separate statement desired is given in the section of this monograph which deals with sources and uses of corporate savings. Similar statements for financial institutions, unincorporated businesses, etc., would be required to complete a set of accounts for the entire business sector of the economy.

Another example of a first step in the same direction may be found in table 2, which presents a summary statement of personal saving and investment. It would be highly desirable, of course, to further deconsolidate the personal sector so as to show separate accounts for farmers, wage earners, proprietors of unincorporated enterprises, etc. Great statistical difficulties obstruct such an undertaking, however, and satisfactory break-downs of this type are not available.

this does not constitute a serious impairment, but circumstances occasionally arise in which transactions of this type occur on a significant scale. Perhaps the outstanding example of such a situation is that prevailing in the immediate postwar years, when vast amounts of Government-owned war plants and equipment were being sold to private business. During this period, gross private domestic investment as shown in the consolidated account, while correctly stating new capital formation for the Nation as a whole, substantially understates private investment in fixed capital assets, owing to the omission of purchases of existing plant and equipment from the Federal Government. Analysis of developments of this sort requires reference to auxiliary data of the type which would appear in a complete set of deconsolidated saving and investment statements for each sector of the economy.

In accordance with national income concepts, capital gains and losses, both on real property and on securities, are excluded from the saving estimates presented in table I. The disappearance in consolidation of transactions involving land and second-hand fixed assets and of interbusiness, interpersonal, and business-personal transfers of intangible assets results in a corresponding exclusion of capital gains or losses from the investment side of the account.

Closely related to the problem of relationships obscured by consolidation are several special difficulties associated with unincorporated business operations. Since most proprietors of noncorporate enterprises and farms do not themselves distinguish at all clearly between their business and their personal savings, it is impossible to do so on an aggregate basis, except by analogy with corporate experience (which would introduce an unsatisfactory predetermination of results). Personal saving, partly for this reason, is defined to include the entire net change in proprietors' equities in their unincorporated businesses and farms. As a result, the distinction in table I between business saving and personal saving is somewhat artificial. The latter includes an unidentifiable amount of retained noncorporate earnings closely akin to undistributed profits of corporations, while the former, apart from capital-consumption allowances, is confined to corporate business.

This partially legalistic differentiation of business from personal saving also suggests that care be exercised in interpreting changes in their relative proportions. According to the present statistics, an apparent increase of one at the expense of the other may reflect shifts in the legal form of organization of operating businesses, rather than any fundamental redistribution of income among economic groups. Such institutional changes are often highly significant in themselves, but the point of emphasis here is simply that they must be given due consideration in any interpretive use of aggregate saving and investment data.

For purposes of measuring the Nation's saving and investment, some choice must be made among the numerous possible definitions of these terms. The concepts underlying the estimates presented in table I are those upon which the official estimates of national income and product are based, and represent an attempt to achieve the optimum combination of analytical utility and statistical feasibility. However, these particular concepts are not to be regarded as uniquely correct, and certain general limitations of scope inherent in them should be understood by users of the data.

The most important restriction of scope, especially in connection with wealth analysis, is the exclusion from gross investment (and from corresponding calculations of saving) of any allowance for consumer or Government capital formation.

Except in the case of residential dwellings, all purchases by individuals for personal use are viewed as consumption expenditures, regardless of the durability of the articles in question. The consolidated statement of sources and uses of gross savings therefore contains no measure of personal investment in durable assets other than residences.[2] For many purposes, such a measure would be highly desirable; it would, for example, be indispensable to a comprehensive inquiry into changes in wealth. It is omitted from table 1, however, because of both conceptual and statistical difficulties in determining exactly what types of goods should be included. Moreover, capitalization of certain personal expenditures here would require introduction into the related national-income statistics of imputed depreciation on the assets in question—an imputation which could be accomplished only through arbitrary procedures tending to impair the objectivity of the data. A complete analogy with business investment would also pose the difficult problem of measuring changes in consumer inventories.

Government capital formation is ignored in table 1 for similar reasons. Accounting practices followed by governmental units do not, in general, provide any ready guide to distinction between current and capital purchases, nor do they afford a basis—except through arbitrary imputation—for calculating depreciation, even if gross capital expenditures were determinable. The problem of establishing criteria for classification of government purchases in these terms is also complicated by the fact that governments acquire many assets, including some of considerable durability, for purposes—such as national defense—without parallel among business investments. The omission of government capital formation from the consolidated saving and investment account avoids arbitrariness in the solution of these difficulties and is probably of little consequence where the data are used for functional analysis of the economy. It must be recognized, however, that the omission is a very serious one from the standpoint of measuring changes in wealth.

In addition to the absence of consumer and government capital formation, several other restrictions in coverage may be mentioned. No account is taken of changes in natural resources, or of intangible investment in health, education, technological progress, etc., although these make a potent contribution to future productivity. On the other hand, private investments in newly produced tangible assets are recorded without regard to their ultimate worth; for example, construction and equipment costs of oil-well drilling appear in gross investment even though eventually proven fruitless. Finally, it should be noted that the definition of durability with respect to business investment in equipment is necessarily somewhat arbitrary. In general, these estimates include all items of producers' equipment having a normal useful life of at least 3 years. Slightly different results would obtain if another criterion of durability—say a 5-year span—were adopted.

[2] And in a formal sense, even these are not regarded as personal investment, since a business capacity is attributed to home owners with respect to acquisition and operation of their dwellings.

The emphasis in table I upon gross, rather than net, investment may call for some explanation. This is partly a matter of statistical feasibility and partly a deliberate choice of what is, for many purposes, the more significant magnitude.

In the first place, for technical reasons, gross capital formation can be estimated much more reliably than net. Adequate estimates of the former can be derived from available production data with a minimum of arbitrary judgment, whereas measures of the latter are contingent upon allowances for capital consumption which can be derived objectively only from unsuitable financial records.

Estimates of capital used up in current production are obtainable primarily from data on business depreciation charges, which are generally expressed in terms of historical cost rather than current replacement cost. It is the latter concept which is relevant in measuring net additions to the stock of capital goods, but conversion of depreciation charges to a replacement cost basis poses extremely difficult problems, both theoretical and statistical, and has not been undertaken here. Credits to depreciation reserves as shown on the saving side of the consolidated account merely reflect business accounting practice; they cannot be deducted from gross private domestic investment to yield a meaningful estimate of net investment. These credits, together with other sources of saving, provide a reasonably accurate estimate of gross private saving in the aggregate, but the distinction in table I between gross and net saving is a bookkeeping, rather than an economic, distinction.

Even if satisfactory data on net investment were available, however, primary attention might well remain focused upon the gross figures. This would not be true in the context of wealth measurement, but for certain types of analysis of the functioning of the economy, gross investment may be a more meaningful concept.

Another advantage of the gross investment concept appears in connection with problems of short-run resource allocation. It stems from the existence of considerable flexibility (actual or potential) in business policies regarding replacement or retirement of durable assets. In determining, for instance, what volume of current resources might be diverted temporarily to some specified program—say, war production—gross capital formation is the more relevant concept. In the short run, current resources could be made available not only by refraining from additions to the stock of private capital, but by not making normal replacements; and an analysis based solely upon net private investment would thus understate one important potential source of war output.

By and large, then, the emphasis upon gross investment severely limits the data only in their wealth-measurement aspects. It is no handicap in most types of functional analysis, and has the merit of divorcing the estimates from overly arbitrary concepts and statistical procedures.

DEFINITIONS

The following definitions are intended to clarify the nature and content of individual items of sources and uses of gross savings as presented in table I. The definition of each major aggregate should be considered in conjunction with the definition of its components, as

details of the latter are not repeated in the former. Also, the definitions should be read in conjunction with the discussion of the significance and limitations of saving and investment concepts in an earlier paragraph which draws attention to some of the broader problems that arise in the interpretation of the data.

Gross private saving.—The excess of current receipts of private businesses and persons over their current expenditures (exclusive of capital consumption allowances). It is the aggregate of gross personal saving and gross business saving, plus the statistical discrepancy described below. The inclusion of the statistical discrepancy on this side of the account is arbitrary, and does not imply greater probability of imperfections in estimates of saving than in estimates of its uses.

Gross personal saving.—The sum of personal saving (net) and institutional depreciation.

Personal saving (net).—The excess of personal income over personal consumption expenditures, taxes, and other payments to general government. It consists of the current saving of individuals (including owners of unincorporated businesses), nonprofit institutions, and private pension, welfare, and trust funds. Personal saving may be embodied in such forms as changes in cash and deposits, security holdings, indebtedness, reserves of life insurance companies and mutual savings institutions, and net investment in unincorporated enterprises and residential dwellings. This definition may be further clarified by reference to table II, which is a consolidated statement of personal saving and its disposition.

TABLE II.—*Disposition of personal saving, 1933–48* [1]

[Billions of dollars]

	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948
Personal saving	−1.18	−.25	1.76	3.58	3.93	.95	2.70	3.69	9.76	25.58	30.20	35.41	27.98	10.34	5.05	12.00
Personal saving other than change in equity in nonbusiness real property and unincorporated enterprises	−1.08	2.89	1.34	3.61	2.66	2.04	3.59	3.78	9.29	27.36	34.79	36.52	32.73	12.00	8.20	5.50
Increase in cash and securities	−1.75	1.96	.61	3.21	1.45	−.14	2.65	3.09	8.12	21.61	30.64	33.50	30.09	11.87	7.85	4.46
Currency and bank deposits	−1.28	1.80	2.46	3.64	.43	.40	3.00	2.88	4.80	10.96	16.18	17.54	19.06	10.58	2.92	−1.22
Savings and loan associations	−.54	−.26	−.18	−.11	−.11	.00	.06	.21	.38	.28	.59	.82	1.06	1.18	1.20	1.25
U. S. Government securities [2]	.63	1.12	−.41	.87	1.17	−.15	.06	.51	3.47	10.37	14.15	15.74	10.49	−.15	2.36	1.33
State and local government securities	−.67	−.79	−.12	−.47	−.05	−.22	−.23	−.46	−.28	−.22	−.12	−.08	−.18	−.36	.40	1.20
Corporate and other securities	.11	.09	−1.14	−.72	.01	−.17	−.24	−.05	−.25	.22	−.16	−.52	−.34	.62	.97	1.90
Increase in private insurance and pension reserves	.57	1.33	1.55	1.67	1.76	1.54	1.72	1.85	2.14	2.49	2.85	3.21	3.46	3.43	3.68	3.51
Decrease in debt, n. e. c. [3]	.10	−.40	−.82	−1.27	−.55	.64	−.78	−1.16	−.97	3.26	1.30	−.19	−.82	−3.30	−3.33	−2.47
Increase in equity in nonbusiness real property	−.67	−1.63	−.73	.03	.28	.36	.97	.95	1.32	.32	−.17	−.60	−.79	−.71	.58	2.51
Net purchases of nonfarm residences [4]	.17	.29	.58	1.31	1.68	1.91	2.93	3.26	3.82	2.11	1.33	1.13	1.23	4.10	6.24	8.02
New construction by nonprofit institutions	.08	.08	.10	.15	.20	.24	.24	.22	.25	.12	.03	.08	.14	.45	.53	.86
Decrease in mortgage debt on nonfarm dwellings	.61	−.45	.16	.15	.02	−.14	−.50	−.78	−.94	−.06	.36	.12	−.20	−3.24	−4.06	−4.09
Less: Depreciation	1.55	1.55	1.57	1.59	1.62	1.65	1.70	1.75	1.81	1.85	1.89	1.93	1.96	2.02	2.13	2.28
Increase in equity in unincorporated enterprises other than farms	.62	1.93	1.58	1.67	.67	−2.05	.16	.74	−.54	2.07	.32	.83	−.68	1.63	−.47	3.40
Increase in inventories	−.48	.00	.21	.53	.24	−.19	.09	.40	.25	.29	−.04	.81	.43	.94	−.66	.98
New construction and producers' durable equipment [5]	.56	.78	1.04	1.36	1.62	1.08	1.36	1.61	1.89	.80	.54	.62	1.73	4.22	4.79	4.47
Decrease in bank and mortgage debt	.98	.55	.55	.13	.07	−.31	−.10	−.05	−.74	.29	.41	.07	−.77	−2.13	−2.22	−.75
Decrease in net payables to other corporations and financial intermediaries	.32	1.38	.56	.44	−.42	−1.79	−.34	−.36	−1.02	1.72	.42	.30	−1.12	−.28	−1.18	.00
Less: Depreciation	.76	.78	.78	.79	.84	.84	.85	.86	.92	1.03	1.01	.97	.95	1.12	1.20	1.30
Increase in equity in farm enterprises	−.45	−2.01	.17	−.84	.75	−.23	.31	.20	.93	1.94	.19	−.19	.26	.01	−1.99	2.25
Increase in inventories	−.27	−1.32	.48	−1.11	.54	.14	.10	.24	.46	1.31	−.42	−.54	−.15	−.23	−2.16	1.32
New construction and producers' durable equipment [6]	.38	.60	.92	1.12	1.35	1.13	1.23	1.32	1.73	1.57	1.33	1.74	1.75	2.61	3.68	4.87
Decrease in mortgage debt to corporations and financial intermediaries	.26	−.47	−.06	.07	.08	.09	.13	.03	.06	.30	.48	.36	.25	.01	−.03	−.15
Decrease in other debt to corporations and financial intermediaries	.17	.15	.22	.10	−.21	−.55	−.06	−.39	−.26	−.05	.14	−.01	.38	−.24	−.80	−.48
Decrease in farm holdings by corporations and financial intermediaries	−.19	−.14	−.08	−.08	.03	.01	.00	.10	.18	.17	.19	.11	.08	.05	.02	.00
Less: Depreciation	.80	.83	.87	.94	1.04	1.05	1.09	1.10	1.24	1.36	1.53	1.85	2.05	2.19	2.70	3.31
Errors and omissions [7]	.41	−1.42	−.61	−.89	−.46	.86	−2.31	−1.98	−1.25	−6.10	−4.92	−1.16	−3.54	−2.60	−1.25	−1.66

[1] Except for rearrangement and regrouping these data are substantially the same as those published in table 6 of National Income issues of the Survey of Current Business. Statistical revisions of some of the series for years prior to 1939, however, have also been incorporated.

[2] Excludes armed forces leave bonds.

[3] Largely attributable to purchases of automobiles and other durable consumers' goods, although including debt arising from purchases of nondurable consumers' goods. The other segments of individuals' debt have been allocated to the assets to which they pertain: viz, savings in savings and loan associations, insurance, and securities.

[4] Includes net purchases of nonfarm residences by proprietorships and patnerships.

[5] Includes purchases of used plant and equipment from the U. S. Government.

[6] Includes farm dwellings.

[7] Excess of personal saving over sum of uses specified above.

Source: Securities and Exchange Commission and U. S. Department of Commerce.

Institutional depreciation.—Credits to depreciation reserves of private nonprofit institutions, corresponding to depreciation charges included among their current operating expenses (which are treated in the national income statistics as personal consumption expenditures).

Inasmuch as a business capacity is attributed to individuals in connection with their acquisition and operation of residential dwellings, all depreciation charges on individually owned fixed assets are regarded as current business expenses, and the corresponding credits to depreciation reserves appear in gross business saving, rather than in gross personal saving.

Gross business saving.—The aggregate of net business saving and capital consumption allowances by private business—i. e., the excess of current receipts of private business over current expenses, before provision for capital consumption.

Net business saving.—The sum of undistributed corporate profits and the corporate inventory valuation adjustment. It should be noted that net business saving, as presented here, is restricted to corporations. In the case of unincorporated businesses, it is impossible to establish satisfactorily any measure of retained earnings; the result is that all net income of unincorporated enterprises is included in personal income and, to the extent not consumed, in personal saving.

Undistributed corporate profits.—The excess of corporate earnings, after provision for tax liabilities, over dividend payments. Only earnings of corporations organized for profit are covered. Earnings are confined to those accruing to residents of the United States, taking into account the net international flow of dividends and branch profits. Earnings are measured net of intercorporate dividends, without deduction of depletion charges, and exclusive of capital gains and losses. In other respects, the definition of earnings is in accordance with Federal income tax regulations.

It should be noted, however, that the estimates on this basis also differ from data reported by the Bureau of Internal Revenue in Statistics of Income because the latter compilation for any given year does not incorporate the results of audit of corporate tax returns, nor does it reflect various other retroactive adjustments made subsequent to its publication, such as renegotiation of war contracts, recomputation of emergency amortization, and tax adjustments resulting from certain carry-back provisions of the income tax laws.

(See table III for a break-down of undistributed corporate profits by major industrial groups.)

Corporate inventory valuation adjustments.—The excess of the change, valued at average prices during the period, in the volume of corporate inventories over the change in the book value of corporate inventories. This is equivalent to the difference between a book-value basis and a replacement-cost basis for charging of inventories to cost of sales in the calculation of corporate profits. The item must be credited to business saving because undistributed corporate profits are recorded on the former basis, whereas the latter is appropriate in an economic sense and corresponds to the value of the real change in business inventories included on the investment side of the account.

(See table IV for a break-down of the corporate inventory valuation adjustment by major industrial groups.)

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TABLE III.—*Undistributed corporate income, by industry, 1929–48* [1]

[Millions of dollars]

	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	9144	1945	1946	1947	1948
All industries, total	2,597	−3,045	−5,381	−5,998	−2,428	−1,619	−613	−284	−8	−906	1,209	2,398	4,921	5,136	6,153	6,128	3,803	8,132	12,073	13,242
Agriculture, forestry, and fisheries	−1	−47	−84	−77	−31	−50	−11	−18	−24	−23	−13	−6	16	19	23	26	35	70	79	97
Mining	78	−129	−250	−169	−88	−20	20	87	147	16	97	126	199	168	182	204	153	222	356	428
Contract construction	42	8	−48	−111	−74	−47	−30	−22	−16	−6	−4	22	70	88	50	15	10	98	144	182
Manufacturing	1,756	−1,212	−2,342	−2,525	−409	−130	225	552	578	−64	1,217	1,912	3,443	3,071	3,481	3,590	1,858	4,247	7,653	8,147
Wholesale and retail trade	114	−566	−849	−977	−165	−37	−12	59	8	−85	216	353	734	713	838	886	977	2,729	2,908	3,283
Finance, insurance, and real estate	72	−585	−904	−1,046	−882	−653	−112	−486	−271	−174	−117	25	77	23	233	360	323	299	541	630
Transportation	348	−222	−510	−534	−393	−445	−458	−266	−307	−412	−158	−80	299	862	1,029	746	245	−88	6	86
Communications and public utilities	178	−250	−276	−320	−237	−161	−175	−113	−57	−93	13	63	58	110	170	144	95	271	163	208
Services	34	−19	−99	−227	−139	−66	−44	−53	−42	−43	−19	−5	35	91	154	164	165	301	255	211
Rest of the world [2]	−24	−23	−19	−12	−10	−10	−16	−24	−24	−22	−23	−12	−10	−9	−7	−7	−58	−17	−32	−30

[1] Subsidiary industrial detail may be found in table 21 of national income issues of the Survey of Current Business.

[2] Represents zero minus the gross outflow of branch profits to foreigners. Profits received by domestic corporations from foreign branches are excluded from this line and included in the industry of the recipient corporation. Data are not available on the industrial distribution of either the inflow or the outflow of branch profits.

TABLE IV.—*Corporate inventory valuation adjustment, by industry, 1929–48* [1]

[Millions of dollars]

	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948
All industries, total	472	3,260	2,414	1,047	−2,143	−625	−227	−738	−31	963	−714	−148	−2,617	−1,204	−773	−287	−564	−5,229	−5,987	−2,170
Agriculture, forestry, and fisheries																				
Mining	5	122	64	23	−67	−4	−9	−16	0	11	−12	1	−17	−3	−3	−3	−4	−75	−69	−69
Contract construction	3	30	23	11	−22	0	−1	−3	−7	4	−4	−6	−14	−3	−4	−5	−3	−39	−109	−43
Manufacturing	301	2,215	1,585	655	−1,340	−457	−161	−478	−11	619	−471	−83	−1,654	−726	−552	−206	−413	−3,007	−3,796	−1,660
Wholesale and retail trade	152	804	663	318	−627	−143	−48	−226	34	309	−219	−37	−882	−455	−190	−55	−111	−1,881	−1,663	−193
Finance, insurance, and real estate																				
Transportation	7	53	46	24	−52	−12	−5	−9	−28	11	−5	−14	−30	−10	−14	−12	−22	−144	−214	−118
Communications and public utilities	4	36	33	16	−35	−9	−3	−6	−19	9	−3	−9	−20	−7	−10	−6	−11	−83	−136	−87
Services																				
Rest of the world																				

[1] Subsidiary industrial detail may be found in table 22A of national income issues of the Survey of Current Business.

Capital consumption allowances.—The sum of business depreciation charges, accidental damage to fixed business capital, and capital outlay charged to current expense. Although the term "charge," is carried over from corresponding entries in the relevant current income and expense statements, it should be understood that as components of gross saving these items are in the nature of credits to reserves for consumption of fixed capital assets.

Business depreciation charges.—Charges recorded by private business for the current consumption of durable capital goods. Depreciation on owner-occupied houses is included, since home ownership is regarded in the national income statistics as a business. Depreciation reported by business is not adjusted for changes in the replacement value of capital goods, except for farm proprietors.

Accidental damage to fixed business capital.—The value of physical losses by fire, natural events, and other accidents to fixed capital of private business, not covered by depreciation charges.

Capital outlay charged to current expense.—Purchases of new durable capital goods included in gross private domestic investment, but charged to current expense by business rather than entered on capital account.

Statistical discrepancy.—The excess, due to statistical imperfections, of gross investment plus the government deficit over the sum of gross personal saving and gross business saving. With one qualification, this difference is equivalent to the excess of the value of gross national product estimated as a sum of purchases of final products over its independently estimated value computed by adding necessary conceptual adjustments to the national income. The qualification is that the discrepancy shown in table I also includes the excess of wage accruals over disbursements, reflecting an inconsistency between business saving and personal saving as to timing of retroactive wage payments (which affect business saving as accrued and personal saving as paid).

Uses of gross private savings.—The sum of gross investment and the consolidated Government deficit (+) or surplus (—) on income and product transactions.

Gross investment.—The sum of gross private domestic investment and net foreign investment.

Gross private domestic investment.—The acquisition of newly produced capital goods by private business and nonprofit institutions and the value of the change in the volume of inventories held by them. It covers all private new dwellings, including those acquired by owner occupants.

New construction.—The value of private construction work put in place within the continental United States. Work put in place in any period may be defined as equivalent to the cost of materials installed plus expenditures for labor and overhead and an allowance for contractors' profits during the period. The estimates cover the erection of structures of all kinds, including major additions and alterations, together with nonstructural installations such as railroad lines, power and telephone lines, and petroleum pipe lines. The value of equipment which is an integral part of a structure, such as heating, plumbing, and lighting equipment and elevators, is included, but other

equipment, such as production machinery or furnishings, is not, and maintenance and repair expenditures are also excluded.

It should be noted that the construction estimates shown in table 1 are more comprehensive than the estimates of new private construction activity published in the Construction and Construction Materials Industry Reports of the Department of Commerce. The differences between the two series are fully specified in the footnotes to table V, which provides a break-down of new construction by type.

TABLE V.—*New private construction, by type, 1929–48* [1]

[Millions of dollars]

	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948
New private construction (National income definition)[2]	7,824	5,566	3,561	1,668	1,142	1,420	1,890	2,783	3,687	3,309	4,899	5,566	6,784	3,951	2,549	2,817	3,934	10,258	13,812	17,892
New private construction activity—Office of Domestic Commerce	7,522	5,306	3,416	1,482	1,005	1,221	1,648	2,486	3,274	2,941	3,808	4,390	5,426	3,007	1,744	1,823	2,716	8,253	11,179	14,563
Residential (nonfarm)	2,797	1,446	1,228	462	278	361	665	1,131	1,372	1,511	2,114	2,355	2,765	1,315	650	535	684	3,183	5,260	7,223
Nonresidential building, except farm and public utility	2,822	2,099	1,104	499	404	455	472	712	1,088	764	785	1,028	1,486	635	232	350	1,014	3,346	3,131	3,578
Industrial	949	532	221	74	176	191	158	266	492	232	254	442	801	346	156	208	642	1,689	1,702	1,397
Commercial [3]	1,296	1,020	483	231	135	177	217	298	400	298	304	365	427	164	34	59	210	1,162	878	1,267
Institutional [4]	350	343	243	125	43	41	52	85	112	119	112	134	158	79	22	46	88	268	389	591
Other [5]	227	204	157	69	50	46	45	63	84	115	115	87	100	46	20	37	74	227	162	323
Public utility	1,624	1,568	987	482	254	312	335	454	589	470	683	771	872	786	570	725	827	1,374	2,338	3,262
Farm construction	279	193	97	39	69	93	176	189	225	196	226	236	303	271	292	213	191	350	450	500
Residential	147	107	59	26	43	54	96	104	118	104	120	127	174	144	185	136	116	212	250	275
Nonresidential	132	86	38	13	26	39	80	85	107	92	106	109	129	127	107	77	75	138	200	225
Construction expenditures for crude petroleum and natural gas drilling	302	260	145	186	137	199	242	297	413	368	366	401	423	304	345	524	598	650	773	1,049
Additional construction activity [6]	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	(7)	725	775	935	640	460	470	620	1,355	1,860	2,280

[1] The data presented here correspond to estimates of new construction activity prepared by the Construction Division of the Office of Domestic Commerce, Department of Commerce, except for the addition of construction expenditures for crude petroleum and natural gas drilling and certain other items as specified in note 6; and except also for the fact that certain revisions of the Office of Domestic Commerce estimates for years prior to 1939 have not yet been incorporated in the National Income series.

[2] Data for 1929–38 are not strictly comparable with those for 1939–48; see note 6.

[3] Consists of warehouses, office and loft buildings; stores, restaurants, and garages; and hotels.

[4] Consists of religious, educational, and hospital and other institutional.

[5] Consists of social and recreational, and miscellaneous.

[6] Consists of the following items omitted from Office of Domestic Commerce estimates of construction activity for definitional or statistical reasons, but properly belonging in new construction as a component of gross national product: Major additions and alterations to residential buildings, profit margins of residential builders, residential land development costs, settlement and allied charges, engineering and architectural fees, and the value of construction of a few minor types of nonresidential structures.

No estimates of these additional items are as yet available for years prior to 1939, and the figures shown for 1939–48 are interim estimates subject to further revision and refinement.

An exact break-down of the additional items by type of construction is not yet available, but the great bulk relates to residential construction.

[7] Not available.

Producers' durable equipment.—The value of newly produced capital equipment acquired by business, other than items representing integral parts of structures. In general, all equipment having an estimated useful life of 3 years or more is here regarded as durable. (Table VI gives a break-down of producers' durable equipment by type.)

Change in business inventories.—The change, valued at average prices during the period, in the volume of raw materials, goods in process, and finished goods held for sale in the possession of private businesses. A sharp distinction must be drawn between the value of the physical change in inventories, as here defined, and the change in the book value of inventories as customarily reported in business balance sheets. (Table VII provides a break-down of changes in business inventories by major industrial categories, both in terms of book value and in terms of real changes, valued at current prices.)

Net foreign investment.—The net change in international assets and liabilities, including the monetary gold stock, arising out of the current international flow of goods and services, factor incomes, and cash gifts and contributions. Net changes in foreign claims and liabilities of the Government, as well as of private business and individuals, are included. (See table VIII for a summary of net foreign investment by major types of capital movements.)

TABLE VI.—*Producers' durable equipment, 1929–45*

[Millions of dollars]

	1929	1930	1931	1932	1933	1944	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945
Total producers' durable equipment	6,438	4,926	3,162	1,781	1,783	2,531	3,351	4,531	5,444	3,975	4,577	6,108	7,676	4,857	4,082	5,706	7,545
Special industry machinery	550	399	300	182	198	256	329	435	503	378	405	511	619	601	576	716	853
Mining Machinery	107	60	26	20	24	38	59	100	114	72	77	114	242	146	113	168	204
Construction machinery	135	106	61	17	14	28	46	80	105	85	82	129	177	159	164	180	254
Metal-working machinery	279	160	87	38	46	81	131	197	192	159	228	449	530	408	331	170	325
Pumps and pumping equipment	147	118	80	46	40	38	61	96	124	101	108	150	213	196	178	239	314
General and miscellaneous machinery and equipment	581	414	312	179	171	237	316	431	508	363	406	467	546	409	401	478	676
Engines and turbines	65	55	32	15	12	20	28	40	51	32	36	48	68	57	72	73	91
Farm machinery and equipment	393	366	189	126	129	142	221	274	344	327	292	375	495	517	383	606	744
Tractors	175	161	99	46	23	58	121	192	254	184	175	236	316	234	170	380	424
Electrical apparatus and equipment	480	376	260	119	87	143	207	264	422	281	352	556	652	451	395	635	724
Office machinery	154	107	75	53	52	64	83	103	129	109	115	145	200	170	119	174	234
Nonresidential furniture and equipment	514	411	278	164	141	192	208	246	307	261	285	341	425	329	277	282	348
Professional and scientific equipment	91	75	54	35	29	33	44	55	80	62	80	83	104	84	118	134	145
Tools	88	68	45	30	34	44	51	61	74	57	65	89	128	82	122	178	160
Durable containers	167	141	99	76	87	111	113	132	166	122	136	143	161	152	197	182	220
Miscellaneous subsidiary durable equipment	349	303	226	157	150	183	214	267	292	247	282	323	395	208	117	139	235
Business motor vehicles	1,656	1,093	753	407	493	709	977	1,264	1,312	836	1,142	1,418	1,746	309	394	501	988
Railroad and transit equipment	391	387	94	52	33	118	125	230	383	162	200	353	463	461	287	385	378
Ships and boats	75	109	83	18	12	21	9	57	65	122	88	145	194	233	312	267	289
Aircraft	41	17	9	1	8	15	8	7	19	15	23	39	35	6	0	0	12
Less: Government purchases, not allocable [1]												6	33	355	644	181	73

[1] Consists of certain Defense Plant Corporation purchases included mainly in special industry machinery, general and miscellaneous machinery and equipment, engines and turbines, pumps and pumping equipment, electrical apparatus and equipment, professional and scientific equipment, and tools.

TABLE VII.—*Net change in business inventories, 1929–48*

[Millions of dollars]

	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948
Net change in business inventories, total	1,562	−283	−1,361	−2,563	−1,619	−1,144	905	1,004	2,309	−973	441	2,275	3,874	2,065	−922	−809	−746	6,711	71	6,455
Farm	−252	−249	308	36	−271	−1,317	478	−1,111	545	140	97	240	458	1,309	−420	−545	−148	−228	−2,162	1,324
Nonfarm	1,814	−34	−1,669	−2,599	−1,348	173	427	2,115	1,764	−1,113	344	2,035	3,416	756	−502	−264	−598	6,939	2,233	5,131
Net change in nonfarm inventories	1,814	−34	−1,669	−2,599	−1,348	173	427	2,115	1,764	−1,113	344	2,035	3,416	756	−502	−264	−598	6,939	2,233	5,131
Corporate	1,558	191	−1,149	−1,816	−871	182	217	1,589	1,520	−920	251	1,633	3,165	470	−457	−1,070	−1,027	6,001	2,897	4,147
Noncorporate	256	−225	−520	−783	−477	−9	210	526	244	−193	93	402	251	286	−45	806	429	938	−664	984
Change in book value	1,200	−4,049	−4,694	−3,941	1,320	852	704	2,973	1,824	−2,297	1,224	2,235	6,677	2,332	425	93	79	14,054	9,836	7,698
Corporate	1,086	−3,069	−3,563	−2,863	1,272	807	444	2,327	1,551	−1,883	965	1,781	5,782	1,674	316	−783	−463	11,230	8,884	6,317
Noncorporate	114	−980	−1,131	−1,078	48	45	260	646	273	−414	259	454	895	658	109	876	542	2,824	952	1,381
Inventory valuation adjustment	614	4,015	3,025	1,342	−2,668	−679	−277	−858	−60	1,184	−880	−200	−3,261	−1,576	−927	−357	−677	−7,115	−7,603	−2,567
Corporate	472	3,260	2,414	1,047	−2,143	−625	−227	−738	−31	963	−714	−148	−2,617	−1,204	−773	−287	−564	−5,229	−5,987	−2,170
Noncorporate	142	755	611	295	−525	−54	−50	−120	−29	221	−166	−52	−644	−372	−154	−70	−113	−1,886	−1,616	−397
Net change in nonfarm inventories by industrial groups	1,814	−34	−1,669	−2,599	−1,348	173	427	2,115	1,764	−1,113	344	2,035	3,416	756	−502	−264	−598	6,939	2,233	5,131
Manufacturing	911	747	−594	−1,155	−578	136	213	1,095	1,344	−631	214	1,274	2,321	1,552	247	−814	−1,557	3,242	998	2,556
Change in book value	598	−1,553	−2,239	−1,846	828	598	381	1,586	1,340	−1,268	713	1,363	4,053	2,323	826	−593	−1,122	6,502	5,046	4,243
Inventory valuation adjustment	313	2,300	1,645	691	−1,406	−462	−168	−491	4	637	−499	−89	−1,732	−771	−579	−221	−435	−3,260	−4,048	−1,687
Wholesale trade	31	54	−413	−175	−89	66	1	286	210	−198	77	162	168	−588	−289	264	542	906	812	893
Change in book value	−74	−527	−832	−358	268	226	9	487	70	−403	236	157	794	−316	−128	293	646	2,150	1,970	817
Inventory valuation adjustment	105	581	419	183	−357	−160	−8	−201	140	205	−159	5	−626	−272	−161	−29	−104	−1,244	−1,158	76
Retail trade	260	−533	−377	−753	−485	−47	313	703	64	−187	118	575	501	−272	−336	191	288	2,191	200	1,556
Change in book value	87	−1,390	−1,148	−1,136	223	−16	394	831	209	−490	312	656	1,309	234	−185	269	382	4,407	1,945	2,135
Inventory valuation adjustment	173	857	771	383	−708	−31	−81	−128	−145	303	−194	−81	−808	−506	−151	−78	−94	−2,216	−1,745	−579
All other	612	−302	−285	−516	−196	18	−100	31	146	−97	−65	24	426	64	−124	95	129	600	223	126
Change in book value	589	−579	−475	−601	1	44	−80	69	205	−136	−37	59	521	91	−88	124	173	995	875	503
Inventory valuation adjustment	23	277	190	85	−197	−26	−20	−38	−59	39	−28	−35	−95	−27	−36	−29	−44	−395	−652	−377

TABLE VIII.—*Net foreign investment, 1929–48* [1]

[Millions of dollars]

	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948
Net foreign investment	771	690	197	169	150	429	−54	−93	62	1,109	888	1,509	1,124	−207	−2,245	−2,099	−1,438	4,672	8,898	1,901
Net long-term capital movement [2]	240	221	−215	−257	−77	−200	−436	−777	−521	−97	−27	73	642	159	147	−21.	1,399	3,603	7,741	2,217
Net short-term capital movement [2]	4	479	637	446	419	−222	−1,072	−431	−356	−344	−1,470	−1,530	389	−67	−1,225	−356	−1,915	851	−2	−604
Change in gold stock	143	310	−133	53	−131	1,266	1,822	1,272	1,364	1,799	3,174	4,243	719	−23	−757	−1,350	−548	623	2,163	1,530
Errors and omissions [3]	384	−320	−92	−73	−61	−415	−368	−157	−425	−249	−789	−1,277	−626	−276	−410	−372	−374	−405	−1,004	−1,242

[1] The data presented here constitute only a bare summary of net foreign investment in terms of major types of capital movements. For greater detail, the following publications of the Department of Commerce should be consulted: 1929 through 1939—The United States in the World Economy; 1940 through 1944—International Transactions of the United States During the War, 1940–1945; 1945 through 1948—The forthcoming Balance of International Payments of the United States, 1946–48.

[2] Positive figures indicate net increases in United States claims on foreigners or net decreases of United States liabilities to foreigners; negative figures indicate net decreases in United States claims on foreigners or net increases of United States liabilities to foreigners.

[3] Represents the difference between the sum of the components listed above and the net international flow of goods and services, factor incomes, and cash gifts and contributions, as reflected in the current account of the United States balance of international payments. The latter is regarded as the more nearly correct measure, and the difference is assumed to represent unidentified capital movements.

It should be noted that the item "Errors and omissions" as shown here differs during the period 1941 through 1946 from that indicated in the official balance-of-payments statistics. This arises from the fact that the latter are compiled in terms of an area embracing United States Territories and possessions, whereas the national-income statistics are confined to the continental United States. In most years, this inconsistency has been ignored, but from 1941 through 1946 explicit adjustment has been made in the current account and in net foreign investment for large Federal Government expenditures in United States Territories and possessions. Data on the corresponding capital movements are not available, however, and the adjustments is here included among errors and omissions.

Government deficit (+) or surplus (−) on income and product transactions.—The excess of Government purchases of goods and services (other than land and second-hand fixed assets), transfer payments, net interest paid by Government, and subsidies less current surplus of Government enterprises over personal tax and nontax receipts, corporate profits tax accruals, indirect business tax and nontax accruals, and contributions for social insurance. This is equivalent to the sum of net changes in private (including foreign) claims upon the Government less the sum of net changes in private (including foreign) liabilities to the Government, and less also the change in the monetary gold stock, excluding from all such changes those arising from transactions in land and second-hand capital assets.

The Government deficit as here defined does not correspond closely either with changes in public debt or with budgetary deficits as usually reported. The following comments as to the nature of the differences are confined to the Federal deficit, but are suggestive also of differences at the State and local level.

The Federal deficit on income and product transactions may be compared with three familiar measures broadly similar to it in general character—the change in the gross public debt, the budgetary deficit, and the Treasury's cash operating statement. It differs substantially from all three in the timing of certain transactions, most notably of business tax receipts, which it reflects on an accrual rather than a cash-collections basis.

Apart from this, it differs from changes in the public debt primarily in taking account of Government liquid assets and loans receivable, as well as of gross debt; in covering not only United States securities but other types of Federal liabilities, such as accounts payable of Government corporations; and in eliminating interagency holdings, such as public-debt issues held by social-security trust funds.

Apart from timing, it differs from the budgetary deficit primarily in excluding lending operations and other capital transactions from current receipts and expenditures, and also in that it reflects on a consolidated basis transactions not only of the general and special accounts of the Treasury but also of numerous trust funds and special deposit accounts treated as separate entities in the official budget document.

Apart from timing, it differs from the cash operating statement, which, unlike the budget, is a consolidated statement of transactions clearing through the Treasury, chiefly in its exclusion of loans and other capital transactions from current receipts and expenditures.

Like all three of the above measures, the deficit on income and product transactions is predicated upon a classification of the Federal Reserve banks as entities distinct from the Federal Government proper. In the national income statistics, these institutions are treated as part of the private banking system.

SYNOPSIS OF TRENDS IN SAVING AND INVESTMENT

A thorough analysis of the data presented in table I is far beyond the scope of this memorandum, which has the more modest objective of indicating the nature of the data, their general significance, and their limitations. A brief summary of salient trends in saving and invest-

ment during the past two decades, however, may be useful in suggesting the direction which more elaborate inquiries might take.

The outstanding feature of the data is the extreme volatility of the various series over the course of the business cycle and under the impact of war. Gross private saving ranged from less than $3,000,000,000 in 1932 and 1933 to nearly $57,000,000,000 in 1944. As a percentage of gross national product, it varied from 5 percent at the depth of the depression to 27 percent in 1944. Equally striking fluctuations are apparent among the various components of private saving, as well as in the principal uses to which it has been put. The highly dynamic relationship of these factors to the functioning of the economy, in short, is revealed by even the most cursory comparison of table I with estimates of national income and product over the same period.

Total gross private saving in 1929, the first year for which data are available, amounted to 15½ billion dollars, or about 15 percent of gross national product. It declined precipitately, both absolutely and in relation to the Nation's output, during the next several years of mounting depression, reaching the low levels cited above in 1932 and 1933. Conversely, as business recovered, total private saving increased much more rapidly than national product, except from 1936 to 1937. A reason for the interruption in the growth of total private saving in that year may have been the impact of large new Federal social-security programs, which had the effect of diverting substantial sums from private saving into Government trust funds. Although savings of these social-insurance funds are held on behalf of specified classes of individuals, they are reflected in table I as part of the Government surplus, rather than in personal saving.

Again in the 1938 recession and subsequent recovery, gross private saving exhibited disproportionate movements as compared with general business indicators. By 1940, it was at approximately the 1929 level, both absolutely and as a percentage of gross national product.

Throughout the next 5 years, the Federal Government's war financing exerted an overwhelming influence upon the level and character of private saving, which mounted to an unprecedented dollar volume. From 1942 through 1945, gross private saving averaged 25 percent of gross national product. Most of it, however, was embodied in private holdings of public-debt obligations, and national (including public) saving was extremely low during this period when maximum resources were devoted to prosecution of the war.

This can be seen most readily through a slight rearrangement of the information in table I. As it stands, the table shows private saving on the one hand and private investment, including changes in net claims upon the Government, on the other. For some purposes, however, it would be more meaningful to transfer the Government deficit to the opposite side of the account (changing its algebraic sign) so as to show gross national (including public) saving in comparison with consolidated gross investment. The latter figure is already shown in table I, and would also represent the aggregate of gross national saving (including the statistical discrepancy) if private and Government saving were consolidated as suggested above. Such a rearrangement would place greater emphasis on the low rate of total national, as distinguished from private, saving during the war. This

emphasis would be diminished, of course, by introduction of an allowance for Government capital formation, but a strong contrast with the movement of private saving alone would remain.

Gross private saving in 1946 and 1947 was dominated by aftermath-of-war developments. Perhaps the most noteworthy of these was the extraordinarily high rate of consumption, as consumers who, as a whole, were in an extremely favorable liquid position, attempted to make up for consumption which they had had to forego during the war. Private saving, as a result, was somewhat low, especially in 1947, in comparison with other periods of correspondingly high investment and production. The deficiency of private saving relative to gross investment was made possible through release of funds by the Government, which used its surplus primarily to retire privately held debt and to finance foreign purchases in the United States. By 1948, the rate of consumption had receded to a more normal level, and gross private saving represented about the same proportion of gross national product as in such other relatively prosperous years as 1929 and 1940.

Both personal saving (net) and net business saving have exhibited more volatility in the business cycle than the gross aggregate, owing to the weight in the latter measure of relatively stable capital consumption allowances. The two net saving components have followed substantially similar trends over the business cycle, although fluctuations in net business saving have been somewhat more pronounced. Their respective reactions to the impact of war, however, diverged widely, largely because of Government policies.

Personal saving has amounted to 4 percent or more of the national income in relatively prosperous peacetime years (except 1947, when, as an aftermath of the war, consumption was abnormally high), and has ranged downward to very small amounts in periods of depressed business activity. In fact, fairly substantial personal dissaving occurred in 1932 and 1933.

At the other extreme were the war years, when exceptional circumstances brought personal saving to unprecedented levels (averaging 18 percent of national income from 1942 through 1945). On the one hand, scarcities of consumer goods and services created by diversion of resources to the war effort, together with Government price controls and rationing, greatly restricted outlets for consumption; and on the other, individuals were strenuously exhorted to invest in Government bonds for patriotic reasons. Very large amounts were in fact so invested, as may be seen from table II, which also shows that accumulation of currency and bank deposits absorbed most of the remaining personal saving during the war years. Since the latter development reflected Government payments to the public of funds created through borrowing from banks, the entire excess of personal saving over normal rates during this period was linked to deficit financing of the war program.

After the postwar dip in 1947, saving recovered in 1948 to a proportion of national income closer to the ratios which had obtained in other periods of peacetime prosperity.

Net business saving (here confined to undistributed corporate profits after adjustment to reflect charges of inventories to cost of sales on a replacement-cost, rather than a book-value, basis) has averaged in the neighborhood of 3 percent of the national income in prosperous nonwar years. Under less favorable conditions, it has been much lower, and

was harder hit during the depression than personal saving. Total corporate profits after tax were negative only in 1931, 1932, and 1933, but aggregate dividends exceeded profits after tax throughout most of the 1930's, with the result that net business saving was negative from 1931 through 1937. The dissaving was especially pronounced in 1932 and 1933, but occurred on a material scale also in 1931 and 1934.

By 1940, net business saving again approached 3 percent of the national income. Unlike personal saving, it did not increase proportionately during the war, due chiefly to restrictive action by the Federal Government in the form of price controls, high excess-profits taxes, and renegotiation of war contracts. In spite of the removal or mitigation of major government restrictions following the end of the war, net business saving declined, as reconversion problems and widespread industrial disputes exerted considerable restraint upon corporate profits and net savings. In 1947 and 1948, however, net business saving increased markedly, and in the latter year exceeded its 1929 proportion of the national income.

That portion of gross private saving represented by capital consumption allowances remained relatively stable throughout both cyclical and wartime fluctuations. It should be noted, however, that this picture would be considerably altered if satisfactory estimates of depreciation on a current replacement-cost basis were available. In general, the substitution would tend to widen the amplitude of cyclical fluctuations of depreciation allowances, with opposite effects upon net saving, both business and personal. Even so, depreciation would remain substantially less volatile than other components of gross savings, since it is a function of the entire outstanding stock of depreciable assets—a magnitude not susceptible to proportionately large annual changes.

Volatility in the business cycle and in war remains the most impressive characteristic of the data, of course, if we turn our attention to the investment side of the account. Gross investment absorbed some 16 percent of the Nation's output in 1929. It fell much more sharply than the latter with the onslaught of depression, so that the ratio had declined to 2 percent by 1932; and throughout the early stages of business recovery, the 1938 recession, and subsequent expansion preceding the war, changes in gross investment were proportionately greater than in gross national product, of which it represented about the same share in 1940 and 1941 as in 1929.

This share was drastically reduced after 1941 by diversion of resources to Government use for prosecution of the war effort. It should not be forgotten, however, that exclusion of Government capital formation results in a serious understatement of additions to the Nation's productive facilities during the war years. Gross investment as here defined rebounded very quickly with cessation of hostilities, as business hastened to restore the wartime impairment of capital equipment and to expand facilities for civilian production. In the first three postwar years, it was sustained in record dollar volume, both absolutely and as a percentage of gross national product.

Inasmuch as net foreign investment has averaged only about 6 percent of the Nation's total investment over the past two decades, the foregoing résumé of gross investment is substantially descriptive

also of gross private domestic investment. Since historical trends in the latter for the corporate sector of the economy are the subject of a separate section of this monograph, they will be passed over here without further comment, except to call attention to the sensitive role of business inventories. Changes in inventories have almost invariably tended to exaggerate the cyclical, wartime, and aftermath-of-war fluctuations in other components of gross private domestic investment.

Net foreign investment has comprised an important, but rarely a preeminent, segment of aggregate gross investment. Only in 1947, when it included exceptionally large foreign loans by the Federal Government, did it exceed one-fifth of the total. The fact that net foreign investment has been positive in nearly all peacetime years attests the persistence of an export surplus. In the decade before the war, it was financed in large measure by shipment of gold to this country, while in recent years government loans have predominated. By and large, private foreign investment in the form of long-term loans has been a minor factor throughout most of the period since 1929.

The Federal deficit during these two decades reflects the well-known history of deficit financing, first during the great depression, then, on a grand scale, of the war program. Surpluses since the war have been employed primarily for retirement of privately held public debt obligations and for loans, which are excluded from expenditures in the calculation of the deficit and are reflected in the consolidated statement in various components of gross investment—notably in net foreign investment. It should be emphasized again, as more fully explained in the preceding section of definitions, that the deficit (or surplus) as shown here represents a comprehensive summation of net changes in government liabilities, claims, and holdings of monetary metal arising from income and product transactions, and does not correspond closely to either the budgetary deficit or changes in the public debt.

Trends of State and local government deficits have been quite dissimilar to those at the Federal level. The political subdivisions in the aggregate have incurred deficits on income and product account during the years under review only from 1929 through 1932 and in 1948.

State and local governments as a whole were prevented from incurring deficits from 1933 through 1940 only by large-scale Federal assistance in the form of grants-in-aid, beginning in 1933. Surpluses were accumulated largely in the form of cash and deposits and trust and sinking fund investments, with only minor amounts used, on balance, for debt retirement.

The State and local surpluses were quite large from the beginning of the war through 1946, reflecting the expansive influence of a war economy upon many types of revenue at a time when shortages of materials and manpower forcibly restricted expenditures. Some of the surplus was used for debt retirement, but much more was invested in Federal securities or accumulated in deposits to establish reserves for financing of postwar capital outlays.

Consummation of these plans, together with the effects of inflation upon operating costs, brought about a sharp shift in the fiscal position of State and local governments after the war. By 1948, their operations showed a deficit (as defined for national income purposes).

SECTION 2. SOURCES AND USES OF CORPORATE FUNDS

The above discussion is centered on gross savings and investment for the whole economy. Because of the aggregative nature of the statistics, it was not possible to show the investment demands of particular sectors of the economy and the way in which the various sectors financed their capital requirements. In order to do so it would be necessary to prepare more detailed data on sources and uses of funds for the major economic groups such as consumers, unincorporated business, corporations, government, and foreigners and for the more important subgroups. Such detail is not now available on a satisfactory basis over an extended period of time, but it is possible to depict the volume and nature of capital requirements and the methods of financing these requirements for one of the most important of these groups—corporate business—in the postwar period.

Estimates of postwar sources and uses of corporate funds are presented in tables IX and X. These data refer to nonfinancial business corporations only—that is, they exclude banking and insurance companies which are primarily suppliers of capital funds for business or intermediaries in the flow of savings from consumers to business. Tables XI and XII present other data relevant to the financing of corporate capital requirements.

TABLE IX.—*Sources and uses of corporate funds, 1946–49* [1]

[Billions of dollars]

	Annual			First half	
	1946	1947	1948	1948	[2] 1949
Uses:					
Plant and equipment	11.6	15.0	17.3	8.0	8.4
Inventories (book values)	11.2	8.9	6.3	3.5	−1.6
Receivables	4.8	5.7	2.3	.5	−2.4
From business	5.1	4.2	.8	.1	−1.8
From consumers	1.7	1.7	1.4	.3	−.7
From government	−2.0	−.2	.2	.1	+.1
Other current assets	−.7	−.1	[3]	[3]	[3]
Total	26.9	29.5	25.9	12.0	4.4
Sources:					
Retained profits [4]	7.7	11.4	12.5	6.7	4.5
Depreciation	4.2	4.9	5.5	2.7	2.9
Cash and deposits	−1.1	−1.3	.1	.2	.1
U. S. Government securities	5.8	1.5	−.1	.8	−.4
Payables	4.0	2.6	.9	−1.4	−2.4
Federal income-tax liability	−1.6	2.7	.9	.4	−1.0
Other current liabilities	1.8	.6	[3]	−.4	−.2
Bank loans (excluding mortgage loans)	3.3	2.6	1.2	−.1	−2.1
Short-term	1.9	1.5	.5	−.3	−1.7
Long-term	1.4	1.2	.6	+.2	−.4
Mortgage loans	.6	.8	.7	.4	.3
Net new issues	2.3	4.4	6.0	3.2	3.3
Stocks	1.3	1.3	1.2	.8	.7
Bonds	1.0	3.1	4.8	2.4	2.6
Total	27.0	30.2	27.7	12.5	5.0
Discrepancy	−.1	−.7	−1.8	−.5	−.6

[1] Excluding banks and insurance companies.
[2] All data for the first half of 1949 are partly estimated.
[3] Less than $50,000,000.
[4] Including depletion. No data are available on retained earnings in the second quarter of 1949. Above estimate assumes a moderate reduction from the first quarter.

Source: U. S. Department of Commerce estimates based on Securities and Exchange Commission and other financial data.

TABLE X.—*Changes in corporate securities outstanding and in their ownership, 1946–49*

[Billions of dollars]

	Annual			First half 1949
	1946	1947	1948	
Net issues [1] by industry group:				
Industrial and miscellaneous	2.5	2.4	2.9	1.5
Public utility (and telephone)	.3	2.2	3.0	1.8
Railroad	−.5	−.1	.2	.1
Net purchases [2] by various groups:				
Commercial banks	.3	0	−.5	.1
Mutual savings banks	.2	.3	.5	.3
Life-insurance companies	2.0	3.2	4.3	1.6
Foreigners	−.2	−.2	−.2	0
Domestic individuals, etc	0	1.3	2.0	1.4

[1] New issues less retirements.
[2] Purchases less sales.

Source: U. S. Department of Commerce estimates based on Securities and Exchange Commission and other financial data.

In analyzing the information given in table IX, several points should be borne in mind. In the first place, total sources of funds should equal total uses or disposition of funds for any given sector of the economy as well as for the economy as a whole. As was pointed out above in connection with the estimates of gross national savings and investment, however, errors in estimation ordinarily give rise to some discrepancy between sources and uses.[3]

Secondly, it should be noted some items may be sources or uses in different periods, depending on the direction of change in the particular component. For example, a reduction of United States security holdings, as in 1946, is a source of funds making cash available, whereas an increase in such holdings constitutes a use of funds by corporations. On the other hand, an increase in trade debt ("payables") of corporations is a source of funds, while a decrease requires financing and hence is a use of funds. A minus sign in the table indicates that an item which for convenience has been classified as a source of funds is in that year a use of funds, and conversely.

Finally, it should be pointed out that some of the uses shown in table IX merely mirror a corresponding source and hence do not indicate a net increase or decrease in financing requirements of corporations. For example, if a corporation sells goods to another corporation on open book account, both corporate receivables and payables rise by the same amount. Thus, for corporations as a whole, only the net increase in receivables constitutes a capital requirement for which means of financing must be found. Such a net increase or decrease is, of course, possible because corporations deal not only with other corporations but with Government, foreigners, unincorporated business, and consumers.

Bearing these considerations in mind, it is possible from the data presented in the accompanying tables to analyze the sources of and demand for corporate funds in the postwar period. Where possible, trends in the investment of capital and financing of capital requirements will be placed in historical perspective and discussed in relation to their effect on the financial position of corporations.

[3] Apart from these errors, there are additional factors leading to such a discrepancy. See discussion in Business Financing in the Postwar Period, Survey of Current Business, March 1948. It will be noted that the estimated uses of corporate funds to finance plant and equipment expansion are not strictly comparable with the over-all plant and equipment figures presented elsewhere in this report. The differences are primarily conceptual though partly the result of different estimating techniques.

POSTWAR TRENDS

American corporations emerged from the war with a huge demand for new capital to finance expansion of facilities for peacetime production, additions to inventories, and other working capital.

Postwar capital requirements of $90,000,000,000

Over the 3½ year period from the end of 1945 to mid-1949, an unprecedented volume of $90,000,000,000 was raised for these purposes. Corporations spent $52,000,000,000 to finance facilities expansion. An additional $25,000,000,000 was used in adding to inventories, while higher book credit to trade customers and consumers accounted for $10,500,000,000.

As has been generally true in the past, capital requirements were financed chiefly from internal sources. Retained profits from operations accounted for $36,000,000,000 and reserves for depreciation were increased by about $17,500,000,000.

In view of their highly liquid position at the termination of the war, corporations were able to finance part of capital requirements through a reduction of $4,500,000,000 in their liquid assets. In the process of expanding their volume of business, corporations increased their trade debt by $5,000,000,000 over the 3½-year period. As was mentioned above, this source of funds reflected in large part the extension of credit to other corporations. It may be noted, therefore, that the net increase in receivables over this period amounted to $5,500,000,000, representing the extension of corporate credit to other sectors of the economy, primarily unincorporated business and consumers.

$23,000,000,000 raised through loans and security sales

In addition to funds available through the current operations of business, corporations raised approximately $23,000,000,000, or one-fourth of total requirements, by borrowing from banks and other institutional lenders and by selling securities in the capital markets.

The net increase in bank indebtedness from the end of 1945 to June 1949 amounted to about $5,000,000,000, as long-term loans rose by about $3,000,000,000 and short-term loans payable within a year increased by about $2,000,000,000. In addition, long-term mortgage indebtedness of corporations was expanded by $2,000,000,000.

On the securities markets, corporations realized about $16,000,000,000 from the excess of bond and stock sales over the retirement of such issues. Net new stock issues amounted to $4,500,000,000, while bond sales accounted for the remainder, or $11,500,000,000.

On an over-all basis, it appears that corporations experienced comparatively little difficulty in financing these huge capital needs of the postwar period except possibly for equity money. While interest cost on borrowed funds was generally slightly higher than the wartime low, rates were maintained at levels which were quite low in historical perspective and were substantially less than the prosperous years of the twenties. It is true that the ratio of corporate earnings to common-stock prices—one index of the cost of raising equity capital—rose sharply in the postwar period, but by mid-1949 the ratio was not much different from the level prevailing during the mid-twenties. While the earnings-price-ratio for industrial stock issues is somewhat higher than in that period, the situation is reversed in the case of railroads and public utilities.

Capital requirements reduced in 1949

A sharp reduction in the demand for capital funds by corporations occurred in 1949, reflecting the basic adjustments which were experienced in the general business picture. The contrast between the first 3 postwar years and the first half of 1949 is clearly reflected in table IX. In each of the first 3 years, total capital requirements were at or near record levels, ranging from $26,000,000,000 to $30,000,000,000 annually, as large-scale facilities expansion and increases in receivables and inventories required additional financing.

Plant and equipment outlays continued heavy through the first half of 1949, but the upward trend in inventories and receivables, which had tapered off in 1948, was reversed in 1949. Whereas in the first half of 1948 the increases in these latter items called for $4,000,000,000 of new financing, in the first half of 1949 reductions of inventories and receivables amounted to about $4,000,000,000, accounting for a total drop of $8,000,000,000 in uses of corporate funds. The decline in inventories followed upon the adoption of cautious buying policies by business as sales leveled off in the latter part of 1948 and then declined after the turn of the year. Part of the reduction in book value of inventories reflected the lower prices at which replacement of stock occurred.

Corporate short-term debt reduced

The lower volume of capital requirements in 1949 was accompanied by reduction of corporate short-term debt to other businesses and to banks. Trade payables were down $2,400,000,000 from the end of 1948 to mid-1949, and outstanding short-term bank loans to corporations fell by $2,000,000,000. These reductions, mainly a reflection of reduced short-term capital requirements flowing from the readjustments in the economy as a whole, stand in sharp contrast to the steady rise over the first three postwar years, when payables rose by $7,500,000,000 and short-term bank loans were expanded by $4,000,000,000. It may be noted also that net long-term bank borrowing was reduced in 1949, and some let-up appeared in the upward trend of mortage debt of corporations.

Changes in liquid assets minor since 1946

In contrast to the early postwar use of liquid assets to finance some capital requirements, there has been relatively minor change in cash and Federal security holdings of corporations since 1946. Cash and deposits owned by corporations increased substantially in both 1946 and 1947, but sales or redemptions of United States Government securities were much greater in 1946 and approximately equal to the cash increase in 1947. Over the last 18 months—from December 1947 to June 1949—the changes in cash and Government securities have been small and also largely offsetting.

As pointed out below, although corporations have reduced their liquid-asset holdings while business operations have expanded in the postwar period, their liquidity position compares favorably with that which prevailed before the war.

Record securities market financing

The volume of funds raised by corporations through the sale of securities (net of retirements) increased steadily over the postwar period, including the first half of 1949, but there has been a considerable change in the composition of the increase, as between equity

and debt issues. In 1946, over half of the net new issues, totaling $2,300,000,000, represented sales of preferred and common stock. While total net new issues rose steadily to $4,400,000,000 in 1947 and $6,000,000,000 in 1948, almost all of the increase was accounted for by bond sales, with the result that the proportion of equity issues fell to 25 and 20 percent, respectively, in these two years. Total net new issues in the first half of 1949 continued at the record rate established in 1948, and there has been little further change in composition.

In noting the postwar composition changes, two points should be borne in mind. In 1946, public-utility and railroad issues were very small, the bulk of the financing having been by industrial companies. Equity financing is relatively more common among these latter concerns, whereas utilities and rail groups traditionally depend more heavily on debt issues. Utilities financing increased sharply from 1946 on, and the increasing relative importance of this group accounts for a substantial part of the reduction in the proportion of equity financing in the following years. Secondly, some large security flotations of the telephone industry (in the utility group) were composed of convertible bond issues; that is, issues which could be and to a considerable extent were later converted to common stock.

COMPARISON OF PREWAR AND POSTWAR FINANCING

In surveying the general structure of the postwar financing of the huge capital requirements of corporations, some interesting comparisons with the prewar situation may be noted. At present, only preliminary data on prewar sources and uses of corporate funds are available. However, certain broad generalizations seem justified on the basis of these data.

In the decade immediately preceding the war, capital requirements were financed largely from internal sources—that is, funds arising out of current operations. During the 1920's, on the other hand, recourse was made to external sources to a somewhat greater extent. The difference between these decades is to be explained in large part by the differing economic conditions. Capital requirements in the twenties were much higher than in the thirties, as a result of the generally higher level of activity prevailing in the earlier period.

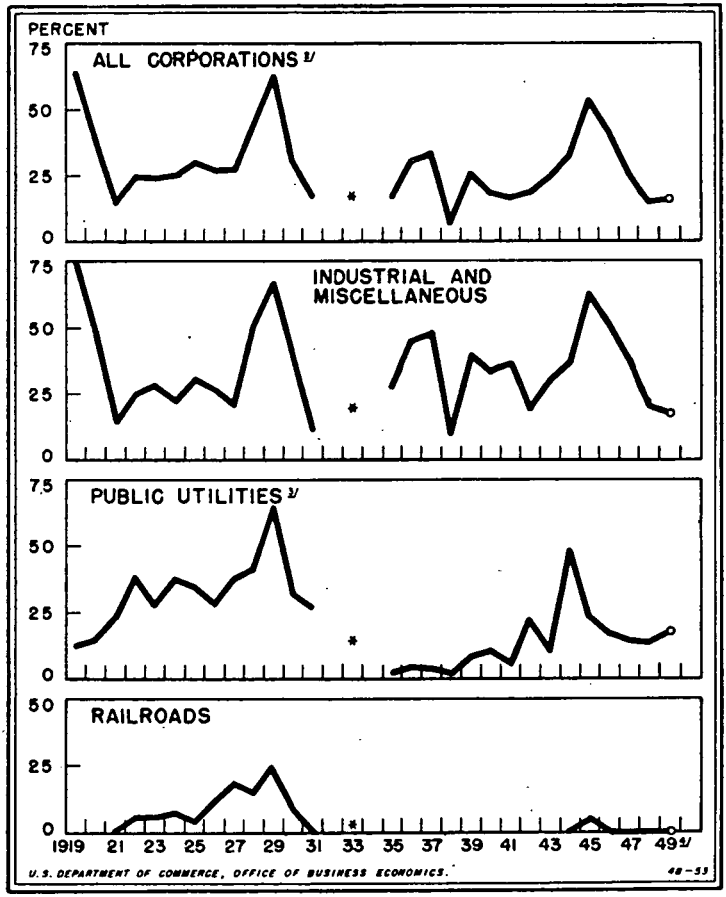
The amount of money raised through the capital markets in the twenties, however, was much more modest than is commonly thought. In the late twenties, including 1929, it is estimated that net new issues —i. e., new domestic private security issues less retirements—were not much in excess of $2,500,000,000 annually, exclusive of investment companies. This figure, of course, is far below the level of new issues in that period, and reflects the large volume of refinancing issues and outright retirements. For most of the years during the thirties and up until the end of the war, retirements of securities exceeded new issues. Even in 1936—the highest year for net new issues from the depression low to the postwar period—less than $1,000,000,000 was raised on balance from the security markets.

Current equity financing relatively low

In historical perspective, it appears that the equity proportion of total funds raised in the securities market in the last 18 months was somewhat lower than in past years of prosperity. As pointed out

above, net equity issues comprised about 20 percent of the total in this period. Comparable data on net new issues by type of issue for previous peacetime periods of prosperity are not available. The Commercial and Financial Chronicle does, however, compile and publish a series on new capital issues which, while not comparable with the net new issues series currently available, is useful in noting the long-term changes in the relative importance of stocks and bond issues. (See chart 1 and table XI.)[4]

CHART 1.—STOCK ISSUES AS A PERCENTAGE OF TOTAL AMOUNT OF NEW CAPITAL ISSUES, ALL CORPORATIONS AND BY INDUSTRY GROUPS [1]



*Ratios omitted in 1932, 1933, and 1934 because of the extremely low volume of new capital issues.
[1] Data include issues for the purchase of existing assets.
[2] Exclude investment and holding companies subsequent to 1924.
[3] Include communications.
[4] Ratios are based upon data for 6 months.

Source of data: Commercial and Financial Chronicle.

[4] The major differences between the net new issues series used here and the Chronicle series are: (1) net new issues take account of retirements of bonds and stocks, whereas the new capital series of the Chronicle does not; (2) the Chronicle series, after adjusting for investment-company issues, still includes a substantial number of financial issues whose purpose, like those classified in the investment-company group, is the acquisition of existing assets or the purchase of outstanding securities.

TABLE XI.—*Relation of stock issues to total amount of new capital issues, by industry groups, 1919–49* [1]

[Totals in millions of dollars]

Year	All corporations [2]		Industrial and miscellaneous		Public utilities [3]		Railroads	
	Total new issues	Stocks as percent of total	Total new issues	Stocks as percent of total	Total new issues	Stocks as percent of total	Total new issues	Stocks as percent of total
1919	2,303	63.2	1,907	74.5	278	12.5	117	0
1920	2,710	38.2	2,005	48.8	382	14.4	322	0
1921	1,822	14.7	978	15.4	492	23.8	353	0
1922	2,336	24.6	1,086	24.9	726	38.0	524	5.2
1923	2,702	24.4	1,350	28.2	888	28.2	465	5.8
1924	3,322	25.0	1,217	22.8	1,326	37.5	780	7.2
1925	4,086	29.4	2,224	30.3	1,481	34.3	380	4.3
1926	4,286	26.3	2,342	26.4	1,598	29.1	346	11.8
1927	5,216	27.2	2,645	21.0	2,065	37.4	506	18.0
1928	5,293	45.0	3,117	50.5	1,811	41.8	364	14.6
1929	6,417	62.1	3,939	66.5	1,932	63.6	547	24.3
1930	4,712	30.4	1,549	39.0	2,365	32.2	797	8.3
1931	1,759	17.5	465	11.6	949	26.7	346	0
1932	324	5.8	37	32.4	274	2.2	13	0
1933	160	74.4	113	99.1	34	20.6	12	0
1934	159	21.4	37	91.9	49	0	73	0
1935	402	17.2	245	27.3	83	2.4	73	0
1936	1,202	29.6	811	43.3	124	3.7	267	0
1937	1,225	33.3	840	47.7	153	3.9	232	0
1938	869	7.6	580	10.5	273	1.8	16	0
1939	381	25.5	235	38.7	61	8.2	85	0
1940	735	18.4	322	33.2	268	10.4	144	0
1941	1,062	16.3	411	35.8	399	6.4	252	0
1942	622	18.6	432	19.2	157	21.7	33	0
1943	378	24.3	298	29.9	18	11.1	61	0
1944	663	32.3	527	36.2	48	47.9	88	0
1945	1,264	52.6	1,029	61.5	112	23.2	123	4.1
1946	3,546	41.4	2,602	51.0	818	17.4	126	0
1947	4,828	25.5	2,553	37.1	2,035	14.0	240	0
1948	5,975	15.1	2,561	20.4	2,836	13.3	578	0
1949: First half	3,235	16.1	1,217	17.3	1,730	17.9	288	0

[1] New capital issues include issues for the purchase of existing assets.
[2] Excluding investment and holding companies subsequent to 1924.
[3] Including communications.

Source: Commercial and Financial Chronicle.

Though in 1946 and 1947 the proportion of stock to total net new issues compared quite favorably with the midtwenties, in 1948 and 1949 the proportion was lower than in all years of the twenties with the exception of 1921, a year of declining business activity. From 1922 to 1927 the ratios ranged from 24 to 29 percent, thereafter rising sharply to over 60 percent in 1929, when equity issues were used extensively to refinance debt issues.

Postwar bank borrowing high

Although corporate indebtedness to banks was reduced in the first half of 1949, the increase in the three preceding years was of record or near-record proportion. The rise in 1946 and 1947 was as large as that which occurred in the years 1919–20, when economic conditions were quite similar to those prevailing in 1946 and 1947. Both periods were characterized by rapidly rising sales, inventories and prices, with a resulting rise in the need for new working capital. Unlike the earlier period, however, long-term bank loans, which first became important in the late thirties, played an important role in the money borrowed from banks. Not only did these loans constitute about half of the total increase in bank loans to corporations in the 3 years 1946, 1947, and 1948, but in 1949 there was less than a half billion dollars'

reduction in the volume of long-term loans outstanding, while short-term bank indebtedness of corporations was reduced by $2,000,000,000.

Increase in internal financing

While hugh sums of money were obtained from banks and the securities markets in the postwar period, available data indicate that the ratio of such external financing to funds available internally from retained earnings and depreciation charges was definitely lower in the postwar period than in the late twenties. In this respect, however. it may be noted that the 1946–48 retained-earnings figures reflect in part the unusually large inventory revaluation in those years.

In comparing postwar and prewar financing, two other points should be mentioned. First, the amount of investment company issues in recent years has been quite small as compared with the 1920's. Though the very substantial amount of money raised in this manner in the late twenties did not finance real investment, it did indicate the plethora of funds seeking equity investment in that period. To the extent that investment companies channeled saving into existing securities which otherwise would have remained in liquid form, they also served to raise stock prices and thus to lower the costs of equity financing to business generally.

Second, the ratio of dividends to net earnings, which affects the level of retained profits, was lower in the postwar period than in the 1920's. This might conceivably indicate a greater reluctance by corporations to undertake new financing as a result of increased difficulties or expense, or it may reflect an additional incentive to retain earnings in view of the much higher individual income-tax rates at present. Trends in the cost of financing will be discussed below. It may be noted here, however, that for the stocks of large companies which are widely held, the ratio of dividends to net earnings is not much different currently from the average for the twenties.

Large spread between bond and stock yields

In comparing the trends of financing through the securities markets, it is interesting to note the long-term variation in the relative cost of raising equity capital as compared with interest rates on borrowed funds. Chart 2 and table XII present long-term series of corporate bond yields, and earnings-price ratios and dividend yields on common stocks.

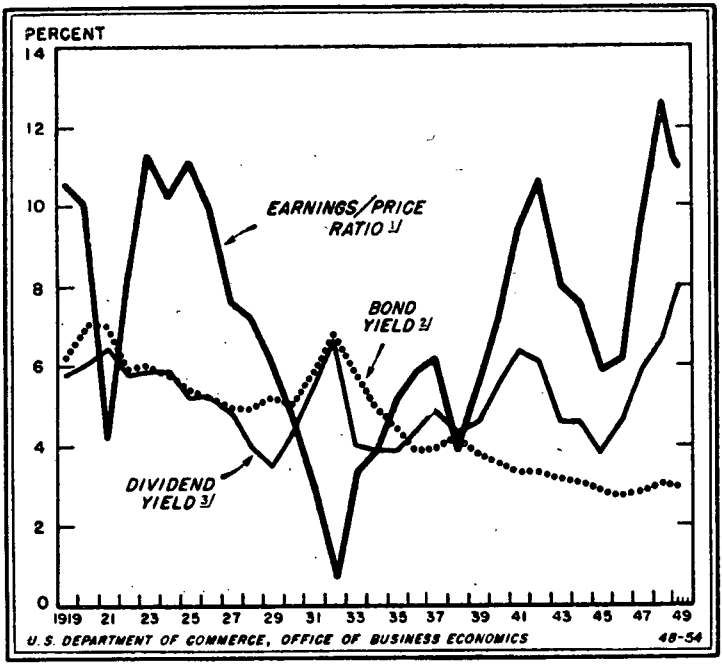
Both the dividend yields and the earnings-price ratios are estimates for common stocks listed on the New York Stock Exchange and, though fairly comparable with the bond yields, are considerably different from the series which would be obtained if it were possible to derive similar figures for all stocks. The earnings figures used in these ratios are those reported by the corporations and are not adjusted in any way.

As may be seen from the chart, corporate bond yields have been steady at about 3 percent since 1946, when the average for the year reached a low 2.7 percent. The much more volatile earnings-price ratio for common stocks, on the other hand, rose almost steadily from 1945 to 1948, as postwar profits increased sharply while stock prices showed little net change over the period. Since the end of 1948, the trend has been reversed and by the second quarter of 1949, the ratio was again back to the 1947 level as earnings were reduced and stock prices rose moderately. Currently, the earnings-price ratio is in line

with the ratios prevailing in the mid-twenties, but is still higher than that which prevailed in the later boom years of that decade.

While the earnings-price ratio has fallen somewhat in the most recent period, the ratio of dividends paid to stock prices has risen steadily over the postwar period. Indeed, by mid-1949, the dividend yield on common stocks was at the highest level in the last three decades, more than 1 percentage point above the average for the mid-

CHART 2.—CORPORATE BOND AND COMMON STOCK YIELDS, AND EARNINGS/PRICE RATIOS



1 Based upon data for common stocks listed on the New York Stock Exchange; total reported earnings for the year expressed as a percentage of the total market value (number of shares times average prices) of these stocks.

2 Data are averages of daily figures.

3 Based upon data for common stocks listed on the New York Stock Exchange; total dividends for the year expressed as a percentage of the total market value (number of shares times average prices) of these stocks.

Sources of data: Bond yield, Moody's Investors Service; earnings/price ratio and dividend yield through 1938, *Common Stock Indexes*, Cowles Commission Monograph No. 3, and for subsequent years, preliminary estimates of the U. S. Department of Commerce, Office of Business Economics.

twenties. However, on an over-all basis, corporate dividend policy has remained conservative, with a relatively high proportion of earnings retained to help finance the huge postwar capital requirements.

When the movements of the earnings-price ratio and dividend yields are compared with the steady downward drift of interest rates on long-term funds, the spread between bond and stock yields stands out clear focus. In the current period, for example, the earnings-price ratio for stocks is almost four times the bond yield. In the mid-twenties, the ratios were about double bond yields.

TABLE XII.—*Relation of bond and stock yields by industry groups, 1919–49*

[Percent per annum]

Year	Total				Industrials		Utilities [4]		Rails	
	Bond yield [1]	Preferred stock yields (high grade)	Common stock		Bond yield [1]	Common stock earnings-price ratio [3]	Bond yield [1]	Common stock earnings-price ratio [3]	Bond yield [1]	Common stock earnings-price ratio [3]
			Dividend yield [2]	Earnings-price ratio [3]						
1919	6.2	6.3	5.8	10.6	6.2	11.3	6.2	8.6	6.4	9.9
1920	7.1	6.8	6.1	10.1	6.9	12.1	7.2	10.7	7.1	5.8
1921	7.0	6.8	6.5	4.2	7.0	(5)	7.2	12.2	6.9	10.1
1922	6.0	6.1	5.8	8.3	6.0	7.3	5.9	12.3	5.9	8.7
1923	6.0	6.1	5.9	11.4	6.0	10.7	5.8	11.4	6.2	12.8
1924	5.8	6.1	5.9	10.3	5.9	9.4	5.6	10.8	5.9	11.9
1925	5.5	5.9	5.2	11.2	5.6	11.2	5.3	9.6	5.5	12.0
1926	5.2	5.8	5.3	10.1	5.4	9.6	5.1	10.0	5.1	12.2
1927	5.0	5.5	4.8	7.6	5.1	7.2	5.0	8.2	4.8	8.7
1928	4.9	5.1	4.0	7.3	5.1	7.0	4.9	7.2	4.9	9.0
1929	5.2	5.1	3.5	6.2	5.3	6.3	5.1	4.5	5.2	8.8
1930	5.1	5.0	4.3	4.7	5.3	4.5	5.1	4.7	5.0	6.2
1931	5.8	5.0	5.6	3.0	6.1	2.2	5.3	5.1	6.1	1.8
1932	6.9	6.1	6.7	.7	6.7	(5)	6.3	7.2	7.6	(5)
1933	5.9	5.8	4.1	3.4	5.3	3.2	6.3	6.4	6.1	(5)
1934	5.0	5.3	3.9	3.9	4.5	4.2	5.4	5.4	5.0	(5)
1935	4.5	4.6	3.9	5.2	4.0	5.6	4.4	5.8	5.0	(5)
1936	3.9	4.3	4.4	5.9	3.5	6.2	3.9	5.2	4.2	3.8
1937	3.9	4.5	4.9	6.2	3.6	6.6	3.9	6.1	4.3	1.3
1938	4.2	4.3	4.3	3.9	3.5	4.1	3.9	6.3	5.2	(5)
1939	3.8	4.2	4.6	5.7	3.3	5.9	3.5	6.7	4.5	2.6
1940	3.6	4.1	5.6	7.2	3.1	7.6	3.3	7.2	4.3	5.9
1941	3.3	4.1	6.4	9.5	3.0	9.6	3.1	7.9	4.0	15.1
1942	3.3	4.3	6.1	10.7	3.0	8.6	3.1	8.9	4.0	31.5
1943	3.2	4.1	4.6	8.0	2.9	6.6	3.0	7.3	3.6	20.7
1944	3.1	4.0	4.6	7.6	2.8	7.0	3.0	6.7	3.4	13.4
1945	2.9	3.7	3.8	5.9	2.7	5.8	2.9	5.9	3.1	6.6
1946	2.7	3.5	4.6	6.2	2.6	6.6	2.7	6.2	2.9	3.5
1947	2.9	3.8	6.0	9.7	2.7	10.8	2.8	6.1	3.1	8.2
1948	3.1	4.2	6.7	12.6	2.9	13.8	3.0	7.6	3.3	10.9
1949, first half	3.9	4.0	7.8	11.1	2.8	13.1	3.0	7.5	3.3	5.4

[1] Moody's corporate bond yields, averages of daily figures.
[2] Total yearly dividends on New York Stock Exchange common stocks as percent of total market value of these stocks, based on average price during year.
[3] Total reported earnings on common stocks as percent of total market value.
[4] Includes communications.
[5] Deficits.
Sources: Bond yields are from Moody's Investors Service. Dividend yields and earnings-price ratios through 1938 are from Common Stock Indexes, Cowles Commission Monograph No. 3; subsequent figures are preliminary estimates made by the Department of Commerce. Preferred stock yields from Standard & Poor's Corp.

The comparison of common stock dividend yields with bond yields over the years is also striking. In contrast to the current situation in which dividend yields are more than double the prevailing 3-percent bond yield, in the twenties the rate of dividend payments to stock prices was not infrequently below the yield on bonds.

Interest rates low

The vast increase in liquid assets plus direct Government action in maintaining the market for United States bonds have undoubtedly contributed greatly to the present low level of interest rates. Another important reason for this development is the growing institutionalization of savings, with a resultant pressure on banks and insurance companies to find investment outlets. Since, with minor exceptions, these institutions do not buy common stock, there has been a steady growth in the demand for fixed-interest-bearing obligations.

The substantial demand for corporate bonds by life-insurance companies is particularly notable. The current flow of funds into

new private insurance at a rate of over $3,500,000,000 a year is more than three times the average of the late 1920's. These companies alone bought on balance during the past 3½ years a volume of corporate bonds roughly equal to the increase in corporate bonds outstanding. Their enormous holdings of United States Government securities plus the large, steady flow of funds into new insurance would seem to insure a continuance of a strong demand for corporate bonds for some time, at rates not too much in excess of present rates.

These factors help to explain not only the low level of bond yields and interest rates but, to some extent at least, the widening spread between the cost of financing in equity securities versus fixed-interest-bearing obligations. Other reasons for the relative weakness of the stock market as compared with the bond market may be found in the complex of factors affecting investors' confidence in the short-run, in possible long-run changes in attitude toward the assumption of risk as a result of developments in our economy, and probably also in the higher rates and increased progressiveness in the tax structure as compared with the 1920's. Since a large proportion of investors in the stock market are more concerned with short-term prospects for earnings and dividends, this area is particularly sensitive to supposed shifts in the business outlook. However, regardless of shifts in investor psychology, so long as businesses can obtain borrowed funds at the present low rates (and incidentally deduct interest charges unlike dividends for tax purposes), it seems probable that, for some time at least, a high proportion of capital requirements will continue to be satisfied through fixed-interest-bearing obligations.

CURRENT FINANCIAL POSITION OF CORPORATIONS

Reviewing the recent developments in the demand for and availability of corporate funds, it is possible to present a few broad generalizations with respect to some of the more important aspects of the current financial position of corporations.

Corporate debt not unduly large

While total interest-bearing debt of corporations—both short and long-term—has risen substantially since the end of the war, the present level of corporate indebtedness is not unduly high in relation to other variables. In the first place, corporations were in a position to reduce their indebtedness during the war period, and in both the war and postwar periods achieved considerable savings in interest charges on debt still outstanding through refunding operations at the low prevailing rates. Thus, despite the postwar increase in debt, interest payments by corporations are well below payments in 1929. The picture is even more favorable in the light of current profits levels. Interest payments represented about 6 percent of profits before interest and taxes in 1948 as compared with about 30 percent in 1929. Though profits were down in 1949 from the previous year, interest charges still constituted a substantially lower proportion of profits than in the late twenties.

Liquidity of corporations

In surveying the financial position of corporations at mid-1949, it is important to note their liquidity status. After drawing substantially on their holdings of cash and United States Government securities in 1946, corporations made little net change in their hold-

ings of these assets over the succeeding period. These liquid assets represented 10 percent of sales in the first half of 1949 as compared with 11.3 percent in 1940 and 10 percent in 1941.

Other measures of liquidity are shown in table XIII. The higher the ratios shown in the table, the more liquid is the financial position of corporations. As may be seen, only in one case does the 1949 position compare unfavorably with prewar. When Federal income tax liabilities are subtracted from cash and United States securities, and the residual is related to corporate sales, the ratio in 1949 approximated 7 percent compared with 9.3 percent in 1940. The ratio in 1949 compared favorably, however, with that of 1941, when it fell to 5.8 percent as a result of the sharp rise in Federal income tax liabilities. Moreover, it would seem plausible, in view of the very large increase in business activity since prewar that corporations would not need to increase their liquid assets in proportion to the rise in activity.

TABLE XIII.—*Corporate liquidity ratios, selected years 1940–49* [1]

Year	Ratio to sales		Ratio to current liabilities	
	Liquid assets	Liquid assets less Federal income tax liabilities	Liquid assets	Total current assets
	Percent	*Percent*		
1940	11.3	9.3	0.46	1.84
1941	10.0	5.8	.44	1.79
1945	17.9	13.5	.93	2.13
1946	14.1	10.9	.73	2.08
1947	11.2	7.9	.66	2.02
1948	9.8	6.6	.61	2.05
1949 (1st half)	10.0	7.0	.64	2.10

[1] Excluding banks and insurance companies. Sales data are total for given period. Other data used to derive ratios are for end of period shown.

Source: U. S. Department of Commerce, based on data from Securities and Exchange Commission and Bureau of Internal Revenue.

In general, on the basis of the ratios examined it would appear that the liquid position of corporate business at the present time is one which would appear adequate for the current volume of business and there seems to be little need on the part of corporations to raise additional funds to improve their liquidity.

Availability of funds and prospective financing

From the postwar experience of corporations in financing their capital requirements, it appears that on an over-all basis relatively little difficulty was experienced in raising the huge volume of capital funds required. The financing was accomplished with little pressure on the cost of senior funds. While interest rates rose slightly through 1948, in the most recent period the trend appears to have been reversed. On the other hand, the cost of raising equity capital increased sharply through 1948. The reduction in 1949, however, brought the earnings-stock price ratio back to a level comparable with the mid-twenties.

The amount of capital financing in the period immediately ahead will depend primarily on the level of demand rather than on supply

considerations. Should the downward trend of inventories and receivables be halted, total demand would be somewhat larger than in the first half of 1949, the degree of increase depending on the facilities expansion by corporations. However, it may be noted in this connection that plant and equipment outlays in the second half of 1949 are expected by business to be down somewhat from the first half, according to the regular quarterly survey of the Securities and Exchange Commission and the Department of Commerce. In any event, it is unlikely that requirements will, in the near future, approach the level of the first three postwar years and assuming no further decline in profits, it would appear that the usual sources of corporate—both external and internal—will prove generally adequate to meet the added financing required.

To the extent that corporations need to resort to the capital markets, some difficulties may be encountered in raising equity capital, particularly if corporations are reluctant to pay the comparatively high price of raising funds through stock issues. On the other hand, the interest cost on borrowed long-term funds may be expected to continue relatively low in the immediate future. Notwithstanding this latter probability, it is quite possible that corporations may be reluctant to add to their fixed charges, as backlog demands are worked off and the future market situation becomes somewhat less certain. Moreover, though small and new businesses fared quite well in the inflationary conditions characterizing the postwar period through 1948, they will undoubtedly encounter increasing difficulties in further financing.

The availability of short-term bank credit for capital needs does not appear to be in question, except possibly for new and small businesses. The recent decline in bank loans was a result of reduced requirements by corporations rather than of unwillingness of banks to make loans at current low-interest charges.

Section 3. Long-Term Trends in Equipment Expenditures

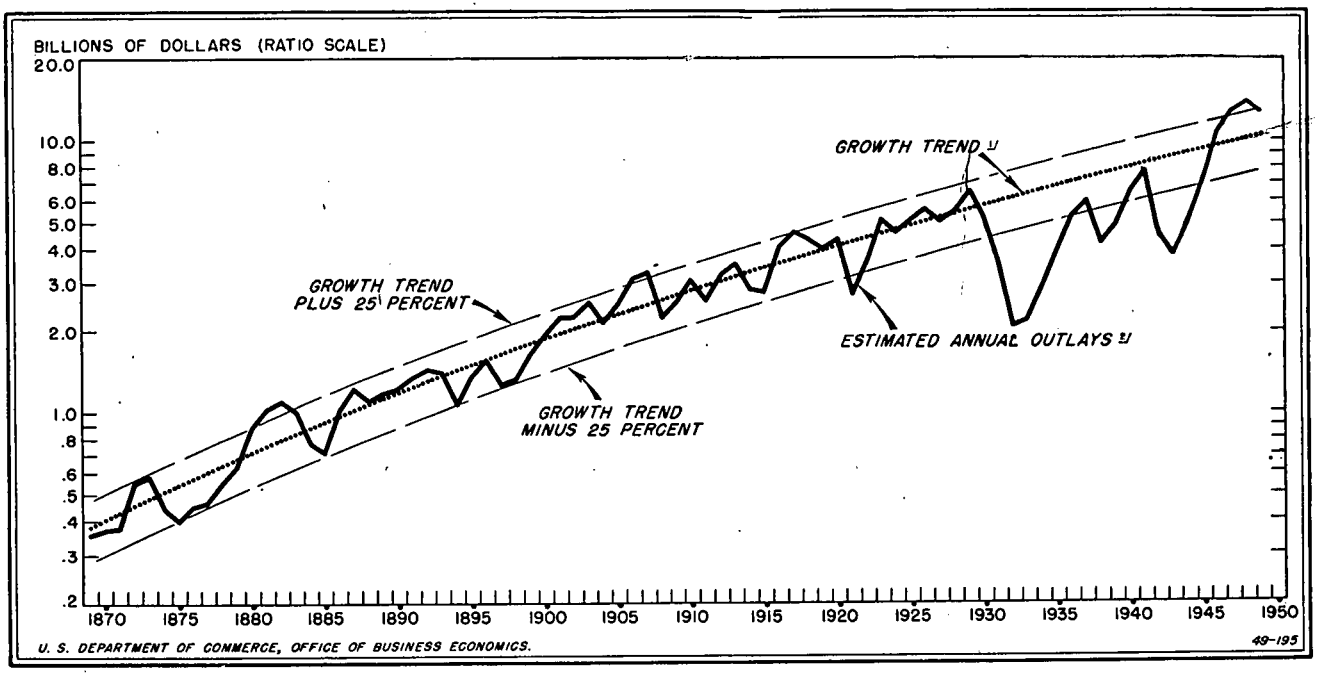
In view of the backlog of demands, which existed at the end of the war, it can be assumed that current outlays for producers' equipment include some catching up with deferred replacements and deferred modernization and expansion. It is important to have at least a rough indication of the extent to which these outlays exceed the normal current replacement and growth requirements and the extent to which the deferred requirements have been met.

The following appraisal is necessarily limited to equipment because in important instances the necessary data do not exist for a comparable analysis of plant. Equipment accounts for more than two-thirds of the combined total of producers' durable equipment plus all private nonresidential construction.

The secular level of outlays

Chart 3 provides some indication of the extent to which current outlays are based upon continuing demands for replacement and growth rather than a catching up with the postwar backlog. It shows estimated outlays for producers' durable equipment since 1869. The data are converted roughly into 1929 dollars so as to avoid, insofar as possible, the effect of price changes.

CHART 3.—GROWTH TREND IN PRIVATE OUTLAYS FOR PRODUCERS' DURABLE EQUIPMENT IN 1929 PRICES



[1] Trend fitted to data for 1869–1930.

[2] Estimates of expenditures for producers' durable equipment 1929-49, tentatively adjusted for price changes, are by the Office of Business Economics. This series is spliced, in 1929, to William H. Shaw's estimates of domestic consumption of producers' durable equipment, plus 30 percent of his estimates for passenger motor vehicles, both converted to 1929 dollars, from data contained in *Value of Commodity Output Since 1869*, published by the National Bureau of Economic Research. An upward adjustment for 1869 and subsequent years to compensate for Census underenumeration, and annual interpolations for the decades 1869–79 and 1879–89 were made; estimated government war expenditures for 1917–21 were excluded. Purchases of World War II surplus equipment from the Government are excluded; if included they would increase the above estimate for 1946 by roughly a billion dollars and for 1947 by a much smaller amount.

Source of data: U. S. Department of Commerce, Office of Business Economics. See also note 2 above.

As the country's stock of equipment grew, the annual replacements necessary to maintain that stock increased. The additions to maintain the same rate of growth in output per worker became larger. The additions necessary to take care of the annual increment in the number of workers also increased, although the percentage increase due to this factor declined with the decline in the rate of growth in the working population.

This secular growth in equipment requirements for replacement and expansion is shown by the trend line fitted to the data from 1869 through 1930. Because of the declining rate of growth in working population the rate of growth in equipment requirements was also declining slightly, as is indicated by the curved line on the ratio scale.

As projected beyond 1929 this secular trend is now about 3 percent per year. As might be expected, it is more than the secular growth in the total national output. While an annual increase of 3 percent may not seem large, its effect is to indicate that the requirements for normal replacements and growth over the next decade will be almost 2½ times those in the 1920's.

Over most of the 62 years prior to 1931 the cyclical fluctuations in equipment outlays were within the range of plus or minus 25 percent of the secular trend. This range is shown by the light dash lines on the chart. The deviations since then have been more extreme. They do not, however, warrant the conclusion that the trend has been altered.[5]

The relatively low outlays in the 1930's reflect the most extensive depression this country has experienced. Even as late as 1940 the economy was still operating well below a full employment level and demand for equipment was correspondingly reduced. The trough during the recent war reflects the large Government purchases of equipment, which are not included, and the restrictions on private outlays. Because of the low outlays before and during the war, and the resulting backlog of deferred expansion and deferred replacement, it is not surprising that the actual outlays in 1947 and 1948 appear to exceed the secular trend by a larger percent than in any preceding year.

This calculated trend, while a useful guide, does not provide a precise measure of the secular level of outlays. Aside from the practical difficulties of compiling such an historical series and adjusting it for price changes—and the resulting questions as to the accuracy of the data—there is the fact that comparatively small variations in fitting the trend line to the data prior to 1931 can mean a substantial difference in the projection of the trend to the present time. The conclusion seems warranted, however, that 1949 outlays are somewhere between 15 and 30 percent above those necessary to provide for normal replacements and growth.

The protracted period of outlays well below the secular trend also indicates that the backlog of deferred replacements and deferred growth must be large—much more than could have been made up by 4 years of above-trend outlays. While it does not provide a satisfactory measure of this backlog it suggests that outlays may average above the secular trend over the next several years.

[5] While the trend in chart 3 was remarkably consistent over a span of more than 60 years its projection into the future is valid only on the assumption of no major change in the economic environment tending to encourage or discourage investment in equipment. It does not preclude the possibility of effective moves to step up the secular level of investment if or when this appears desirable.

The segments of the market

This conclusion can be checked by analysis of certain segments of the equipment market. In dealing with these segments it is important to start with some knowledge of their size relative to each other and to the whole. Of the private outlays for producers' durable equipment in 1948, amounting to $21,000,000,000, approximately 13 percent was spent for passenger cars for business use and another 11 percent for trucks. About 12 percent was for farm machinery including tractors. The remainder of the equipment bought last year can be more conveniently broken down in terms of the purchasing industry than by type of equipment. The table below is necessarily a rough approximation. Nevertheless it serves to indicate relative magnitudes.

	Percent	
Passenger cars for business use		13
Trucks and truck trailers		11
Farm tractors	5	
Other farm machinery	7	
		12
Other equipment purchased by:		
Manufacturers and miners	31	
Railroads, electric utilities, telephone utilities	14	
Other utilities, other transportation, trade, services, construction, and miscellaneous industries	19	
		64
Total		100

PASSENGERS CARS FOR BUSINESS USE

In any appraisal of the demand for passenger cars it is not practicable to distinguish between those purchased for business use and those bought for nonbusiness purposes. Much of this business use is by professional persons, small entrepreneurs, and farmers for whom the same vehicle frequently is in part a business car and in part a family car.

The 1949 production of passenger cars for domestic use will be in the neighborhood of 5,000,000 cars. This compares with an estimated demand for normal replacement and normal growth of from 2½ to 3 million cars per year. The remainder reflects the catching up with the backlog of deferred demands.

As near as can be calculated from prewar relationships, there is comparatively little remaining deferred growth in the number of cars in use. The bulk of the remaining backlog appears to be in deferred replacements. Most of those cars which were already overage by prewar standards at the end of the war are still in service. With postwar production going to satisfy the more urgent demands for additional cars, replacements have continued at a very low level. Even if we assume that the average life expectancy is now about 12 years as against the prewar 10 years, there were at the end of 1948 about 6,000,000 cars in use which would have been scrapped if replacements had been readily available.

The combined backlog of deferred growth and deferred replacements appears large enough to assure purchases well above normal replacement and growth over the next several years.

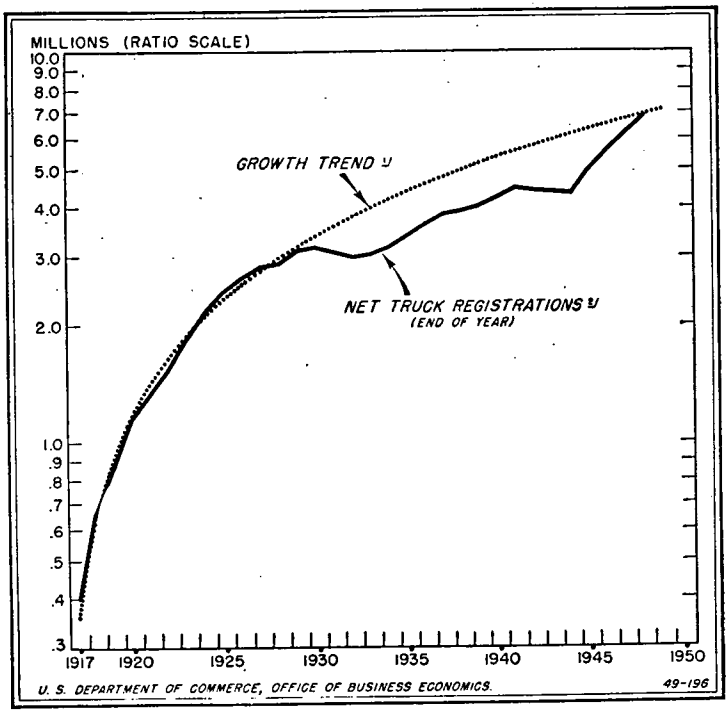
MOTORTRUCKS

Growth in truck usage

The growth trend in truck usage is shown in chart 4. In the early years of the industry this growth was comparatively rapid. That it was declining even prior to 1930 is clearly evident in the curved trend line on a ratio scale.

This growth trend is fitted to the years 1917 through 1929 and projected to 1949. As depicted, it shows a secular growth slowing to

CHART 4.—GROWTH OF TRUCKS IN USE



1 Trend fitted to data for 1917–29.
2 "Net truck registrations" for each year are total registrations in the following year, less new registrations also in the following year; data for 1948 are estimated.

Sources of data: U. S. Department of Commerce, Office of Business Economics; net truck registrations, based on data from Federal Works Agency, Public Roads Administration and R. L. Polk and Company.

less than 3 percent at the present time. This is about in line with the secular growth in the total national output and, therefore, the physical volume of goods to be moved. It may prove to be an understatement since the over-the-road trucks are still taking some traffic away from the railroads.

Even at less than 3 percent the indicated growth in absolute terms now amounts to roughly 180,000 trucks per year.

Up until 1930 this growth trend was so strong that the number of trucks in use was not seriously affected by cyclical fluctuations in business activity. This was not true in the following decade. The number actually declined in 1931 and 1932. Even 1941 was still well below the projected trend.

Truck production for civilian use was restricted in the early years of the war, resulting in a further deferment of the normal growth. Subsequently there has been a sharp increase in the number of trucks in use as additional units to meet the demands of a full employment economy became available.

The increase in truck registrations since the end of the war has been much more than any conceivable secular growth. The bulk of the catching up with the secular trend has already occurred.

Replacement demand

Trucks had a prewar life expectancy of between 10 and 11 years. This was an average, with some being scrapped soon after purchase and others lasting a long time.[6] The number of trucks which according to the calculated mortality table should still have been in use in each of the years 1933 through 1941 is within 3 percent of the actual number registered in each of these years. This suggests that there was no prewar trend toward increased longevity.

According to this mortality table there were 1.7 million trucks registered in 1948 which would have been taken out of service if replacements had been freely available. It appears that, in a seller's market, potential buyers found it easier to postpone replacements than to postpone the purchase of additional trucks needed in their business.

Applying the prewar mortality curve—and excluding those trucks which by that standard were already overage in 1948—the current normal replacements would be around 450,000 per year.

The combination of normal replacements plus normal secular growth adds up to over 600,000 trucks per year, which is about in line with the peak prewar private purchases for domestic use reached in 1936, 1937, and 1941. It is, however, far below the probable 1949 purchases of over 900,000 trucks.

Matematically, the backlog of deferred replacements, if spread over 4 years, would be sufficient to maintain demand at over 900,000. Such a calculation is significant only as an indication of the magnitude of the backlog. Long before the backlog is exhausted it seems likely that the lessening urgency of demand will result in a lower rate of purchases. The large backlog should, however, serve to maintain the average level over the next several years well above the peak prewar rate and above the rate which could be sustained indefinitely.

FARM EQUIPMENT

The following analysis is limited to tractors, which are by far the most important single item of farm equipment but a little less than half of the total purchases last year.[7] It is not practicable to make similar calculations for the other items. There is ample evidence, however, of a strong aggregate growth trend. It is also clear that the same influences which have created a large backlog of demand for tractors have affected the other major items of equipment.

Growth in tractors on farms

The growth in the number of tractors on farms since 1920 is shown in chart 5. The possibilities for continuing this growth are excellent.

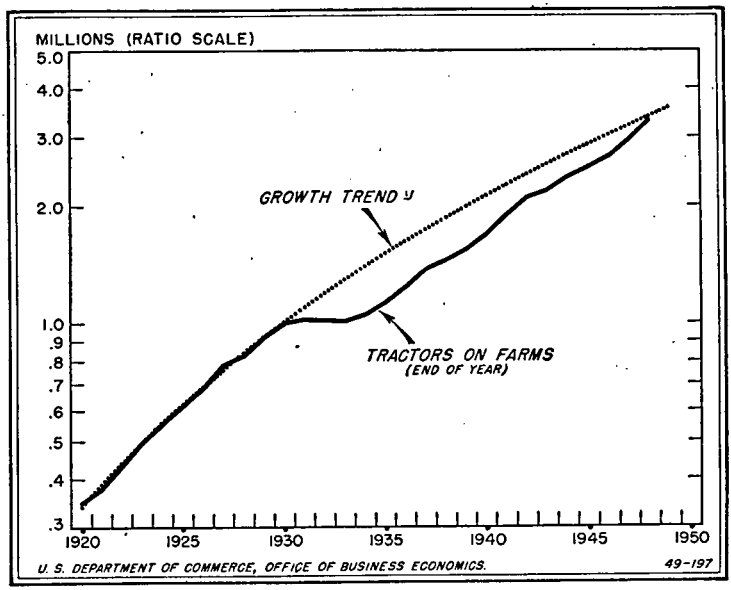
[6] There is not, even for prewar years, an analysis of truck mortality similar to the mortality tables prepared for passenger cars. The Commercial Car Journal published in its April 1940 issue statistical approximation of such a curve which was calculated from passenger-car data.

[7] This analysis excludes the so-called garden-type tractors of 1, 2, and 3 horsepower

The last census of agriculture reported that on January 1, 1945, the 2.4 million tractors then in use were on 2 million of the 5.8 million farms. While many of the remaining farms were small there were 1.6 million with two or more horses or mules and no tractor. The improvement of tractors and related equipment and the development of smaller sizes are continually opening up new possibilities for using more than one tractor per farm and for using them on farms not already mechanized.

The trend line in chart 5 was fitted to the data from 1920 through 1930. It is such that with each succeeding year the percentage increase becomes a little less but the absolute increment becomes a

CHART 5.—GROWTH OF TRACTORS ON FARMS



1/ Trend fitted to data for 1920–30.

Sources: Data beginning with 1943, adjusted by U. S. Department of Commerce, Office of Business Economics, from basic data of the U. S. Department of Agriculture, Bureau of Agricultural Economics; data prior to 1943, Bureau of Agricultural Economics.

little larger. As depicted by this trend, the current annual growth in tractors on farms is between 5 and 6 percent or about 180,000 tractors.

Farm income and wage rates important

The actual number of tractors on farms followed this growth very closely from 1920 through 1930. There was almost no increase in the next 3 years, however, and the actual number had not caught up with the growth trend prior to the war.

This deviation from the growth trend can be explained in part by the decline in farm income and in part by fluctuations in alternative costs, particularly the cost of tractors and related equipment as compared with the cost of farm labor.

During the war and postwar years these cyclical influences were sharply reversed. In addition to high farm income and high farm wage rates a third influence has been present in the large accumulation of liquid assets as the result of wartime savings by farmers.

This has encouraged and made possible the purchase of some additional tractors which might not otherwise have been bought.

As the result of these influences the number of tractors on farms rose sharply after 1940 and would have increased even more rapidly if the additional machines had been available. By the end of 1948 it was still a little below the calculated trend line. Other evidence suggests that this part of the postwar backlog of demand, while still significant, is approaching exhaustion.

Replacement demand

From an analysis prepared by the Bureau of Agricultural Economics of the age distribution of tractors on farms as of January 1, 1942, it is possible to derive a rough approximation of the survival rate of tractors at that time. This averages out to a life expectancy of about 14 years with about 60 percent being scrapped in their twelfth to sixteenth years.

Application of this survival rate to earlier years results in a calculated number of tractors which overstates the actual number reported on farms. While this may be due, at least in part, to the inadequacy of the data, it suggests that there was a trend toward greater longevity. More specifically it suggests that, while the life expectancy of the tractors produced in the late 1920's was about 14 years, those produced a decade earlier had an average life of only about 10 years. This might be explained on the grounds that the machines had been improved and that farmers had learned how to care for them. Subsequent improvements, notably the introduction of rubber tires, may have resulted in a continuation of this trend which was not yet fully reflected in the 1942 survival rate.

Using the mortality table with an average life of 14 years, about 400,000 tractors would have been scrapped that were still on farms as of January 1, 1949. If the average life is increased to 17 years these deferred replacements would be only about 100,000. The actual backlog probably lies somewhere between these two figures.

Regardless of such calculations it seems evident that the backlog of deferred replacements must be substantial. Until recently the shortage of tractors, the inability to obtain prompt delivery except at gray market prices and the abnormally high prices for used equipment have been strong incentives to keep the machines in use well beyond their normal life.

Using the 1942 survival curve, and excluding those tractors which by that standard would already have been scrapped by January 1, 1949, the current replacement demand would be around 125,000 per year. Using a 17-year average life these normal current replacements would be about 100,000.

This current replacement demand is as small as it is because as recently as January 1, 1935, the number of tractors on farms was less than one-third of what it is today. It is growing rapidly, however, as a reflection of the much higher rate of purchases in the last half of the prewar decade than in the first half and the rapid increase in the number of tractors on farms. Using the 1942 survival curve this normal current replacement demand would have been around 100,000 in 1948 and would be about 150,000 in 1950, and 180,000 in 1952.

To recapitulate, the current demand for tractors to take care of the normal growth in ownership and the normal replacement is roughly

300,000 per year. This recurring demand is growing so that by 1952 it will be nearer 400,000. It compares with roughly 400,000 tractors expected to be purchased by farmers in 1949.

The backlog of demand for additional tractors on farms and for deferred replacements, particularly the latter, is more than enough to account for the difference between the normal replacements plus growth and the 1948 purchases for several years. This does not preclude some decline in purchases as the more urgent needs are satisfied—and particularly if any substantial decline should occur in the extraordinarily favorable influences of farm income and wage rates which have affected tractor demand in recent years. It does provide a very important underlying element of strength to the demand for tractors.

RAILWAY EQUIPMENT

The following analysis covers freight cars and locomotives which are the two most important elements of railroad equipment. Of the $917,000,000 spent by class I railways for equipment in 1948, $417,000,000 was for freight-train cars—not including purchases by other than class I railways and by nonrailway companies which together own about 15 percent of the total cars in service. Locomotives accounted for $351,000,000, passenger cars $121,000,000, and other equipment $28,000,000.[8]

Negative growth

The growth in demand for freight cars is a negative quantity. The required number of cars has actually been declining.

From 1925 through 1948 the total volume of intercity commodity transport increased by a little over 100 percent. The proportion of that transportation which moved by rail, however, declined substantially. Thus the railway transportation in 1948, instead of being double 1925, was only half again as large. This divergence is shown in chart 6.

At the same time freight train speeds had been increased by more than one-third and trains were being kept moving more hours of the day. The average capacity of freight cars had been increased about 15 percent and the average load was approximately in line with that increased capacity. The net result was that the 1948 traffic was handled with amost 20 percent fewer cars than were required in 1925.

This declining trend not only eliminated any demand arising from the need for additional freight cars; it also minimized the replacement demand. In the 20-year period 1927 through 1946 retirements, for sale or demolitions, amounted to almost 1.4 million cars or at the rate of over 75,000 per year. It was necessary to replace only a little over 800,000 of these or an average of just over 45,000 per year.

The possibilities for diversion of traffic to other carriers and for continued improvement in the efficiency of freight car operation, are not yet exhausted. These trends, however, may not be at the same rate in the future as in the past. To the extent that they do continue they will tend to offset the normal growth of the economy and possibly minimize the replacement market.

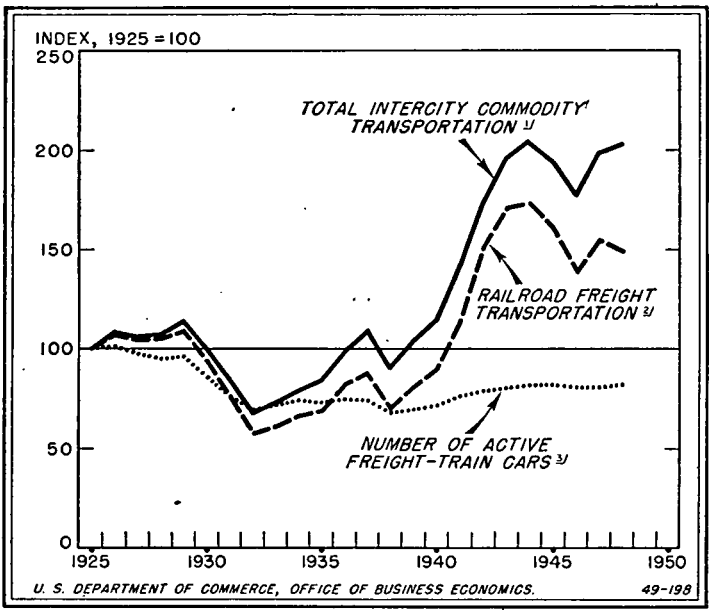
The same negative growth is evident in locomotives. The 1948 traffic was handled with less than two-thirds of the number of loco-

[8] Review of Railway Operations in 1948, Association of American Railroads, Bureau of Railway Economics.

motive units required in 1925. This decrease has occurred in part because the newer units are more powerful but even when measured in pounds of tractive effect rather than number there was a substantial reduction between 1925 and 1948.

Over the intervening 23 years 23,000 locomotives were scrapped which did not have to be replaced. This amounted to a major inroad into the replacement market.

CHART 6.—INTERCITY COMMODITY AND RAILROAD FREIGHT TRANSPORTATION AND ACTIVE FREIGHT-TRAIN CARS



[1] Ton-miles of freight carried, weighted by average operating revenues for 1935-39. Includes freight carried by rail, intercity truck "for hire," domestic waterborne, pipe line, and air transportation.

[2] Ton-miles of freight carried by rail, weighted by average operating revenues for 1935-39.

[3] Freight-train cars owned or leased by Class I, II, and III railroads (including switching and terminal companies) at end of year, minus the daily average surplus (deficit in 1947) for Class I railroads.

Source of data: U. S. Department of Commerce, Office of Business Economics.

There is good reason to expect that the number of units will continue to decline. An important element in the continuation of this trend is the shift to Diesel electric units which are susceptible of more continuous operation.

Freight car replacement demand

According to an analysis prepared by the Interstate Commerce Commission and published in 1946, the mortality curve of freight-carrying cars amounted to an average life expectancy of about 25 years. About 15 percent of the cars were scrapped before they were 20 years old, 70 percent lasted 20 to 30 years, and 15 percent lasted over 30 years.

This mortality curve was based on a reported sample of cars retired over a period of years up through 1942 rather than on the actual

survivals in 1942. A subsequent study covering a larger sample and including retirements in more recent years indicates an average life of between 27 and 28 years.

The fact that the analysis which included the more recent years arrived at a somewhat longer life expectancy suggests the possibility of a trend toward longer life. The data are not readily available to check either of t e two mortality curves against the actual survivals in an immediate prewar as against an earlier year—as was done, for example, with motortrucks—and thus to indicate whether or not there was such a trend.

There is some reason to believe, however, that the normal life expectancy has been increased. The prewar survival of cars which had been built prior to the First World War reflected the high rate of replacements when the all-wood cars were being retired as well as the shift from the steel underframe to the all-steel car. By the end of 1947, 70 percent of the cars were all-steel and the all-wood cars had practically disappeared. Aside from the possibility that the all-steel cars may last longer, it is evident that the obsolescence of the all-wood cars is no longer an important factor in the mortality of freight cars.

Applying the 25-year average life to the 1¾ million cars owned or leased by class I railways would give a normal retirement of 70,000 cars per year. If we assume that there has been a trend toward longevity, and that the average life expectancy of cars built subsequent to the First World War should be about 30 years instead of 25 years, the rate would be 60,000 instead of 70,000. Either calculation would be valid, however, only on the assumption of a uniform past rate of acquisition. The installations of new cars 20 to 30 years ago were nearer 100,000 per year. According to the Interstate Commerce Commission's mortality curve, it is these cars which should be currently ending their useful life.

The above figures do not include the other than railroad-owned cars which would add perhaps 10,000 per year to the retirement rate. On the other hand, the normal replacements, as distinguished from the normal retirements, will be reduced by any continuation of the trend toward fewer freight cars in service. As indicated above, this reduction in the past has been of major importance.

These various factors do not lead to any precise estimates of the replacement demand. It is apparent, however, that the close to 100,000 cars to be delivered to domestic users in 1949 involve some catching up with deferred replacements. The remaining backlog of demand is neither very urgent nor very firm.

Locomotive replacement demand

According to the mortality curve developed by the Interstate Commerce Commission, based on a reported sample of actual retirements over a period of years through 1942, the average life of a steam locomotive was about 30 years. Less than 5 percent were scrapped before they were 20 years old. Over 50 percent lasted from 20 to 30 years and another third from 30 to 40 years. The remaining 12 percent were kept in service for more than 40 years.

Since almost all of the Diesel electric units are well under retirement age, the actual scrappage in the next few years will be limited almost entirely to the steam locomotives. In view of the demonstrated superiority of the Diesel electric units, the actual scrappage of the

steam locomotives is likely to exceed any rate which might be calculated by applying the above mortality curve to the actual number in service or to the rate at which they were being purchased about 30 years ago.

At the end of 1948 less than one-quarter of the tractive power had been converted to Diesel. More than three-quarters was still steam. There were small amounts of electric and other power. Over half of the steam locomotives were more than 30 years of age and only one out of eight was less than 20 years old. At the rate at which these steam locomotives were being retired in 1948, it would take 7 to 8 years to eliminate those which were already more than 30 years old.

In 1948 the number of steam locomotives scrapped was just about equal to the number of new Diesel electric units acquired. Over the longer run the number of Diesel electric units required for replacement would be less than the number of steam locomotives scrapped. It is evident, however, that the backlog of deferred replacements is rather large and that it could support replacements at or near the 1948 rate for some time.

ELECTRIC UTILITY EQUIPMENT

Four to five million kilowatts of additional capacity will be required each year to take care of the normal secular growth in the use of electricity over the next several years. Replacement demand is small because in a rapidly growing industry much of the capacity is of comparatively recent installation.

The growth in the demand for power has not outstripped the industry's capacity to the point where any significant part of the demand remains unsatisfied. In order to meet this demand, however, the existing capacity has been operated well above the optimum rate. While the additional capacity required to eliminate overloading of facilities and provide an adequate reserve for contingencies is a matter of business judgment, it is clear that the backlog in this sense is large.

The reported planned installations of about 6,000,000 kilowatts in each of the next 3 years—almost 50 percent above 1948—are more than enough to take care of the normal secular growth in the demand for electricity but not enough to eliminate the backlog.

While there is no precise relationship between installations of additional generating equipment and the required transmission and distribution facilities, these requirements are also large.

TELEPHONE EQUIPMENT

Growth in telephone usage

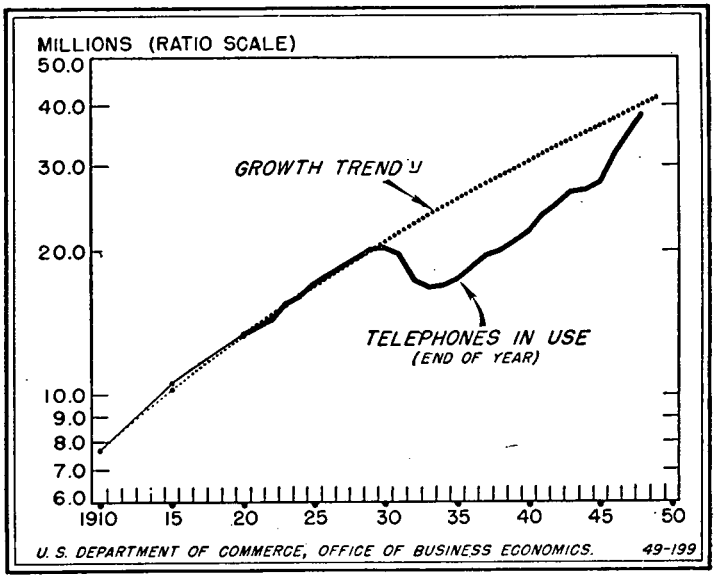
The growth in the number of telephones in use is shown in chart 7. The possibilities for continuing this growth appear excellent. For example, there are telephones in less than half of the occupied dwelling units at the present time.

The growth trend in chart 7 is fitted to the data from 1910 through 1929. It follows the familiar pattern of a declining percentage rate of growth but increasing absolute annual increments. In the 1920's the secular growth was between 4 and 5 percent, or three-quarters

of a million telephones per year. As projected in chart 7, it is currently only a little over 3 percent but 1.3 million per year.

From 1910 to 1930 the cyclical deviations from this growth trend were comparatively unimportant. This was not true in the following decade. Due to the depression the number of occupied dwelling units lagged well behind its normal secular growth. Real income per family declined substantially. The price of telephone service declined less after 1929 than many other items competing for the consumer's dollar. Similarly, the business use of telephones was affected by the reduced rate of starting new firms and the increase in failures and discontinuances from other causes and by the general decline in the volume of business to be transacted and its profitability.

CHART 7.—GROWTH OF TELEPHONES IN USE



[1] Trend fitted to data for 1910–29.

Sources of data: American Telephone and Telegraph Company, except data for 1922, 1927, 1932, and 1937, which are from the U. S. Department of Commerce, Bureau of the Census.

In the immediate postwar years these influences were sharply reversed. There was a high rate of family formation and a large excess of business births over business deaths. Business and consumer buying power increased sharply above the prewar levels and telephone rates lagged behind the general increase in prices.

To the extent that these influences were already present before the end of the war, their effect was limited by wartime restrictions on telephone equipment. The last 3 years, however, have witnessed a rapid catching up with the growth trend. In 1948 the increase in the number of telephones in use was 2½ times the calculated normal annual growth.

Because of the high rate of installations over the last 3 years, it seems reasonable to conclude that the larger part of the deferred growth in the number of telephone customers which existed at the end of the war has already been met. This is illustrated by the convergence of the calculated and the actual lines in chart 7.

In addition to the remaining backlog of demand for additional telephones, some 2.5 million party-line customers were still waiting for individual lines or higher classes of service at the end of 1948; furthermore, the satisfaction of as many demands as possible has meant the maximum utilization of existing telephone plant.[9] It seems likely that this overloading, plus the unsatisfied demands for higher classes of service, is more important than the unsatisfied demands for additional telephones.

Replacement demand

Normal replacement demand accounted for only a small part of the total outlays for equipment in 1948. The reported outlays by the Bell system for plant and equipment, exclusive of reused goods, amounted ot $1,460,000,000 in 1948. In contrast, the depreciation charges were only $278,000,000.[10] The level of outlays is and will be determined primarily by the need to provide additional telephone service.

Any remaining backlog of deferred replacements is difficult of calculation but, given the demands of the past several years, there would be a tendency to keep existing equipment in operation as long as possible.

In summary, 1948 outlays for telephone equipment were very high, in the neighborhood of double those which would be required to take care of normal replacement plus normal growth. The remaining backlog of demand is still large, particularly in terms of providing more adequate facilities for existing customers, but not enough to account for the difference between 1948 outlays and normal growth and replacement for more than another year or two.

MANUFACTURING AND ALL OTHER

Any attempt to apply the type of analysis used in the above sections to each of the various manufacturing industries, which in the aggregate accounted for almost one-third of total equipment purchases last year, is beyond the scope of this report. Furthermore, the necessary data do not exist in many instances. It is equally impracticable to analyze in this fashion the diverse elements of other utilities, other transportation, trade, services, construction, and miscellaneous industries which together account for another fifth of the total. The basis does exist, however, for certain rough generalizations.

While it is not practicable to calculate the normal replacement and normal growth demand for equipment for manufacturing as a whole, or for the composite of all other industries not discussed, there is little reason to doubt that, as in most of the areas covered, 1948 outlays for equipment in the aggregate involved a substantial catching up with deferred demand.

In the aggregate, postwar expansion of productive capacity has reached a point where it is adequate to satisfy most of the demands made upon it. There will be a continuing demand for equipment to take care of normal growth, but the backlog of deferred demands in this respect which existed at the end of the war has been largely exhausted.

[9] 1948 annual report of the American Telephone & Telegraph Co.

[10] Ibid. Normal replacement demand would be even smaller because the latter figure covers the total of depreciable assets, which in a growing industry is much larger than the total in existence some years ago which would now be reaching the retirement age. On the other hand, many of the depreciable assets are carried at book values well below present replacement cost.

This is much less true of the backlog of deferred replacements. The most urgent postwar requirement was for additional capacity to turn out much more than the prewar volume of end products. Replacement and modernization of facilities was necessarily given secondary consideration. Relatively inefficient facilities have been continued in operation because they were needed to satisfy the demand for the end products and because, given the pressure of that demand, the prices charged could be high enough to cover the cost of operating the inefficient facilities. With a return to more normal competitive conditions there is again a strong incentive to reduce costs by replacing inefficient equipment.

This pattern of demand—with current outlays well above normal replacements and normal growth but with a large backlog made up primarily of deferred replacements—parallels that in a number of areas discussed above where the data exist to demonstrate the relationships more conclusively.

SUMMARY AND CONCLUSIONS

Because of the growth of the economy, and the increased mechanization of production, the secular level of equipment outlays necessary to maintain facilities and provide for normal continued growth in productive capacity over the next decade is two to three times that in the 1920's, even after adjustment for price changes.

Aggregate 1949 outlays are well above this secular level. A rough summation of the items specifically analyzed indicates an excess which is consistent with the general conclusion in this respect developed from chart 3. The excess over the past 4 years, however, has not been enough to exhaust the backlog of demand which existed at the end of the war, stemming from deferred growth and deferred replacements.

SECTION 4. THE DEMAND FOR PLANT AND EQUIPMENT

Business investment in plant and equipment in 1948 and the first half of 1949 was the highest on record—in both absolute and relative terms. Information available at this time for the whole year 1949 indicates only slight declines in the level and rate of capital expenditures.[11]

Despite this record volume of investment in the postwar period, there has been a good deal of discussion as to its adequacy to make up for the retardation in the rate of growth of the Nation's stock of capital resulting from the depression years of the thirties and the wartime restrictions of the forties. Possibly even more attention has been paid to the likelihood of investment continuing at a level sufficient to maintain a high rate of economic activity. The major purpose of this paper is to evaluate the current level of outlays for plant and producers' durable equipment in terms of its historical relationships with other economic variables.

Factors determining the demand for capital goods

A proper appraisal of current capital outlays in comparison with those in the prewar period necessitates adequate historical measures

[11] This study is confined to private nonagricultural investment in business plant and equipment. The data taken from the private gross domestic investment sector of the national product accounts exclude changes in inventories, residential and nonprofit institutional construction, and farmers' outlays for construction, machinery, and motor vehicles.

of related economic variables—especially those determining businessmen's profit expectations, including the expected rate of return on the investment and its cost of financing. These expectations involve a fairly long-term appraisal of the economic outlook in view of the relatively long period needed to recover and derive some return from an investment in plant and equipment. A businessman's decision to invest in a capital asset is further dependent on the certainty or uncertainty with which he regards the economic outlook during the useful life of the asset.

Some of the more important variables affecting the demand for capital goods are over-all economic activity, stock of capital, capacity and utilization of capacity, liquidity, debt-equity position, the availability of funds, prices, costs of financing, stock-market activity, technological developments, changes in the business population, and such institutional factors as Government tax and fiscal policies and security regulations and the functioning of financial institutions.

The current level of investment

By utilizing one or more of the above variables for which data are available in various statistical relationships, it is possible to explain most of the prewar variations in plant and equipment outlays, though some of these relationships give rather divergent results when projected into the current period. It should be noted, however, that outlays for equipment are invariably above the prewar average relationships, as suggested in the previous analysis of long-term trends in equipment expenditures, while the reverse is true for plant construction.

Ratio analysis indicates that the current level of investment relative to the gross national product is moderately higher than in 1929 (see table XIV) but considerably higher than both the average for the twenties and 1941. The latter is also true when the data are roughly corrected for changes in their respective price levels, although the current ratio is moderately lower than in 1929 on this basis. Here too, the differential rates of investment in equipment as against plant are noticeable, with the rate of investment in the latter considerably lower than in the twenties.

Investment and economic activity

The income-creating effect of expenditures for new plant and equipment is a major determinant of the level of business activity. However, with a difference in timing, business activity has a reverse effect on the volume of capital-goods investment. This is especially true in the case of replacement outlays.

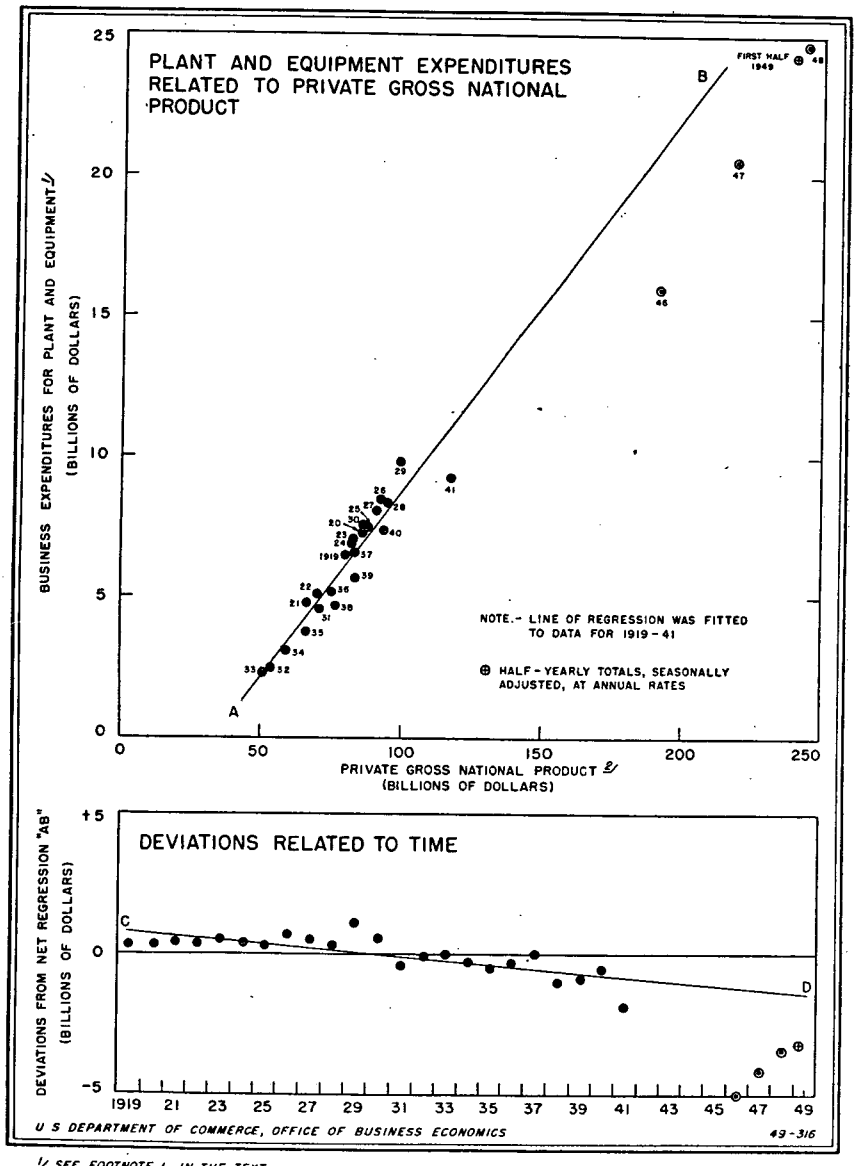
Although the causation may run in either direction, it is illuminating to compare the variations in plant and equipment outlays with those in total economic activity.

As can be seen in chart 8, fluctuations in private nonagricultural investment in new capital goods, while relatively of greater magnitude, have corresponded very closely in both timing and direction with the private gross national product in the nonwar years since 1919. On the average in the 1919–41 period a change of 13.5 percent in business outlays for plant and equipment has been associated with a change in the same direction of 10 percent in the private gross national product.[12]

[12] The full regression formula for the 1919–41 period is: Private nonagricultural plant and equipment expenditures = −4.554+0.134 private gross national product (in billions of dollars)−0.073 (given year minus 1930).

Also illustrated in chart 8 (lower panel) is the downward time trend evident in the relationship. An examination of this trend, however, indicates that this downward drift is not apparent in the twenties. Thus, the data suggest that the years from 1919 to 1930 may be on one line of relationship while those in the following decade are on another. At a given level of economic activity, investment in capital goods in the later period is somewhat lower than in the twenties.

CHART 8.—RELATIONSHIP BETWEEN BUSINESS EXPENDITURES FOR PLANT AND EQUIPMENT, PRIVATE GROSS NATIONAL PRODUCT, AND TIME



1/ SEE FOOTNOTE 1, IN THE TEXT

2/ REPRESENTS TOTAL GROSS NATIONAL PRODUCT LESS COMPENSATION OF GENERAL GOVERNMENT EMPLOYEES

SOURCE OF DATA: U.S DEPARTMENT OF COMMERCE, OFFICE OF BUSINESS ECONOMICS

TABLE XIV.—*Private nonagricultural plant and equipment expenditures as a percent of private gross national product*

Year	Total plant and equipment	Plant	Equipment	Year	Total plant and equipment	Plant	Equipment
1919	8.1	2.4	5.7	1935	5.7	1.4	4.3
1920	8.4	3.2	5.2	1936	6.9	1.7	5.2
1921	7.2	3.0	4.2	1937	7.9	2.3	5.6
1922	7.3	3.3	4.0	1938	6.1	1.8	4.3
1923	8.5	3.6	4.9	1939	6.8	2.0	4.8
1924	8.3	3.7	4.6	1940	7.9	2.2	5.7
1925	8.5	3.8	4.7	1941	7.9	2.2	5.7
1926	9.2	4.2	5.0	1942	4.0	1.2	2.8
1927	8.9	4.3	4.6	1943	2.7	.7	2.0
1928	8.9	4.0	4.9	1944	3.5	.9	2.6
1929	9.8	4.2	5.6	1945	4.9	1.4	3.5
1930	8.8	3.9	4.9	1946	8.4	2.7	5.7
1931	6.5	2.6	3.9	1947	9.4	2.7	6.7
1932	4.6	1.7	2.9	1948	10.1	3.0	7.1
1933	4.5	1.4	3.1	1949: First half [1]	10.2	3.0	7.2
1934	5.2	1.5	3.7				

[1] Based on seasonally adjusted data.

Source: Office of Business Economics, Department of Commerce.

The reason for both this lower investment rate and the downward time trend is, to a large extent, found in the cyclical trend of construction outlays. When plant and equipment outlays are segregated, no significant time trend is found in the relation between private nonagricultural equipment outlays and the private gross national product.

The annual rate of investment in plant and equipment in the first half of 1949 was nearly $2,000,000,000 lower than would be expected from this relationship with private national product. This apparent deficiency of investment reflected an excess of equipment outlays more than offset by a deficiency in plant expenditures.

Plant versus equipment expenditures

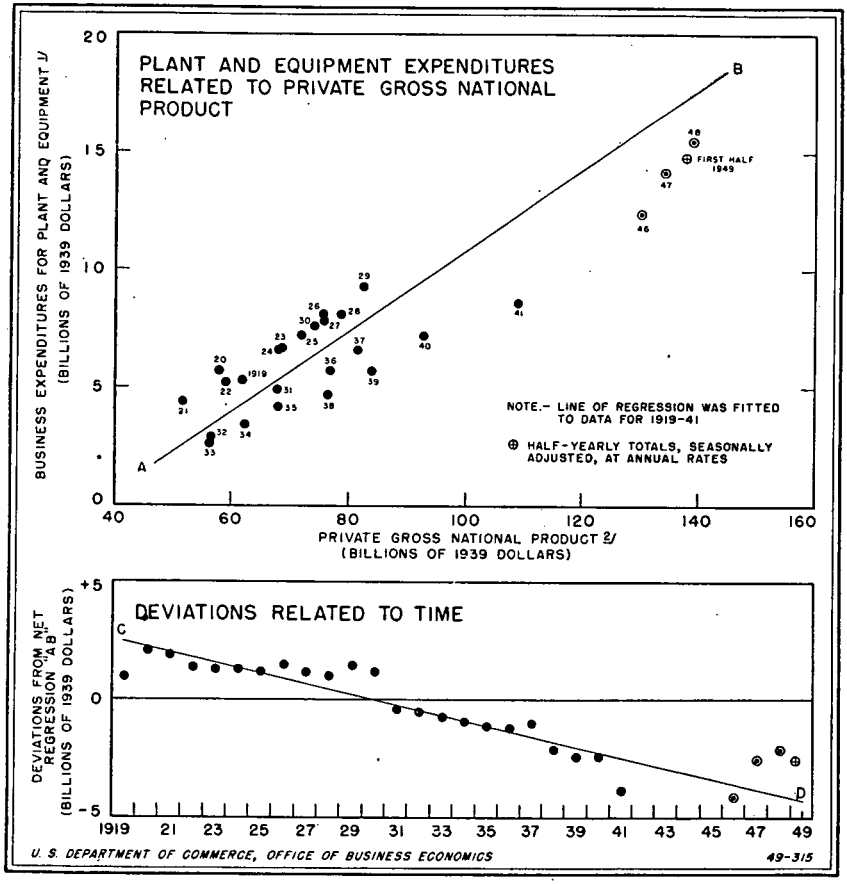
Private investment in plant, after a period of unusually large expansion in the twenties, fell considerably more than business activity from 1929 to 1933, and then in the subsequent prewar upturn rose only slightly relative to general economic activity. In the immediate prewar years the ratio of private plant investment to the private gross national product was only about 60 percent of the average rate in the twenties. Thus, the lag in construction expenditures and its characteristically long-term cycle resulted in a significant lowering of both investment and business activity during the thirties and early forties. Even in the postwar period of capital investment boom, the rate of construction outlays has been only 80 percent of the level in the twenties.

Thus, equipment outlays have been the major sustaining force in the demand for fixed capital by business in both the post 1929 prewar and postwar periods. Equipment expenditures averaged slightly over 55 percent of total plant and equipment outlays in the twenties, somewhat over 65 percent in the thirties, and slightly more than 70 percent in the prewar and postwar forties.

There are several factors, in addition to the important effects of the construction cycle, which explain some of the upward movement in the ratio of equipment outlays to total capital outlays. These factors

include the secular trend toward the increasing mechanization of industry and, in the postwar period, the use of new equipment and machinery in defense plants purchased from the Government (which are not, of course, included in the totals for new capital outlays) and the substitution of machinery for manpower to offset increasing labor costs.

CHART 9.—RELATIONSHIP BETWEEN BUSINESS EXPENDITURES FOR PLANT AND EQUIPMENT, PRIVATE GROSS NATIONAL PRODUCT, AND TIME, IN 1939 DOLLARS



1/ SEE FOOTNOTE 1, IN THE TEXT.
2/ REPRESENTS TOTAL GROSS NATIONAL PRODUCT LESS COMPENSATION OF GENERAL GOVERNMENT EMPLOYEES.
SOURCE OF DATA: U. S. DEPARTMENT OF COMMERCE, OFFICE OF BUSINESS ECONOMICS

Physical volume of plant and equipment investment.

When the relationship between private nonagricultural plant and equipment expenditures is adjusted for the differential movements of capital-goods prices and the general price level, many of the aspects noted in the current dollar relationship come into sharper focus. In real terms, the volume of investment is significantly more dynamic, increasing more than 17 percent with each 10-percent rise in real output.[13] As can be seen in chart 9, the investment data again fall

[13] In billions of 1939 dollars, private nonagricultural plant and equipment expenditures equal minus 6.322 plus 0.172 private gross national product minus 0 223 (given year minus 1930).

on two rather clear lines in relation to the volume of activity, with no time trend apparent in the years from 1919 to 1930 but a considerably more pronounced downward drift in investment during the 1931–41 period.

In this case, however, about one-third of the downward movement is attributable to equipment. It appears therefore that, in the current dollar relationship, movements in the ratio of machinery prices to the general price level during the thirties and early forties partly offset the downward time trend in the constant dollar relationship.

The level of plant and equipment expenditures in the first half of 1949 was about 2.5 billion dollars (seasonally adjusted at annual rates) higher than would be expected from its prewar relationship to real national product. The current level would be almost exactly on the line of relationship if the downward time trend were not continued after 1941.

It is of further interest to note that if lines of relationship with real product are determined separately (without time trends) for the two periods 1919–30 and 1931–41, the current level would be about $4,000,000,000 lower than expected from the earlier period and an equal amount higher than would be anticipated from the data for the second period.

Investment versus lagged earnings

As noted above, the expected rate of profits is a major consideration in any decision to engage in an expansion of productive capacity. There is, of course, no quantitative measure of these expectations for the business community as a whole. Probably the best approximation available is corporate profits after taxes—on the hypothesis that the current rate of return plays a central role in the forward economic thinking of the average businessman.

It is, therefore, of interest to examine the relationship of investment in plant and equipment and corporate profits after taxes. Capital outlays have been lagged 6 months behind earnings to allow for the time elapsing between the decision to invest and its effectuation. Other time lags were also tested but did not give as good results. The relationship based on the period 1919 through 1941 is shown in chart 10.[14]

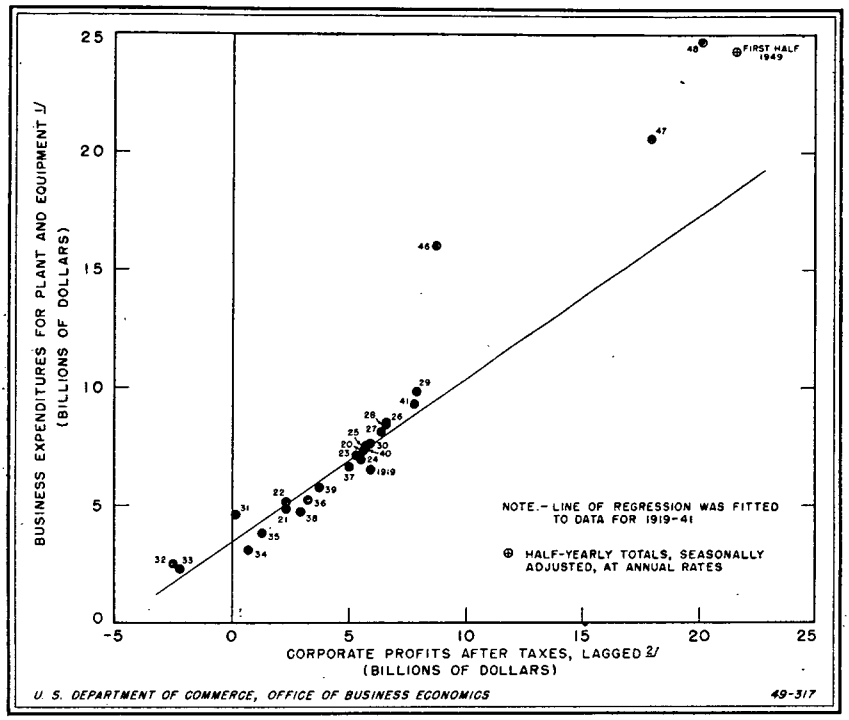
The variations in plant and equipment outlays over the prewar period are fairly well described by the movements in earnings. On this basis the annual rate of capital investment is about $6,000,000,000 higher currently than the expected value. The excess indicated by this relationship, contrasted to the results utilizing the private gross national product, reflects the relatively higher taxes in the postwar period.[15]

To a considerable extent, the unusually high current rate of private investment relative to profits after taxes is due to the backlog of deferred demand which still existed at the beginning of this year—and, to a lesser extent, to the favorable liquid position of most businesses. However, there are other factors—particularly the low interest rates—which may tend permanently in the postwar period to raise invest-

[14] The regression equation is as follows: Nonagricultural plant and equipment expenditures =3.446+0.692 profits after taxes in billions of dollars and lagged 6 months. In the absence of reliable semiannual data during the pre-1929 period, the earning series was lagged prior to 1929 by a 2-year moving average centered on the earlier year.

[15] The current rate of investment is 1.5 billion dollars higher than would be expected from a similar relationship with lagged earnings before taxes.

CHART 10.—BUSINESS EXPENDITURES FOR PLANT AND EQUIPMENT RELATED TO CORPORATE PROFITS AFTER TAXES



1/ SEE FOOTNOTE 1, IN THE TEXT.
2/ SEE FOOTNOTE 4, IN THE TEXT.

SOURCE OF DATA: U. S. DEPARTMENT OF COMMERCE, OFFICE OF BUSINESS ECONOMICS

ment for a given level of net income. The level of wage rates relative to equipment costs and interest rates, and the accelerated development of new products and technologies may operate in the same direction.

CHAPTER IV

DEBT VERSUS EQUITY IN BUSINESS INVESTMENT

In testimony on investment problems before congressional committees, and in current business literature, the terms "risk", "venture", and "equity" are often used indiscriminately. In addition, complicating factors such as the "rate of savings" and the "adequacy of investment" as a whole are brought in. Yet the terms and problems are far from identical. To take the last term first, what is meant by "adequacy of investment" or investment "needs"? In the sense of maintenance and expansion of productive facilities, additional or better tools, housing, etc., investment needs must be judged primarily by the amount of current production which the economy feels should be added to the flow of total output in the future. There is no uniquely "right" answer either with respect to amount, time, or period. One may well agree that "savings," if made, must be matched by actual investment and conversely that investment inevitably must be matched by savings. But such in no way implies that for a given period savings and investment are "adequate" or "inadequate" or ought to be of this or that magnitude in relation to something else.

To be sure, a tolerable degree of progress and employment opportunities for an expanding population is dependent upon increasing plant and equipment. But there may be several proportions in which current production is divided between consumption and investment, all of which under varying conditions may serve the ends of full employment, stability and progress. While it is easier to go along with and accept the historical pattern by which investment has heretofore increased in the United States, the future may be too unlike the past to rely without question on such a percentage as a target level for economic health and growth. It may be that new factors require savings and investment not at the historical ratio but at a higher or lower rate. The proper rate for the future depends upon many factors, including changes in population, changes in standards of value, the allurements of technological innovation, and the rapidity with which the economy wishes to take advantage of these improvements by way of new consumption products and services together with the willingness and purchasing power to absorb the unsaved portion through consumption.

INVESTMENT LEVELS OF THE RECENT PAST

Thus, although "just how much investment is enough" or "what rate of growth is desirable," may be debatable, a look at the record of the past always provides illuminating orientation. The accompanying tables I and II show the major items which make up gross private domestic investment and their relation to total national product.

As used in Department of Commerce data, the concept "gross private domestic investment" includes all acquisition by private busi-

ness of newly produced capital goods for replacement, as well as for additions, changes in the volume of business inventories, together with all new private dwellings, including those of owner-occupants. Net investment (for technical reasons not available quantitatively in the Department of Commerce series) differs conceptually by excluding replacements. Growth of the economy requires that there be net additions to plant facilities, but the job-giving aspects of "investment" depend upon gross rather than upon net investment. The business man's decision to purchase a new machine creates new employment opportunities whether the new machine be for replacement or expansion.

TABLE I.—*Gross national product and gross private domestic investment, 1929–48*

[Billions of dollars]

Year	Gross national product	Gross private domestic investment				
		Total	New construction	Producers' durable equipment	Total plant facilities	Changes in business inventories
1929	103.8	15.8	7.8	6.4	14.2	1.6
1930	90.9	10.2	5.6	4.9	10.5	−.3
1931	75.9	5.4	3.6	3.2	6.8	−1.4
1932	58.3	.9	1.7	1.8	3.5	−2.6
1933	55.8	1.3	1.1	1.8	2.9	−1.6
1934	64.9	2.8	1.4	2.5	3.9	−1.1
1935	72.2	6.1	1.9	3.4	5.3	.9
1936	82.5	8.3	2.8	4.5	7.3	1.0
1937	90.2	11.4	3.7	5.4	9.1	2.3
1938	84.7	6.3	3.3	4.0	7.3	−1.0
1939	91.3	9.9	4.9	4.6	9.5	.4
1940	101.4	13.9	5.6	6.1	11.7	2.3
1941	126.4	18.3	6.8	7.7	14.5	3.9
1942	161.6	10.9	4.0	4.8	8.8	2.1
1943	194.3	5.7	2.5	4.1	6.6	−1.0
1944	213.7	7.7	2.8	5.7	8.5	−.8
1945	215.2	10.7	3.9	7.5	11.4	−.7
1946	212.6	29.5	10.2	12.5	22.7	6.7
1947	235.7	31.1	13.8	17.2	31.0	.1
1948	262.4	45.0	17.8	20.7	38.5	6.5

Source: Survey of Current Business, Department of Commerce.

The striking fact about gross private investment over the years of record has been its variability. From 15.8 billion dollars in 1929 private investment fell to less than 0.9 billion dollars in 1932. It recovered progressively to 11.4 billion dollars in 1937 only to drop back to little more than half that level the following year.

During the war years the private portion of the economy was restricted both in freedom of decision in investment matters and in access to the materials that go into plant and equipment. Investment comparisons insofar as they relate to the private-enterprise economy must, accordingly, either partly or wholly disregard the data for the years 1942 to 1945, inclusive. The forced postponement of nonwar construction during these 4 years explains in large part the new investment records established each year since.

In 1948 gross private investment reached a total of nearly $45,000,000,000, in current dollars, or nearly three times as high as in 1929. Gross national product, estimated at $262,000,000,000 in 1948, had increased roughly 3½ times. If the ratio of investment to gross national product were unhealthy in 1929 (as most analysts agree to have been the case), it may have been so likewise in 1948.

TABLE II.—*Gross private domestic investment, total and major components as percentages of gross national product, 1919–48*

[Gross national product =100]

Year	Gross private domestic investment				
	Total	New construction	Producers' durable equipment	Total plant facilities	Changes in business inventories
1919	15.3	4.8	6.4	11.2	4.1
1920	18.2	5.6	6.1	11.7	6.5
1921	10.6	6.0	4.6	10.6	----------
1922	12.9	7.8	4.4	12.2	.7
1923	16.9	8.4	5.4	13.8	3.1
1924	13.1	9.3	5.1	14.4	−1.3
1925	16.5	9.6	5.2	14.8	1.7
1926	16.7	9.7	5.5	15.2	1.5
1927	15.0	9.6	5.1	14.7	.3
1928	13.7	8.7	5.4	14.1	−.4
1929	15.1	7.5	6.1	13.6	1.5
1930	11.2	6.1	5.4	11.5	−.3
1931	7.0	4.7	4.2	8.9	−1.9
1932	1.5	2.9	3.1	6.0	−4.5
1933	2.3	2.0	3.2	5.2	−2.9
1934	4.3	2.2	3.8	6.0	−1.7
1935	8.6	2.6	4.7	7.3	1.3
1936	10.1	3.4	5.5	8.9	1.2
1937	12.6	4.1	6.0	10.1	2.5
1938	7.4	3.9	4.7	8.6	−1.2
1939	10.8	5.4	5.0	10.4	----------
1940	13.9	5.5	6.0	11.5	2.4
1941	14.6	5.4	6.1	11.5	3.1
1942	6.8	2.5	3.0	5.5	1.3
1943	2.9	1.3	2.1	3.4	−.5
1944	3.6	1.3	2.7	4.0	−.4
1945	5.0	1.8	3.5	5.3	−.3
1946	13.9	4.8	5.9	10.7	3.2
1947	13.2	5.9	7.2	13.1	.1
1948	17.1	6.8	7.9	14.7	2.4

Source: Department of Commerce, Office of Business Economics; 1939–48, computed from data Survey of Current Business, July 1949.

Gross private investment includes not only plant and equipment, construction, and net foreign investment but also changes in business inventories. Changes in the latter from year to year are highly unstable since they can range from positive quantities to relatively large negative items. For example, business added 1.6 billion dollars to inventories in 1929, only to wipe out this increase in the succeeding 2 years and further reduce them by 2.6 billion dollars in 1932. Acquisition of plant and durable facilities, which incidentally is not the whole of business "investment" as use of the word sometimes suggests, showed a less proportionate decline, dropping between the same years from 14.2 to 3.5 billion dollars. The distinction is important because decisions involving plant investment are necessarily of a different longer-run character than those which influence inventory building or liquidation.

Fluctuations in private investment expressed as a percentage of gross national product are, of course, less violent, since gross national product, though by different amounts, generally moves in the same direction. Thus the all-time high level of private investment in 1948 viewed as a fraction of national product approximated the level of the twenties (table II).

Needless to say neither the amounts shown in table I nor the percentages in table II are presented as norms or target goals for the future.

EQUITY VERSUS DEBT

The risk-capital problem involves in the first instance a choice, not of over-all amounts, but of the contract form under which savings are invested. Even in respect to this narrower problem, the terms "risk," "venture," and "equity" should not be used interchangeably.

Risk is a relative term. All capital is in some degree venture capital. Even Government bondholders must gamble on the level of prices and the value of the dollar. Capital is always subject to the possibility of loss not only in general, but even in a particular enterprise. There the measure of risk often depends on the opportunities available to the particular capital item for alternative employment elsewhere. At one extreme "sunk capital," with little opportunity for retreat or withdrawal, must take what it can get by way of return. At the other extreme, capital in liquid forms, free to choose from several alternatives, may turn in other directions whenever risk of loss threatens. Thus capital invested in an oil hole, a right-of-way, or a rolling mill, with conversion to other uses effectively cut off, is subject to greater hazards of economic loss than a parking lot, investment in an automobile truck, or a custom lathe. This is true though each investment entails venture and risk. Differences in the economic risk associated with capital invested in one productive facility or another is thus entirely a matter of degree.

As between individual owners of capital, contractual forms have, however, grown up which permit the shifting of portions of individual business risks from one owner of capital to another. These contracts do not alter the amount of risk involved in investment itself. They do permit the concentration of that risk on those who, for a price, are most willing to undertake it. Conversely, the amount of risk remaining to be borne by those seeking to minimize their own risk is, at least in legal theory,[1] proportionately lessened by the arrangement.

With this shifting of risk between individuals in order to concentrate it, the term "equity" capital enters, as distinguished from capital supplied under "debt" contracts. Equity capital is a contractual, legalistic concept rather than an economic one and is accordingly the more precise term when one is concerned with the terms upon which capital is available for investment in productive facilities.

Significance of these distinctions to any examination of the flow of investment capital has been well summarized before the Joint Committee on the Economic Report as follows:

> From the point of view of the managers of business every dollar invested in business is a venture and involves risk. The only difference between one dollar and another is in the priority of loss, should the venture prove unsuccessful. Thus, the dollar put in through common stock is less safe, at least theoretically, than the dollar represented by preferred stock, and so forth, through the whole gamut of possible corporate securities. In other words, the problem of analyzing the need for capital formation in terms of the adequacy of venture savings is purely a question of determining whether the needed capital formation can be converted into instruments which appeal to the holders of savings as suitable for nonventure savings or as suitable only for venture savings. The problem of matching the need for capital formation against the adequacy of venture and non-

[1] The annals of corporate finance abound with instances where bondholders and preferred-stock holders in actual fact assumed fully as much or even more risk than did common-stock holders. As investment media such senior securities have shown investment results in terms of amount and regularity of income and preservation of principal by no means superior to those obtained from a well-diversified list of common stocks.

venture savings, therefore, is not a question of the use to which funds are put; it is a question of the means by which savings find their way into capital formation.[2]

The problem of contractual form is thus the problem of debt versus equity, of flexible capital contracts versus those containing default provisions. It is not the problem of more or less savings, or even of equalizing savings and investment. Thus the advocacy of easier credit (i. e., debt) for small or other business, as a device for securing capital may encourage precisely the type of capital relationship least desirable under the circumstances. Excessive reliance on debt forms means that equity forms are relatively unattractive.

EQUITY FORMS AID IN AVOIDING ECONOMIC COLLAPSE

While risk and venture are important in sustaining full employment, the form of contract may make considerable difference. In time of depression there is the danger of cumulative bankruptcies. When times are good, low-cost debt may increase the leverage factor in income available for common-stock holders. When depression comes, businesses may borrow money because they have to. If during boom times they have resisted the temptation to use their credit, they will be in better shape to weather a business collapse. In either event debt is a problem only when incurred in amounts or at times likely to result in default. As long as interest is earned and paid the strong language of debt contracts is of little importance.

Debt can and does, however, become a serious danger for the economy whenever large groups of debtors for some reason such as an unanticipated decline in income are no longer able to perform on their contractual obligation. The very fact that debtors suddenly find it difficult to perform makes creditors only more determined in their insistence upon prompt payment and liquidity. At such times business puts almost irresistible pressure on government for government lending, moratoria, debtor relief, and "reconstruction" or bail-out institutions with free access to the public treasury.

The role which business debts play in economic instability has been sketched in a recent study as follows:

> Many different, and not altogether consistent, arguments have been advanced to show that the debts of corporations are a factor in bringing on and accentuating depressions. A few of the most interesting of these are as follows: (1) Debt weakens certain companies, and their collapse causes a business decline. (2) When a decline is under way, the pressure of debt forces debtors to sell goods at a sacrifice and curtail purchases, producing sharp falls in certain parts of the price structure. (3) When a decline is under way, rigid debt charges help make costs rigid and prevent certain prices from falling. (4) When a decline is under way, businessmen whose debts fall due in the visible future are obliged to do their best to remain liquid, which holds down business volume. (5) During a business decline, a shrinkage of the debt of business firms takes place almost automatically, and this reduces the volume of bank deposits, reinforcing the decline. (6) This same shrinkage of business debt destroys a major channel of investment for new savings and thus renders savings not only sterile but positively destructive.[3]

Given such a chain of forces there is justifiable concern over the forms of private capital contracts quite apart from the problem of investment itself.

[2] Testimony of Earl Bunting, president of the National Association of Manufacturers, in Current Price Developments and Economic Stabilization, Hearings, Joint Committee on the Economic Report, 80th Cong., 1st sess., July 15, 1947, p. 427.

[3] Debts and Recovery, 1929-37, The Twentieth Century Fund, p. 179.

For the economy as a whole, as for an individual debtor, the burden of debt may be measured either by its ratio to total assets and collateral, or by the proportion of current and reliably certain prospective income required to meet interest payments. Here the caution respecting the use of national aggregates which hide individual differences is particularly appropriate. Individual companies, especially new ones, may have considerable difficulties in arranging their finances so that fixed obligations for interest are amply cushioned, even though debtors, in the aggregate, are generally well off.

The figures on what has happened in the economy as a whole bring out an important fact about the current equity-capital problem that is frequently overlooked. Measured in terms of the ratio of interest payments to national income, the burden of private debt, due to the low interest rates and the unprecedentedly high levels of national income, has been but a fraction of that in prewar years.

Two measures of the trend of debt burden in recent years are given in table III. One of these shows the extent of debt rigidities in the economy by comparing national income and the distributive share represented by net interest. For 1948 the dollar amount of net interest was somewhat less than during the thirties and substantially less than in 1929 or 1930. Percentagewise interest was only about one-fourth as important relative to income as it was in 1929 or 1930 and about one-seventh as important as during the depression years 1932 and 1933.

It may be urged with propriety that interest charges should be related only to the income out of which they must be paid rather than to all national income since the latter includes wages and other nonproperty forms of income. The right-hand portion of table III presents data on this more precise concept of "burden."

TABLE III.—*Private debt burden as measured by the relation of interest to income, National Aggregates, 1929–48*

[Billions of dollars]

Year	National income	Net interest	Percent	Business, farm and rental income	Monetary interest paid private business [1]	Monetary interest as a fraction of business income
						Percent
1929	87.4	6.5	7.4	29.6	9.8	33.1
1930	75.0	6.2	8.2	19.0	9.1	48.0
1931	58.9	5.9	10.0	11.0	8.4	76.4
1932	41.7	5.4	12.9	4.4	7.6	172.7
1933	39.6	5.0	12.6	7.4	6.7	90.5
1934	48.6	4.7	9.7	10.4	6.3	60.6
1935	56.8	4.5	7.9	15.4	5.9	38.3
1936	64.7	4.5	7.0	18.4	5.6	30.4
1937	73.6	4.4	5.9	21.5	5.5	25.6
1938	67.4	4.3	6.4	17.3	5.3	30.6
1939	72.5	4.2	5.8	21.3	5.2	24.4
1940	81.3	4.1	5.0	25.5	5.0	19.6
1941	103.8	4.1	4.0	38.0	5.0	13.2
1942	137.1	3.9	2.9	49.5	4.8	9.7
1943	169.7	3.4	2.0	57.9	4.6	7.9
1944	183.8	3.1	1.7	59.8	4.5	7.6
1945	182.7	3.0	1.7	57.2	4.6	8.0
1946	179.6	3.0	1.7	64.8	4.7	7.3
1947	201.7	3.4	1.7	76.7	5.3	6.9
1948	226.2	3.8	1.7	84.3	5.9	6.9

[1] The annual interest obligation of private business, represented by business debt, is best measured by the amount of monetary interest paid. Imputed interest, as included in national income, is not likely to represent a default hazard nor is it necessary to consider net interests since interest income is fully as useful as income from other sources in meeting recipients' obligations. In periods of substantial defaults, interest actually paid may, of course, be materially less than interest obligations coming due.

Source: National Income Supplement to Survey of Current Business, July, 1947, 1948, 1949.

Note that during recent years the interest charges of corporations, unincorporated enterprises, farmers, and landlords, have been low enough in relation to income to have been earned more than 14 times over. This compares with only three times in 1929, twice in 1930, and barely once in the succeeding 3 years combined. Stated another way, though with some departure from realism, the national income could fall to one-third its current levels without the obligation for fixed interest under existing contracts becoming as burdensome relatively as it was in 1929 or in the immediate prewar years. The danger of burdening fluctuating income with rigid annual charges for interest is strikingly shown by the figures for 1932 when business, under contract to pay 7.6 billion dollars in interest, received little more than half that amount, 4.4 billion dollars, in current income.

A comparison frequently made which relates debt principal to current income has been purposely avoided. Neither for the Nation nor for business is the burden of debt in any individual income period measured by its principal. Only a portion of debt outstanding matures in any single year; payment of that portion which does mature is, moreover, not necessarily limited to amounts available in the form of current income. Private debts need not and, indeed, seldom are, retired except by refunding. With adequate coverage of interest charges this is ordinarily possible. When lenders are of a mind to insist upon collection of maturing debts irrespective of security, the pattern of collapse described in the previous paragraph is set in motion.

CHANGING ROLE OF EQUITY IN CORPORATE FINANCE

While the aggregate annual burden of carrying private debt has been declining, available data point to an increasing reliance by manufacturing corporations on debt as a source of business capital. A similar, though less marked, trend appears also in respect to trading corporations. Equity finance has played a somewhat declining role over the years 1926–46.

Summarized below for selected years are the aggregate balance sheets of those manufacturing and trading corporations that report balance sheets to the Internal Revenue Bureau. They disclose (compare table IV) the following shifts in capitalization:

	1926	1936	1946
Manufacturing corporations:	*Percent*	*Percent*	*Percent*
Liabilities and liability reserves of all types	28.4	29.3	29.8
Common and preferred stock	48.5	47.1	31.2
Surplus and surplus reserves (net)	23.1	23.6	39.0
Stockholders' equity	71.6	70.7	70.2
Total	100.0	100.0	100.0
Trading corporations:			
Liabilities and liability reserves of all types	37.2	42.3	41.3
Common and preferred stock	44.5	42.3	25.9
Surplus and surplus reserves (net)	18.3	15.4	32.8
Stockholders' equity	62.8	57.7	58.7
Total	100.0	100.0	100.0

TABLE IV.—*Stockholder equity and its components related to total assets*

[Manufacturing, trading, and all corporations submitting balance sheets with tax returns—selected years 1926-46]

Year	Common and preferred stock	Surplus and surplus reserve (net)	Stockholder equity (net)	Total assets	Ratio of—		
					Stockholder equity to total assets	Capital stock to total assets (percent)	Surplus to total stockholder equity
	Billions of dollars	*Billions of dollars*	*Billions of dollars*	*Billions of dollars*			
Total manufacturing:							
1926	31.4	14.9	46.3	64.7	71.6	48.5	32.2
1929	33.2	19.5	52.7	70.3	75.0	47.2	37.0
1933	30.4	12.9	43.3	57.8	74.9	52.6	29.8
1936	25.6	12.8	38.4	54.3	70.7	47.1	33.3
1939	25.7	16.8	42.5	56.7	75.0	45.3	39.5
1943	27.4	33.3	60.7	94.8	64.0	28.9	54.9
1946	30.0	37.6	67.6	96.3	70.2	31.2	55,6
Total trade:							
1926	8.5	3.5	12.0	19.1	62.8	44.5	29.2
1929	9.4	4.2	13.6	21.8	62.4	43.1	30.9
1933	7.7	2.1	9.8	15.6	62.8	49.4	21.4
1936	7.7	2.8	10.5	18.2	57.7	42.3	26.7
1939	7.8	3.8	11.6	19.0	61.1	41.1	32.8
1943	7.0	6.6	13.6	21.5	63.2	32.6	48.5
1946	8.3	10.5	18.8	32.0	58.7	25.9	55.9
All industrial groups:							
1926	84.7	34.6	119.3	262.3	45.5	32.3	29.0
1929	105.3	55.1	160.4	335.8	47.8	31.3	34.4
1933	92.5	35.1	127.6	268.2	47.6	34.5	27.5
1936	96.7	36.8	133.5	303.2	44.0	31.9	27.6
1939	90.7	46.2	136.9	306.8	44.6	29.6	33.7
1943	79.5	66.1	145.6	389.5	37.4	20.4	45.4
1946	83.2	81.5	164.7	454.7	36.2	18.3	49.5

Source: Statistics of Income for years concerned. Treasury Department Press Service No. S-1051, Apr. 21, 1949, table 3.

While changes during the first decade covered by the summary were negligible, shifts in capitalization of manufacturing corporations in the 10 years after 1936 have been noticeable. The extent to which capital has been raised from the proceeds of sales and retained earnings is illuminated by the fact that capital stock account, which in 1936 represented 47 percent of the aggregate capital employed by the reporting corporations, fell by 1946 to less than one-third of the book value of the total assets. In the case of trading corporations, the capital stock account represented barely one-fourth of the assets employed in 1946. Aggregate figures on capital accounts are, of course, subject not only to the usual accounting limitation but to such additional factors as the increased taking in good times of maintenance and other write-offs postponed during the stringent years prior to 1936, accelerated amortization during the war, etc. Moreover, prices were rising and profits increasing by phenomenal amounts. At such times those holding equities find it hard to resist pyramiding earnings on their holdings rather than diluting both their claims to the profits bonanza and their control. Thus the debt ratio of manufacturing corporations increased.

When surplus and surplus reserves are added to the balance sheet figures at which capital stock is recorded, the downward trend in stockholders' equity is, of course, less. Stockholders' equity in manufacturing corporations fell from levels of $71 per $100 of total assets in the years 1926 and 1936 to $64 in 1943, but rose again in 1946 to about former levels. The converse is that $30 out of every $100 of postwar assets belonging to these corporations is currently offset by debt obligations compared with $25 thus financed out of every $100 in 1939.

At the same time that stockholders' equity has been declining relative to total assets, the portion of their equity represented by surplus accounts has been increasing markedly. The proportion of surplus of total stockholders' equity in manufacturing increased from about 30 percent to more than 50 percent between prewar years and 1946; that in trading corporations doubled. The extraordinarily strong financial position of corporations in recent years is indicated by the fact that their surplus, which formerly amounted to about one-half of the amounts at which common and preferred stocks were carried, was by 1946 equal to that which banks are required to have, and, in fact, even exceeded capital accounts. For obvious reasons the trend must have continued at an accelerated rate through 1947 and 1948. In those 2 years the Department of Commerce reports that all corporations retained nearly $24,000,000,000 of earnings while net issues of new capital stock amounted to barely one-tenth of that amount (table V).

TABLE V.—*Sources and uses of corporate funds, 1946, 1947, 1948* [1]

[Billions of dollars]

	1946	1947	1948
Uses:	26.9	29.5	25.9
Plant and equipment	11.6	15.0	17.3
Increase in inventores (book value)	11.2	8.9	6.3
Increase in trade receivables	4.8	5.7	2.3
Other current assets	−.7	−.1	[2]
Sources:	27.0	30.2	27.7
Reduction in holdings of United States Government securities	5.8	1.5	−.1
Cash and deposits and miscellaneous current assets	−1.1	−1.3	.1
Increase in various liabilities:			
Trade payables	4.0	2.6	.9
Bank loans:			
Short term	1.9	1.5	.5
Long term	1.4	1.2	.6
Mortgage loans	.6	.8	.7
Federal income tax liability	−1.6	2.7	.9
Other current liabilities	1.8	.6	[2]
Depreciation charges	4.2	4.9	5.5
Retained earnings [3]	7.7	11.4	12.5
New security issues—net:			
Bonds	1.0	3.1	4.8
Stocks	1.3	1.3	1.2
Discrepancy (uses less sources)	−.1	−.7	−1.8

[1] Excluding banks and insurance companies.
[2] Less than $50,000,000.
[3] Includes depletion.

Source: U. S. Department of Commerce.

SIZE DIFFERENCES IN THE PROPORTION OF CAPITAL IN EQUITY FORMS

Several incidental facts about the prevailing relationship between equity and debt are given in tables VI and VII. Irrespective of size classes, United States manufacturing corporations had, as of December 31, 1948, provided about 65 percent of total capital employed by them in form of capital stock and surplus, the remaining 35 percent being represented by liabilities. This represents a change from the early 1930's when, according to a study by the Twentieth Century Fund, the percentage of borrowed capital to total capital tended to decrease with increasing size.

When the factor of debt maturities is considered, however, larger corporations seem to have their finances in slightly better order than do the smaller. Current debt, relatively heavier among the smaller companies, is in general more risky than funded debt. Recurring maturities present renewal problems which are often embarrassing in times of stress.

TABLE VI.—*All manufacturing corporations liability and capital accounts per $100 of assets, as of Dec. 31, 1948, by size groups*

Liabilities	Size groups in millions of dollars per $100 of assets					
	Under ¼	¼ to 1	1 to 5	5 to 100	100 and over	All sizes
Bank loans payable within 1 year	$4.15	$4.38	$4.08	$3.33	$1.69	$2.73
Other notes and accounts payable	15.93	10.70	8.16	6.66	6.93	7.42
Federal income taxes accrued	4.11	6.58	7.16	7.70	6.80	7.06
Other current liabilities	4.15	3.67	3.69	4.38	3.83	3.99
Total current liabilities	28.34	25.33	23.09	22.07	19.25	21.20
Bank loans 1 year or longer	1.46	1.37	1.82	2.94	3.40	2.90
Other long terms	5.38	4.13	4.02	5.13	8.25	6.42
Total long-term debt	6.84	5.50	5.84	8.07	11.65	9.32
Other liabilities	1.87	.69	1.83	.60	.73	.84
Reserves	.52	.75	1.30	2.43	3.28	2.55
Capital stock, capital surplus	36.41	28.86	27.12	31.02	33.59	31.78
Earned surplus and surplus reserves	26.02	38.87	40.82	35.81	31.50	34.31
Total stockholder equity	62.43	67.73	67.94	66.83	65.09	66.09
Total assets (liabilities)	100.00	100.00	100.00	100.00	100.00	100.00

Source: Computed from data, Federal Trade Commission and Securities and Exchange Commission, Quarterly Industrial Financial Report Series; First Quarter, 1949.

TABLE VII.—*Ratio equity capital to total assets, all manufacturing corporations, by size groups, 1944*

Classification by size of total assets in thousands of dollars	All	With net income	With no net income
0 to 50	53.1	61.6	28.3
50 to 100	62.2	66.2	42.3
100 to 250	65.5	67.3	51.3
250 to 500	66.2	67.1	54.3
500 to 1,000	65.6	66.1	56.5
1,000 to 5,000	65.4	65.7	57.4
5,000 to 10,000	66.7	66.4	73.0
10,000 to 50,000	65.1	65.1	62.9
50,000 to 100,000	62.7	62.5	71.2
100,000 and over	66.7	66.7	65.3
Total	65.7	65.9	57.0

Source: Computed from U. S. Treasury Department Statistics of Income for 1944, pt. 2, table 6, pp. 220–221.

Table VII demonstrates the interesting, though perhaps not surprising, fact that corporations reporting net income characteristically report a higher ratio of equity to total assets than do those corporations which have been unable to report net income for tax purposes. While data from income-tax returns are not available for 1948, the table confirms the fact that differences in debt equity ratio between manufacturing companies classified by size is not considerable. An

important exception relates to the very small corporations having under $50,000 of assets. Among the successful corporations in this class, the debt equity ratio conforms more or less to the pattern of other size classes; the class is, however, heavily weighted with corporations unable to report income and for these the debt ratio is very high.

NEW MONEY FINANCING AND RELIANCE ON RETAINED EARNINGS

Further evidence of the trend toward financing out of retained earnings is given in table VIII. The portion of new funds added in recent years in nondebt forms has not been so much out of line with traditional standards of finance as has the method by which the new equity has been obtained. In 1929 United States corporations financed their new money requirements about one-fourth from increased debt, 40 percent by common stock sales, slightly less than one-fourth from retained earnings, and some 13 percent through new preferred stock issues.

TABLE VIII.—*New money financing, all United States corporations, 1929–48*

[Millions of dollars]

Period	Retained corporate earnings [1]	New money common stock [2]	New money preferred stock [2]	Increase in corporate debt [3]	Total new money
1929	2,597	4,407	1,517	2,800	11,321
1930	−3,045	1,091	412	400	−1,142
1931	−5,381	195	116	−5,800	−10,870
1932	−5,998	10	10	−3,500	−9,478
1933	−2,428	105	15	−3,100	−5,408
1934	−1,619	31	3	−1,400	−2,985
1935	−613	15	54	−700	−1,244
1936	−284	262	90	1,300	1,368
1937	−8	203	205	−300	100
1938	−906	19	48	−2,500	−3,339
1939	1,209	71	26	300	1,606
1940	2,398	74	61	2,000	4,533
1941	4,921	79	94	7,900	12,994
1942	5,136	16	103	8,200	13,455
1943	6,153	37	55	3,900	10,145
1944	6,128	91	133	−500	5,852
1945	3,803	226	430	−9,800	−5,341
1946	8,132	728	740	3,600	13,200
1947	12,073	620	589	11,500	24,782
1948	13,242	500	400	8,000	22,142
1930–39 inclusive	−19,073	2,002	979	−15,300	−31,392
1940–48 inclusive	61,986	2,371	2,605	34,800	101,762
1929–48 inclusive	45,510	8,780	5,101	22,300	81,691

[1] Department of Commerce, Survey of Current Business, National Income Number, July 1949.
[2] Commercial and Financial Chronicle.
[3] E. T. Bonnell, Public and Private Debt in 1946, Survey of Current Business, September 1947, October 1948; 1948 estimated from Sources and Uses of Corporate Funds, Survey of Current Business, February 1949.

Since that time methods of new money financing have changed. During the 1930's a series of losses, combined with dividends paid from previous surplus and substantial net reductions in corporation debt, resulted in a net drain upon corporate funds of $31,000,000,000. During this period new money financing by stock issues fell to extremely low levels. To a certain extent before the war and almost wholly during the war, new plant construction and capital requirements were met by the Government.

Thus, as is shown in table VIII, during the 9 years ending in 1948, for every $102 new money, only $35 was raised by increasing corporate debt. For the 20 years 1929–48 inclusive, only $22 out of each

$82 new money has been in debt forms. Including, as one must, retained earnings along with the minor amounts raised by new stock issues, the portion of new equity funds in relation to total new money has been relatively high in each year of the past two decades with the exception of 1936, 1941, and 1942. Nine out of the 20 years witnessed actual decreases in corporate debt. In the 9 years ending with 1948, retained earnings have aggregated more than 12 times new common and preferred stock sales. Even with the reduction in surplus during many of the earlier years, net additions to retained earnings have provided considerably more than three times as much new money in the two decades as have stock sales.

During and since the war, United States corporations have been retaining upward of one-half of corporate profits after taxes. In 1947–48 the percentage retained was in excess of 60 percent in contrast to 31 percent in 1929. A good deal of such retained earnings were needed to replenish inventories depleted during the war, to aid reconversion, and to bid for producers' goods in short supply at increasing prices. For example, in 1947 corporations retained $12,000,000,000 of undistributed profits. During that year the Department of Commerce estimates that $6,000,000,000 needed to be held in the business in order to replace the physical volume of inventory used up. While corporations in the aggregate paid out only 36.6 percent of profits after taxes, one-half of the undistributed profits had to be earmarked for maintenance of inventory unchanged. Only one-half of the retained profits or about 31 percent of profits after taxes were available for working capital, expansion, or debt retirement.

TABLE IX.—*Corporate profits after taxes, retained earnings and portions available for expansion, all private corporations*

[Amounts in billions of dollars]

Period	Corporate profits after taxes			Retained to finance		Percentage of profits undistributed	Percentage of retained profits available for expansion
	Total	Dividend payments	Undistributed profits	Physical inventory unchanged	Working capital and expansion		
1929	8.4	5.8	2.6	−0.5	3.1	31.0	119.2
1930	2.5	5.5	−3.0	−3.3	.3		
1931	−1.3	4.1	−5.4	−2.4	−3.0		
1932	−3.4	2.6	−6.0	−1.0	−5.0		
1933	−.4	2.1	−2.4	2.1	−4.5		
1934	1.0	2.6	−1.6	.6	−2.2		
1935	2.3	2.9	−.6	.2	−.8		
1936	4.3	4.6	−.3	.7	−1.0		
1937	4.7	4.7					
1938	2.3	3.2	−.9	−1.0	.1		
1939	5.0	3.8	1.2	.7	.5	24.0	41.7
1940	6.4	4.0	2.4	.1	2.3	37.5	95.8
1941	9.4	4.5	4.9	2.6	2.3	52.1	46.9
1942	9.4	4.3	5.1	1.3	3.8	54.3	74.5
1943	10.6	4.5	6.1	.8	5.3	57.5	86.9
1944	10.8	4.7	6.1	.3	5.8	56.5	95.1
1945	8.5	4.7	3.8	.6	3.2	44.7	84.2
1946	13.9	5.8	8.1	5.2	2.9	58.3	35.8
1947	19.1	7.0	12.1	6.0	6.1	63.4	50.4
1948	21.2	7.9	13.2	2.2	11.0	62.3	83.3

Source: Survey of Current Business, national income number, July 1949.

The fact that corporate directors have progressively favored wholesale retention of earnings means that investment decisions formerly made by the owners of substantial funds or by individual capitalists in their own right now become the decisions of corporate directors. In many cases this may involve little change in the group making the decisions. Those who directed the flow of venture capital as owners may now control investment flow as corporate directors. In other instances, however, where control and ownership are divorced, the process of making investment decisions may be entirely out of the hands of the owners. The private property atom has been split. Such gives rise to the possibility that corporate directors may be influenced by noneconomic considerations such as the simple desire to see their corporations grow bigger. Moreover, directors familiar with the profit possibilities of expansion in their own companies may be less well informed or appreciative of the opportunities for investment in competing or alternative lines.

SUMMARY

1. The investment needs of the country depend on the number, intelligence, and capacities of its labor force, on changes in its standards of values and other factors determining the rapidity with which the economy wishes to take advantage of technological improvement. Since this rate is subject to a wide range of choice, the record of the past or some other standard of adequacy affords no absolute norm.

2. Among changes in types of private capital investment, that which takes place from year to year in business inventories is probably the most unstabilizing. Fluctuations in private investment expressed as a percentage of gross national product show less variance than do the absolute figures.

3. The risk capital problem differs from the general investment problem, being primarily a problem of contractual forms of flexible capital contracts contrasted with those containing default provisions. While "risk" and "venture" are important in sustaining full employment, the form of contract by its rigidity may involve the possibility of cumulative bankruptcies in the event of deep depression.

4. Low interest rates in the war and postwar period have held down the burden of debt, as measured by the proportion of current income required to meet interest payments, to a point where fixed charges are relatively far lower than during the prewar period.

5. While the annual burden of carrying private debt has been declining, the proportion of capital derived from debt sources has been increasing.

6. In respect to stockholders' equity, the capital stock account has become decreasingly important proportionately while the portion of equity represented by surplus accounts has been increasing markedly. Surplus of manufacturing corporations, which formerly amounted to about one-half of the amount at which common and preferred stocks were carried, had, by 1946, reached the point where it was equal to or exceeding capital account.

7. Corporations of various sizes show no significant differences in the relative proportions of the capitalization financed by debt. Irrespective of size classes, manufacturing corporations had, as of December 31, 1948, provided about 65 percent of total capital employed by them in the form of capital stock and surplus.

8. Corporations reporting net income characteristically report a higher ratio of equity to total assets than do those corporations which have been unable to report net income.

9. The portion of new funds added in recent years in nondebt forms has not been so much out of line with traditional standards of finance as have the methods by which the new equity has been obtained. Including retained earnings, out of every $102 of new money raised during the 9 years ending with 1948, only $35 was represented by an increase in corporate debt.

10. In the 9 years ending with 1948 retained earnings have aggregated more than 12 times the proceeds of new stock sales. This shift in the manner in which equity funds are obtained with the consequent change in the manner in which investment decisions are made is probably the most striking change that has taken place in the field of corporate equities in recent years.

11. Corporations in the aggregate are apparently not being starved for funds in nonequity forms but the channels through which they are obtained have undergone striking change.

CHAPTER V

THE CURRENT POSITION AND FINANCIAL PROBLEMS OF SMALL BUSINESS

CURRENT POSITION OF SMALL BUSINESS IN THE ECONOMY

Before anything meaningful can be said about any of the problems of small business, it is important to specify what is meant by small business and to ask what portion of all business comes within the limits of that definition.

While recognizing the impossibility of drawing a mathematical line that will satisfactorily distinguish small from big business for every purpose, the Department of Commerce at one time defined small business as comprising: Manufacturing plants with 100 employees or less; wholesale establishments with less than $200,000 annual net sales; and retailing, service establishments, and construction enterprises with net sales or receipts of less than $50,000.

On the basis of the above definition, 92.5 percent of all business establishments operating in 1939 were classifiable as small. These establishments accounted for nearly 45 percent of all persons engaged in business of other than a professional or agricultural character and were responsible for over 34 percent of the dollar output of all business. Because of price level changes, it is now thought that wholesale firms should be divided at $500,000 annual sales and retail and other types of service establishments at $100,000. On this basis, about the same percentage of all firms would be classed as small as was true in 1939. What is needed is a thorough study of industry by type to develop statistical standards of smallness for each industry or group of like characteristics.

The relative importance of small business in each of the major sectors of business in 1939, in terms of establishments, personnel, and value of output, is indicated in table I.

TABLE I.—*Percentage of small business in United States, totals*

Industry or trade	Establishments	Personnel	Value of output, sales, or receipts
Manufacturing [1]	91.6	29.9	30.6
Wholesaling	77.2	39.0	21.1
Retailing	91.2	56.2	42.4
Service establishments	98.7	73.8	65.5
Hotels	90.1	30.7	26.5
Construction	93.1	47.0	34.2
Places of amusement	89.8	56.6	33.3
All industry	92.5	44.8	34.1

[1] Proprietors and employees are included except for manufacturing, under which the 1939 census tabulated only manufacturing employees. The total of output, sales, and receipts for the small businesses represented in the table was $43,600,000,000, of which retailing and manufacturing each accounted for about 40 percent.

Source: Censuses of Business and Manufactures, 1939.

This table brings out the significant fact that small business predominates in some sectors of the economy, but occupies a decidedly subordinate role in others. Of the three measures, i. e., establishments, personnel, and value of output, that relating to personnel is the most meaningful for present purposes. By this measure small businesses occupy a predominant role among service establishments, are more important than larger businesses in both retailing and places of amusement, and are nearly as important as larger businesses in construction and wholesaling. However, in the hotel business and especially in manufacturing, small businesses occupy a decidedly subordinate role.

Although small businesses occupy a subordinate role in manufacturing when taken as a whole, there are some lines of manufacturing where small businesses are relatively important. This is brought out in tables II and III. In 1939, there were four industries, printing and publishing, food and kindred products, apparel and finished products, and lumber and timber establishments in which half or more of the total wage earners were employed by firms with 100 employees or less. For 1947, the industry classifications were changed slightly, and the order is somewhat different, but when industries are ranked according to the importance of small business, these four industries continue to head the list. However, only two, lumber and products, and apparel and related products, still continue to employ half or more of the total wage earners. There has been an appreciable drop in the other two, printing and publishing, and food and related products. The change in the relative positions of these groups may have been due to the further development of integrated manufacturing and distribution, to the effect of popular preferences for "national brands," or to more advanced mechanization in production processes.

TABLE II.—*Distribution of wage earners by size of establishment—Manufacturing industry groups, 1939*

Industry group	Percentage of wage earners			
	0 to 100	101 to 250	251 to 500	Over 500
Printing, publishing, etc.	58.5	16.9	12.5	12.1
Food and kindred products	52.2	19.9	10.9	17.0
Apparel and finished fabrics	50.0	24.9	15.7	9.4
Lumber and timber establishments	50.0	20.3	16.8	12.9
Furniture and finished lumber products	47.5	29.8	14.3	8.4
Miscellaneous industries	42.6	23.3	20.8	13.3
Chemicals and allied products	37.7	16.7	10.9	34.7
Stone, clay, and glass products	36.3	26.3	16.8	20.6
Nonferrous metals and their products	29.9	14.1	16.0	40.0
Paper and allied products	29.8	30.9	23.0	16.3
Machinery (except electrical)	26.3	17.1	16.8	39.8
Leather and leather products	18.4	24.5	29.6	27.5
Iron and steel and their products	17.3	17.1	16.2	49.4
Products of petroleum and coal	14.4	18.8	20.2	46.6
Electrical machinery	12.5	12.8	15.8	58.9
Textile-mill products	11.5	20.1	24.2	44.2
Transportation equipment except automobiles	10.6	9.9	10.2	69.3
Tobacco manufacturers	10.1	13.8	12.0	64.1
Rubber products	8.7	9.5	12.7	69.1
Automobiles and automobile parts	3.9	3.5	5.0	77.6
All industry groups	29.9	18.7	16.1	35.3

Source: Computed from Census of Manufactures, 1939

TABLE III.—*Distribution of wage earners by size of establishment—Manufacturing industry groups, 1947*

Industry group	Percentage of wage earners 1947			
	1 to 99	100 to 249	250 to 499	500 and over
Lumber and products (excluding furniture)	57.5	22.3	10.6	9.6
Apparel and related products	52.1	23.4	13.3	11.2
Printing and publishing industries	42.5	16.1	11.5	29.9
Food and kindred products	41.5	21.1	12.6	24.8
Miscellaneous manufactures	40.1	18.6	14.2	27.1
Furniture and fixtures	38.2	24.3	15.8	21.7
Stone, clay, and glass products	28.9	19.1	16.8	35.2
Fabricated metal products	26.5	17.9	15.8	39.8
Chemicals and allied products	25.7	14.9	12.6	46.8
Leather and leather products	23.7	22.5	28.1	25.7
Paper and allied products	20.2	25.9	24.1	29.8
Machinery (except electrical)	16.6	11.7	12.3	59.4
Instruments and related products	15.4	11.9	11.2	61.5
Textile-mill products	12.1	16.0	19.4	52.5
Tobacco manufactures	11.4	14.3	17.6	56.7
Petroleum and coal products	10.9	11.3	17.1	60.7
Electrical machinery	8.2	8.4	12.3	71.1
Primary metal industries	8.1	9.6	11.6	70.7
Rubber products	5.4	6.2	7.1	81.3
Transportation equipment	4.5	4.3	4.3	86.9
All industry groups	25.0	15.6	13.5	45.9

Source: Census of Manufactures 1947, Preliminary Report Series No. C–100–6.

Comparative data are not available with which to present a complete picture of how the position of small business has changed over time, either before or since 1939. However, from the extensive data on the number of business establishments developed by the Department of Commerce, supplemented by some preliminary reports from the 1947 census of manufactures, some information on this point can be obtained. These data will be presented in the following section.

Trends in business population

Of the three measures employed in the preceding paragraphs for portraying the prewar position of small business in the economy, the only one for which figures are available over a long period of time is the number of firms. Concerning the number of firms, a considerable body of data has been developed covering the past 20 years and particularly since the outbreak of World War II. Since the great bulk of all business firms are small firms, data on changes in the business population are frequently used to indicate changes in the position of small business.

The long-term trend figures show that the number of firms and thus presumably, the number of small firms, has increased more rapidly than the human population since 1900. Thus, in 1900, there were only 21 firms per thousand persons, but in 1947, the number of firms per thousand persons had increased to 26. Differences in the trends for different major industry groups since 1929, when the Department of Commerce series begins, are shown in table IV. The percentages appearing in the last column of this table may be compared with the change in human population of 18.3 percent between 1929 and 1947.

TABLE IV.—*Change in annual average number of business firms, by major industry groups, 1929–47*

Industry	Number of firms		Change since 1929	
	1929	1947	Amount	Percent
	Thousands	*Thousands*		
All industries	3,097.1	3,879.0	781.9	25.2
Contract construction	233.0	289.3	56.3	24.2
Manufacturing	257.6	330.5	72.9	28.3
Food and kindred products	40.5	36.8	−3.7	−9.1
Textiles and textile products	34.5	41.6	7.1	20.6
Leather and leather products	5.3	6.6	1.3	24.5
Lumber and lumber products	58.7	71.2	12.5	21.3
Paper and allied products	3.3	4.0	.7	21.2
Printing and publishing	42.6	42.4	−.2	−.5
Chemicals and allied products	11.6	12.0	.4	3.4
Stone, clay, and glass products	8.6	11.2	2.6	30.2
Metals and metal products	32.4	51.3	18.9	58.3
Wholesale trade	114.9	196.6	81.7	71.1
Retail trade	1,341.1	1,672.8	331.7	24.7
Finance, insurance, and real estate	324.8	344.7	19.9	6.1
Service industries	670.5	830.5	160.0	23.9

Source: Based on data in Survey of Current Business, June 1949, p. 20.

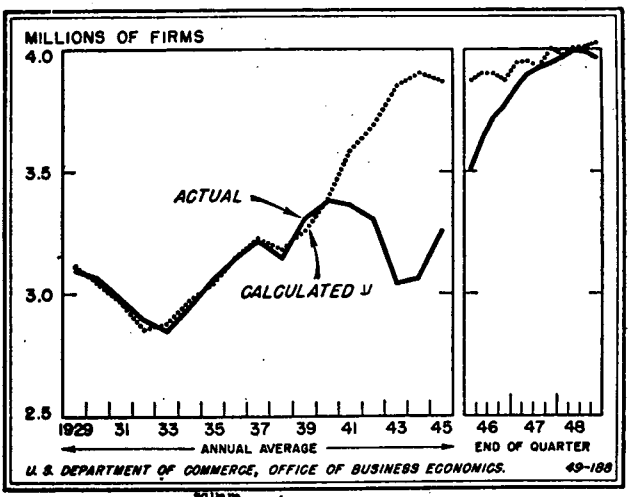
All major industry groups except finance, insurance, and real estate showed an increase in the business population in excess of the human population. In wholesale trade the increase was nearly four times as great, but other major industry groups showed a percentage increase only slightly in excess of the percentage increase in the human population.

However, caution is necessary in drawing conclusions from such data as are presented in table IV respecting the position of small business in the economy. Thus, despite the fact that the number of business establishments in manufacturing increased percentagewise between 1929 and 1947 by more than any other major industry group except wholesaling, a comparison of tables II and III shows a definite decline from 1939 to 1947 in the percentage of all manufacturing wage earners employed in establishments having 100 employees or less.

Year-to-year variations in the number of business firms operating are related closely to variations in the level of business activity. This is apparent from chart 1, which shows the annual average number of firms in operation since 1929 and, theoretically, the normal number of firms for the same years. The calculated number of firms was based upon the national gross product excluding government, agriculture, professional, and other services, plus a growth factor allowing for the observable expansion in economic activity over the years. The calculated line coincides remarkably close with the actual data from 1929 to 1940 and is again in the theoretically normal relationship by the end of 1947. The intervening years were war years when thousands of small firms were closed because there was a lack of goods to sell, raw materials to manufacture, or there were more favorable job opportunities elsewhere. In addition to these

factors, the requirements of military service led to the closing of many businesses operating in nonnecessitous lines. The chart also indicates that, except for the period of wartime restrictions and conscription of manpower, the number of firms in operation has tended to increase when business has been on the upgrade and decrease when business has been on the downward trend. A systematic analysis of this relationship for the years 1929 to 1940 shows a consistent tendency for the number of firms in operation to rise or fall by roughly 100,000 for every rise or fall of $10,000,000,000 in "real" gross national product, excluding Government and agriculture.[1]

CHART 1.—FIRMS IN OPERATION: ACTUAL AND CALCULATED



[1] Calculated from a linear least square regression equation for the years 1929–40, $Y=2,349+12.07X+7.17t$, where Y= number of firms (thousands); X=gross national product, excluding government, agriculture, and professional and other services excluded from the business population (billions of 1939 dollars); and t=time in 6-month intervals centered at December 31, 1934.

Source of data: U. S. Department of Commerce, Office of Business Economics.

However, some industries were much more sensitive than others to changes in the level of general business activity. Table V shows for each industry group the average percentage change in the number of firms in that group that was associated with a 10-percent change in the business population as a whole in the period 1929–40. This table brings out the significant fact that while the response to changes in the general level of business activity was below the average in the case of retail business, finance, insurance, and real estate and particularly the service industries, the response in manufacturing was three times and, in contract construction, twice as great as the average.[2]

[1] The Postwar Business Population, Survey of Current Business, January 1947.

[2] For a discussion of the techniques employed in this study see the article, Industrial Patterns of the Business Population, Survey of Current Business, May 1948.

TABLE V.—*Indices of sensitivity and number of firms in operation*

Industry	Indices of sensitivity [1]	Number of firms in operation (thousands)			
	Percent change in group associated with 10-percent change in total business population	September 1941	December 1943	December 1947	
				Actual [2]	Calculated [1]
Major industry groups:					
Manufacturing	31	236	228	319	319
Contract construction	19	244	147	284	249
Wholesale trade	10	146	114	182	180
Retail trade	8	1,621	1,318	1,766	1,859
Finance, insurance, and real estate	8	285	268	304	293
Service industries	4	644	548	733	682
Manufacturing industries:					
Lumber and lumber products	57	36	41	65	68
Stone, clay, and glass products	45	6	8	15	10
Metals and metal products	28	28	30	50	38
Printing and publishing	26	38	39	42	51
Food and kindred products	25	56	52	57	76
Textiles and textile products	24	24	23	40	31
Leather and leather products	24	3	3	5	4
Chemicals and allied products [3]	21	9	8	10	10
Paper and allied products	13	2	2	3	3

[1] Based on the linear least squares regression of the logarithms of the number of firms in operation in each group and the total business population and time for the years 1929–41. In the case of wholesale trade, service industries, food and kindred products, textiles and textile products, and chemicals and allied products, the year 1941 was omitted from the relationship.
[2] Preliminary.
[3] Includes products of petroleum and coal.

Source: Survey of Current Business, May 1948, p. 3.

BUSINESS FAILURES AND THEIR CAUSES

Changes in the total business population from one year to another come about, obviously, as a result of differences between the number newly established and the number discontinued in a given year. Revised data on the number of new and discontinued businesses developed by the Department of Commerce are available since 1944 on a semiannual basis. Table VI is based on these data. It shows the rates at which firms were established and discontinued at annual rates per thousand firms in operation in 1944.

TABLE VI.—*Entry and discontinuance rates, all industries*

[New and discontinued businesses at yearly rate per thousand in operation, 1944 [1]]

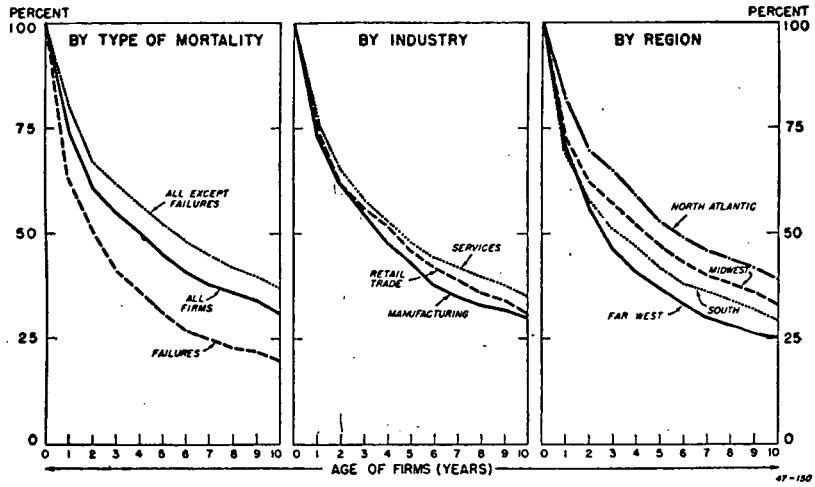
Period	New firms	New firms×2 (thousands)	Annual entry rate	Discontinuances	Discontinuances×2 (thousands)	Annual discontinuation rate
			Percent			*Percent*
1944—January to June	182.2	364.4	11.7	107.6	215.2	6.9
July to December	172.6	345.2	11.1	90.9	181.8	5.9
1945—January to June	213.4	426.8	13.8	100.0	200.0	6.4
July to December	216.4	432.8	13.9	102.7	205.4	6.6
1946—January to June	368.0	736.0	23.7	108.6	217.2	7.0
July to December	251.2	502.4	16.2	117.8	235.6	7.6
1947—January to June	277.8	555.6	17.9	145.8	291.6	9.4
July to December	195.0	390.0	12.6	146.0	292.0	9.4
1948—January to June	226.8	453.2	14.6	176.2	352.4	11.4
July to December	167.9	335.8	10.8	194.6	389.2	12.5

[1] Total in operation in 1944, 3,102,100.

Source: Based on data in Survey of Current Business, June 1949, p. 22.

Table VI indicates that the rate at which new businesses were established tended to increase from the beginning of 1945 until mid-1946 and to decrease thereafter. This was caused by the gradual shift to peacetime industries plus the marked increase in manpower occasioned by demobilization. The discontinuances rate, on the other hand, has increased continually since the beginning of 1945 until it overtook the entry rate in the last half of 1948. This was to be expected since, normally, the discontinuances are only slightly less than the number of new starts which produces the slight growth of the number of firms in existence. Whenever a period of unusual rapid growth is experienced, it is to be expected that this will be followed by a period having a higher rate of discontinuances. This is true, since in a period like that immediately following the end of the war, thousands of new firms are established, many of them too

CHART 2.—ESTIMATED LIFE SPAN OF BUSINESS FIRMS



(Based Upon Distribution of 1,650 Firms Sold or Liquidated in Second Quarter of 1946)

Source of data: U. S. Department of Commerce.

rapidly, with insufficient investigation, and often facing unrecognized and possibly insurmountable problems. The situation now appears to be in fairly even balance, and it is to be expected that the number of starts will again exceed the number of discontinuances by only a small margin in good business years.

For present purposes the general magnitude of these rates is of greater significance than these trends. Table VI brings out two important facts: (1) In any year, newly established businesses comprise a very large portion of total businesses in operation, and (2) the number of discontinuances approximates the number of new businesses.

The close relationship between the number of new and discontinued businesses is directly traceable to the fact that the high turn-over in the business population takes place primarily among recently established firms. Chart 2 shows the life span of a representative sample of businesses sold or liquidated during the second quarter of 1946. This chart emphasizes the high rate of infant mortality in the business population. Though this was a year of high prosperity, 26 per-

cent of all firms sold or liquidated in that period had been in existence for a year or less and 45 percent had been in existence for 3 years or less. Moreover, some interesting variations were found by class of industry and by region. Service industries tended to survive longer than manufacturing and retailing, while firms in the North Atlantic area had a higher survival rate than those in the other regions. Whether this was a reflection of differing degrees of wartime expansion or differing levels of economic maturity cannot be said.

An earlier study by the Department of Commerce based on data for retail businesses from the Census of Business 1929–39 indicated that the chances of a buisness concern to survive grow progressively better as the business grows older.[3] The year-to-year survival ratio (number of stores surviving at a given time divided by the number in the base year) was shown to grow progressively higher as the surviving stores grew older. The estimated yearly rate of decrease in the number of stores of various ages operating in 1929 was highest in 1930, when 12.2 percent were casualties, and lowest in 1939, when 2.9 percent of the 1929 stores ceased operations. This relationship becomes especially significant when the extreme depression of the business years 1932–33 are recalled.

Infant mortality is characteristic of new businesses as a class, whether the businesses are large or small. If we except the self-employed, non-employee firms, where the turn-over rate is known to be exceptionally high, it is doubtful whether new establishments of small size are either more or less subject to infant mortality than larger ones. An analysis of discontinuances in the fourth quarter of 1944, presented in table VII, showed that while a slightly higher percentage of the very largest businesses had lasted for 1 year, the life span of concerns with one to three employees was otherwise longer on the average than that for new businesses of larger size. These data are too limited, however, to warrant the conclusion that the smaller new businesses generally live longer than larger concerns.

TABLE VII.—*Percent of fourth quarter, 1944 discontinuance, by age of firm and size*[1]

Age of discontinued firms (in years)	Cumulative percentage distributions					
	Total, all sizes	1–3 employees	4–7 employees	8–19 employees	20–49 employees	50 or more employees
1 or less	30.6	29.7	32.0	35.5	33.5	24.3
2 or less	48.3	46.8	49.0	56.3	54.5	49.9
3 or less	57.5	56.3	56.9	65.5	63.4	61.8
4 or less	65.2	64.4	64.9	71.7	68.2	66.0
5 or less	70.5	69.6	70.5	76.2	73.9	72.3
6 or less	74.5	73.4	75.0	80.6	77.7	73.7
Over 6	100.0	100.0	100.0	100.0	100.0	100.0
Number o idiscontinued firms [1]	19,300	13,700	3,000	1,700	600	250

[1] Does not include firms without employees.

Source: Survey of Current Business, December 1945, p. 4.

In an effort to get behind these over-all figures, particularly to provide better data for explaining why businesses cease operations, the Department of Commerce conducted a survey of a representative sample of businesses sold or liquidated in the second quarter of 1946

[3] How Long Do Retail and Wholesale Establishments Tend To Survive?. Economic (Small Business) Series No. 54.

according to the records of the Bureau of Old Age and Survivors Insurance. From this survey no-employee firms were excluded, since reports from most of such firms to the BOASI are not included. A total of 1,650 usable reports were received. Each entrepreneur was asked to indicate (1) his primary motives in selling or liquidating his business and (2) the principal difficulties encountered by his business during the year preceding its disposition.

Answers given to the first question were used as a basis for distinguishing those that could be considered failures. Firms were classed as failures which reported the desire to avoid loss as the primary motive in the sale or liquidation of the business. This definition of failure is valid in the economic sense, although it departs from legal usage where the term is restricted to cases involving bankruptcy.

Table VIII shows a percentage distribution for all reporting firms of the primary motives that led to sale or liquidation of the businesses.

TABLE VIII.—*Motives for disposal of sold and liquidated firms* [1]

[Percent of firms]

Motive	All firms	Sold	Liquidated
All motives	100	100	100
Avoid loss	34	26	48
Dispose of at a profit	7	10	2
Alternative opportunity	20	23	15
Lost lease	9	3	19
Retirement, illness, and others	30	38	16

[1] Based on replies of 1,650 businessmen who sold or liquidated concerns in the second quarter of 1946.

Source: Survey of Current Business, April 1947, p. 4.

This indicates that about one-third of all business establishments during the period were failures in the economic sense defined above. The proportion was higher (nearly half the total) among firms liquidated than among those sold outright (where failures constituted just over one-quarter of the total).

Significant also is the fact that 30 percent of all the disposals resulted from the desire to retire, illness, or similar reasons. This motive accounted for 38 percent of the businesses sold and 16 percent of those liquidated. Since the survey covered a period of high prosperity when opportunities for disposition at a profit were exceptionally good, it is probable that this motive was relatively more important than would have been the case had business been less prosperous.

Tables IX and X contain percentage distributions of what were reported as the principal difficulties of selected firms during the year preceding their disposition in the second quarter of 1946. For this purpose firms classed as failures are treated separately. Each entrepreneur was asked to indicate whether the difficulties checked constituted an important factor in leading him to dispose of his business. In the case of firms classed as failures, an affirmative answer was given in almost all cases. Hence, in these cases, the factors specified are taken to be those considered by the entrepreneurs as the principal cause of their failures. Since some respondents indicated more than one cause of difficulty, the percentages frequently add to more than 100.

TABLE IX.—*Business difficulties of sold and liquidated firms other than failures, by industry groups* [1]

[Percent of firms]

Difficulty	All industries	Retail trade			Services	Manufacturing			Contract construction	Transportation	Other
		Total	Durable goods	Nondurable goods		Total	Durable goods	Nondurable goods			
Scarcity of merchandise or materials	43	56	65	54	24	34	36	33	54	9	20
Difficulty in getting competent employees	31	27	14	29	39	37	42	30	32	38	23
Increase in labor cost	9	7	3	7	9	9	10	7	9	22	16
Difficulty in getting equipment or repairs	7	4	6	4	11	14	18	9	5	16	8
Increase in rent	7	7	3	8	12	0	0	0	0	3	3
Difficulty in securing customers	2	2	2	2	5	3	2	5	2	3	0
Lack of capital	2	1	0	1	3	4	8	0	5	3	2
Inability to get dealer agencies	[2]	[2]	0	[2]	[2]	0	0	0	0	0	2
Decline in value of inventory	[2]	1	2	[2]	[2]	0	0	0	0	0	0
Other	7	6	6	6	9	7	8	5	7	16	10

[1] Based on return from 1,069 businessmen who sold or liquidated concerns in the second quarter of 1946 for reasons other than to avoid loss. Since many firms indicated more than 1 difficulty, percentages add to more than 100. The 1,069 firms cited a total of 1,162 difficulties.

[2] Less than 0.5 percent.

Source: Survey of Current Business, April 1947, p. 6.

TABLE X.—*Causes of failure, by industry groups* [1]

[Percent of failures]

Cause	All industries	Retail trade			Services	Manufacturing			Contract construction	Transportation	Other
		Total	Durable goods	Nondurable goods		Total	Durable goods	Nondurable goods			
Scarcity of merchandise or materials	47	60	73	59	28	48	46	54	74	10	28
Difficulty in getting competent employees	28	29	27	29	38	31	31	32	18	30	19
Increase in labor cost	16	16	14	17	14	16	17	14	16	20	15
Difficulty in securing customers	13	10	14	10	23	15	14	18	2	13	16
Lack of capital	12	6	0	7	11	10	12	7	21	30	15
Increase in rent	10	14	0	16	14	6	7	4	3	3	6
Difficulty in getting equipment or repairs	8	3	9	3	10	10	10	11	10	33	7
Inability to get dealer agencies	2	3	9	2	2	0	0	0	0	0	4
Decline in value of inventory	2	1	0	1	1	1	0	4	0	3	6
Other	13	10	9	11	12	15	15	14	10	20	20

[1] Based on replies of 543 businessmen who sold or liquidated concerns in the second quarter of 1946 in order to avoid loss. Since many firms indicated more than 1 cause of failure, percentages add to more than 100. The 543 firms cited a total of 846 causes of failure.

Source: Survey of Current Business, April 1947, p. 5.

For present purposes it is notable that of all the firms other than failures, only 2 percent considered lack of capital or difficulty in securing customers as a major business problem. Firms classed as failures more frequently looked upon these two factors as major causes of their difficulties, these being mentioned by 12 and 13 percent, respectively, of the total respondents. That such a low percentage, even of the failures, cited capital difficulties is surprising. Other difficulties, apart from the two just mentioned, rank in about the same order for the failures and the nonfailures.

One other finding of the survey which has some bearing on the credit problem relates to the proportion of veterans of World War II among the entrepreneurs of businesses sold or liquidated. This is significant

United States Senate

MEMORANDUM

because of the special Federal legislation for guaranteeing loans to veterans. Of the entrepreneurs of failing firms 18 percent were veterans of World War II, whereas such veterans accounted for only 11 percent of the entrepreneurs of nonfailing firms.

The data given in tables IX and X have the difficulty of being based on what was essentially a nontypical year. The 12-month period ending with the second quarter of 1946 included both a period of war and a period of marked readjustment, particularly in some businesses and in some locations. It is not usual on the national scene to find the scarcity of merchandise or materials as a vital difficulty nor is it common to find trouble in getting competent employees. To be sure, outstanding people are not plentiful, but most firms in normal times are able to get a sufficient number of people who are equal to their assigned responsibilities. This means that nearly three-fourths of the reasons for failures in this most recently gathered sample must be regarded as nontypical of the usual times or of the present time.

Of considerable interest in this connection is table XI which summarizes an earlier study made of 500 cases of business bankruptcies which obtained the causes for failure in the opinion of the owners and the causes for failure in the opinion of the creditors. Over two-thirds of the owners blamed the business depression and nearly half of them thought that insufficient capital was a factor while 28 percent were willing to blame their own inefficient management. On the other hand, most creditors thought, from their observation, that inefficient management was a primary factor in nearly 60 percent of the cases while insufficient capital was of consequence in about 33 percent of the cases and business depression was of consequence in 29 percent of the cases.

TABLE XI.—*Causes of failure, owners' versus creditors' opinions*

OWNERS' OPINIONS

Cause of failure	Percentage of enterprises affected	Cause of failure	Percentage of enterprises affected
Business depression	67.7	Too rapid expansion	10.5
Insufficient capital	48.2	Losses from signing notes with recourse	9.6
Competition	37.9	Buying too much on credit	9.5
Adverse domestic and personal factors	35.1	Real-estate losses	6.1
Decline in value of assets	31.6	Lack of adequate books	5.6
Bad-debt losses	29.8	Automobile-accident losses	2.5
Inefficient management	28.2	Failure to carry sufficient insurance	2.3
Excessive overhead expenses	24.0	Unusual expenses	1.8
Poor business location	14.6	Inefficient and dishonest employees	.9
Losses from speculation	11.6		
Unfavorable changes in trading area	11.2		
Excessive interest charges on borrowed capital	11.1		

CREDITORS' OPINIONS

Inefficient management	58.7	Poor business location	2.7
Dishonesty and fraud	33.7	Decline in rental income	2.3
Insufficient capital	32.9	Lack of adequate books	2.1
Business depression	29.1	Excessive interest charges on borrowed capital	2.1
Adverse domestic and personal factors	28.1	Unfavorable changes in trading area	1.9
Bad-debt losses	17.6	Signing notes with recourse	1.4
Competition	9.1	Real-estate losses	1.4
Excessive overhead	8.9	Unusal expenses	1.4
Too rapid expansion	7.2	Failure to carry sufficient insurance	.7
Decline in value of assets	5.8	Automobile-accident judgments	.6
Losses from speculation	5.8	Inefficient and dishonest employees	.6
Buying too much on credit	3.9		

Source: Shilt, Bernard A., and Wilson, W. Harmon, The Small Business, South-Western Publishing Co., 1944, p. 10.

A review of the various studies made into the causes of business failures shows that whatever basis is used inefficient management is probably the most important cause of business collapse. The inefficient management may have been evidenced by poor bookkeeping systems, poor locations, and unwise merchandising policies, but it is still a question of inefficient or inadequate management. To this should be added the various problems arising out of the inherent nature of the economic system.

The data given on business mortality in the preceding sections indicate both the large volume of economic waste and an approach for effecting at least a modification in the seriousness of the problem. There will always be business failures since no human process is perfect and mistakes are certain to be made, but business failures are expensive, since they usually represent financial losses at least to the owners and frequently for the creditors as well. They represent losses in time and resources which might have been utilized more effectively under better conditions or in other lines of activity.

Every study of business failures that has been made points out that the largest single cause of lack of success has been inefficient or inadequate management. This indicates that one logical method of attack is the promotion of education in business methods. Operating a business today is a good deal more complex than was the case a few decades ago. The range of merchandise that can be manufactured and sold is much broader, the style factor is more important and, therefore, obsolescence is a greater risk. Sources of supply are more numerous and marketing methods more highly developed and more difficult to utilize properly. Government regulations, intended to insure higher levels of business ethics for the benefit of both the producer and the consumer, are more in evidence. Taxes are more numerous, more complicated, and much more burdensome. The mere mechanics of complying with government reporting requirements are considerable even in the smallest of businesses. As a consequence, the business manager must be an expert in a great many things and, in the case of the small business, this is extremely difficult if not outright impossible. One appropriate way effectively to help him is through the development of educational materials analyzing his many problems in a clear simple style that may be read quickly and easily and be understood by anyone having average intelligence.

The spread of scientific agricultural methods, through public schools, the colleges, and the information furnished the county agent system, has been important in solving the technical problems of the farmer. Whatever the methods used, whether it be the public schools, the colleges and universities, or the field offices of the Department of Commerce, or all of them, it is important that information and counsel be made available on the various management techniques as they relate to production, sales, personnel, financing, accounting, and the other functions of management.

A second major classification that causes business failure might be designated as situational factors. This refers to those causes or influences on a business firm which do not necessarily reflect on management ability although they may at times be capable of solution when handled by unusually capable management backed by adequate financing. Sudden changes in styles, the development of new products which replace existing products, and highway relocations, are

examples of things which can happen which change the situation of the particular firm and cause its failure without necessarily reflecting upon the ability of the individual management.

A third group of the causes of failures might be referred to as structural factors. By this we refer to those phases of the business situation which exist in the economic structure, as products of law or business practice which were created, more or less consciously, and which can be modified whenever it is found necessary. In this classification the most important problems, today, appear to be capital problems and taxation.

The provision of capital for use in small firms is the product in part of savings by the individual and in part by obtaining funds or credit through the banking or business system. Credit funds are available in part in accordance with the judgment and practices of lenders and in part dependent upon the laws and regulations imposed upon the business community.

Taxes always represent the outstanding illustration of an important factor which is imposed entirely as a matter of law. It is probably safe to say that all taxes are unpleasant, unpopular, and burdensome. It is also correct to say that many taxes, which were of no particular concern at a low or modest rate such as was common prior to the war, may be very serious in their implications to business enterprise when raised to the levels observable during World War II and the following adjustment years. These are matters which legislation has created and legislation can modify.

Mention should also be made of competitive practices. Businessmen will agree that competition is the life of the trade and that it is the struggle that forces initiative and enterprise into full action. Businessmen should also admit that no little effort is spent upon developing ways and means of avoiding competition either by agreement or through the elimination of competitors through competitive means which are not always entirely fair.

In our discussions of business mortality and causes of failure, we have considered primarily the problems of firms which have failed to make the grade, which have failed to survive the business struggle. Many of these firms probably could not have been saved in much the same way as modern medicine will most likely never produce certain or perpetual life.

Large, and much more important, problems for investigation are presented by turning from the problems which produced the deaths of some businesses to the problems experienced by the businesses in existence. These are the businesses which are still able to make the grade with varying degrees of success and these are the ones to which the economic future of the country appears to be tied.

New businesses

The Department of Commerce recently undertook a series of studies of the financing of firms established since the close of World War II. One, covering wholesale and retail trade firms, has been completed. Another on manufacturing firms is in process. This study is based on about 1,000 reports received from a carefully selected sample of 600,000 retail and 70,000 wholesale firms which according to the records of the Bureau of Old-Age and Survivors Insurance, started in business between the beginning of 1945 and the end of the third quar-

ter of 1947. Firms with no employees do not report to the Bureau of Old-Age and Survivors Insurance and thus could not be included in the survey. Reports from firms already discontinued at the time of the survey also proved difficult to obtain and, as a result, the coverage of such firms was insufficient. These two shortcomings necessitated some adjustments in aggregate figures and have to be taken into account in interpreting tables where the raw figures are used.

The survey indicates that outlays of new firms during this period on plant and equipment represented over 40 percent of the volume of such investment by all firms, both new and old. On the basis of the reports received it is estimated that all new trade firms starting business during the survey period had initial capital requirements of $7,000,000,000 which they invested as follows:

	Billions
New plant and equipment	$2.5
Used plant and equipment	1.2
Inventories	1.7
Additional working capital	1.5

High as it seems, the 40 percent estimate is probably an understatement of the proportion of investment in new plants and equipments and inventories accounted for by new trade firms in the survey period. It takes no account of plant and equipment rented by these new businesses, which are much more prone than existing firms to rent than to buy. Likewise, it takes no account of their outlays on capital and equipment after they had started operations.

The most significant findings of the survey for present purposes relate to the sources of the capital with which the new firms were established. It is estimated that of the $7,000,000,000 total initial investment required by all new trade firms during the survey period, 63 percent was provided from the personal savings of the entrepreneurs. Another 14 percent was obtained through bank loans, while 8 percent came from suppliers and 11 percent from other loans, mainly from friends and relatives. The capital markets supplied but a very small proportion of the initial capital, mainly in the form of equity financing of new wholesale firms which were the largest of the new firms included in the sample.

From table XII it is evident that the predominant position of personal savings as a source of initial capital is characteristic of all new firms, regardless of size. However, personal savings appear to be relatively more important in the case of the smallest firms and to become less important as the size of the firm increases. Conversely, capital stock subscriptions and suppliers' credit assume somewhat greater importance as the size of the firm increases. While capital stock subscriptions, like debt financing, vary directly with the size of firm, it is significant that total equity investment varies inversely. This is due, of course, to the comparative unimportance of capital stock subscriptions as a source of capital for new small firms due to their inherent inability to tap the organized capital markets.

TABLE XII.—*Trade firms starting operations in the 1945–47 period: Percentage distribution of sources and uses of initial investment funds by 1947 sales-size groups* [1]

SOURCES

Line of trade and 1947 sales size	Total	Personal savings	Capital stock	Supplier credit	Bank loans	Mortgage loans	Other
Wholesale	100	38	22	18	10	1	12
Under $100,000	100	63	12	6	10	(2)	9
$100,000 to $499,999	100	61	12	9	12	(2)	7
$500,000 and over	100	29	26	23	9	1	13
Retail	100	56	7	10	14	2	11
Under $10,000	100	68	(2)	7	17	2	6
$10,000 to $49,999	100	66	(2)	8	13	2	11
$50,000 to $99,999	100	62	2	9	11	1	16
$100,000 and over	100	49	13	12	15	2	9

USES

Line of trade and 1947 sales size	Total	Plant [3]	Equipment	Inventories	Other
Wholesale	100	14	12	41	32
Under $100,000	100	14	26	17	42
$100,000 to $499,999	100	12	24	25	40
$500,000 and over	100	12	9	50	29
Retail	100	23	27	29	21
Under $10,000	100	19	40	23	18
$10,000 to $49,999	100	22	32	27	19
$50,000 to $99,999	100	23	26	32	19
$100,000 and over	100	23	25	29	24

[1] Excludes firms with no employees. Detail will not necessarily equal 100 percent because of rounding.
[2] Less than 0.5 percent.
[3] Includes renovation and land.

Source: U. S. Department of Commerce, Office of Business Economics, Survey of Current Business, December 1948, p. 23.

The importance of the personal savings of entrepreneurs as a source of capital for new trade firms is again indicated by the fact that more than 45 percent of the reporting firms obtained their initial capital entirely through personal savings. Since firms with no employees were excluded from the survey, it is probable that the true percentage financed entirely through personal savings of entrepreneurs was considerably higher than the figures indicated.

An adequate appraisal of the role of personal savings in the financing of new trade firms should also take account of the fact that, in the case of nearly one-sixth of the firms, the personal savings of entrepreneurs were supplemented by those of relatives and friends. Moreover, it is probable that part of the funds reported as capital stock subscriptions really represented the personal savings of the individuals operating the business or the investment of friends and relatives.

Although small in volume compared with personal savings, bank credit ranked second to personal savings as a source of initial capital for the new trade firms. One out of every four firms in the reporting group received some bank credit. These loans accounted for 12 percent of the initial investments of all firms and for 32 percent of the investment of firms receiving bank credit.

That bank credit tended to be made more freely available to larger firms than to the smaller ones can be seen from table XII. The one apparent exception to this generalization (the case of large wholesalers) is fully accounted for by large direct loans and suppliers credit advanced by parent companies to some of the reporting firms. The

extent to which this generalization holds is adequately reflected in the figures because of the greater importance of veterans loans in the smaller size classes.

That bank credit is made more freely available to firms with greater investment in fixed assets (especially plant) than to other firms is another conclusion that may be drawn from the survey findings. Firms with plant investment accounted for 39 percent of the number and 52 percent of all bank loans, while firms with equipment but no plant accounted for 55 percent of the number and 41 percent of the value of all bank loans. The interrelationship between bank loans and investment in plant and equipment is further brought out in table 13, which gives sources and uses of funds by different lines of trade. Apparel stores, wholesalers, home furnishings and household appliance stores show the lowest percentage both of bank loans and of fixed asset outlays. On the other hand, food stores, eating and drinking places, and the building materials and hardware groups show high percentages both of bank loans and fixed asset outlays.

Another significant interrelationship between sources and uses of funds brought out in table XIII is that between supplier credit and investment in inventories and equipment. Thus, among the retail trades, apparel stores reported the highest proportion of supplier credit and also the highest relative investment in inventories and equipment. On the other hand, automotive stores and dealers in building materials and hardware had low investments in inventories and equipment combined and received a relatively small proportion of supplier credit.

TABLE XIII.—*Trade firms starting operations in the 1945–47 period: Percentage distribution of sources and uses of initial investment funds by line of trade* [1]

Item	Wholesale trade	Retail trade							
		All stores	Building materials group [2]	Automotive stores	Home furnishings group [3]	Food stores	Apparel stores	Eating and drinking places	Other
Sources	100	100	100	100	100	100	100	100	100
Personal savings	38	56	54	57	70	51	63	52	56
Capital stock	22	7	11	13	8	2	9	1	8
Supplier credit	18	10	4	6	6	11	16	14	13
Bank loans	10	14	16	12	12	20	5	15	14
Mortgage loans	1	2	4	3	1	2	(4)	2	1
Other	12	11	11	9	3	13	7	16	8
Uses	100	100	100	100	100	100	100	100	100
Plant	14	23	24	27	10	24	8	32	16
New	11	14	18	19	6	16	1	14	11
Used	2	4	6	3	2	5	2	9	1
Renovation of rented premises	(4)	5	(4)	5	2	3	5	9	4
Equipment	12	27	18	14	12	45	19	46	24
New	8	21	10	13	8	28	10	41	20
Used	4	6	8	1	4	17	8	5	4
Inventories	41	29	32	24	52	21	49	10	39
Other	32	21	26	35	25	11	24	11	21

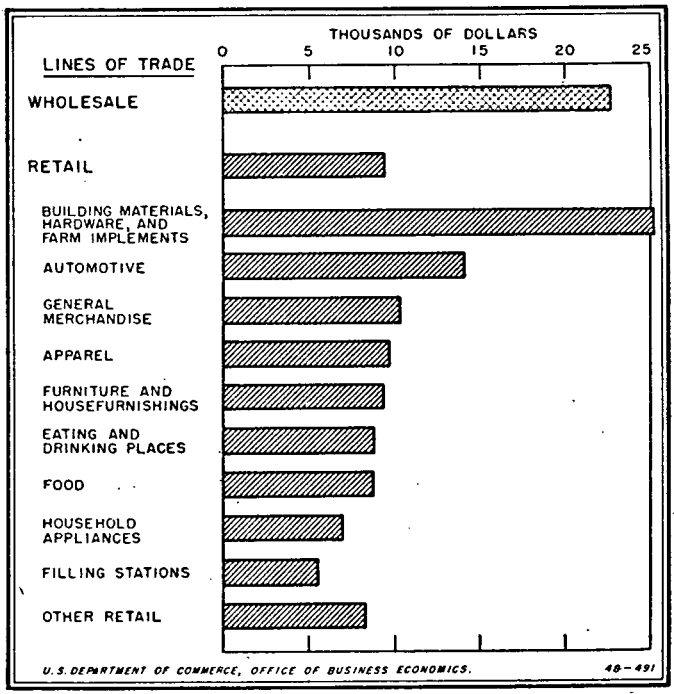
[1] Excludes firms with no employees. Detail will not necessarily add to totals due to rounding.
[2] Includes hardware and farm implement stores.
[3] Includes furniture, housefurnishings, and household appliance stores.
[4] Less than 0.5 percent.

Source: U. S. Department of Commerce, Office of Business Economics, Survey of Current Business, December 1948, p. 23.

This study of the financing of new trade firms makes it clear that proprietors of such firms are generally obliged to depend largely on their own savings and that of their friends and relatives for the capital required to start in business. Organized capital markets are not available to them. Bank credit and credit from suppliers is available to but a limited extent; in the case of bank credit, chiefly when collateral is available. Finally, the availability of these latter sources of credit varies inversely with the size of the concern.

One of the most frequent questions directed to business counselors by individuals considering establishing new businesses is the minimum

CHART 3.—WHOLESALE AND RETAIL FIRMS STARTING OPERATIONS DURING 1945–47: AVERAGE INITIAL INVESTMENT BY LINE OF TRADE [1]



Source of data: U. S. Department of Commerce, Office of Business Economics.

amount of capital required for initiating operations. The trade firm study found that the average initial investiment per firm was about $9,500 for retailers and $22,500 for wholesalers. Differences in the averages in the different lines of retail trade are brought out in chart 3. The average initial investment shown in the 1945–47 study should not be taken as typical of what might be found in another period of time. The amount of capital required in entering a new business may shift materially from year to year because of changes in the price levels for inventories, equipment, and building facilities. In addition, constantly rising standards of living are reflected in the pattern of competitive enterprise. The prewar retail establishment is rapidly becoming drab in comparison with more recently organized competitors which have installed new lighting facilities, new display

equipment, as well as new store fronts. Such innovations have value in obtaining business, but they cost money, and the amount of money is constantly changing. It is this factor of change which has led to the Department's decision not to prepare any absolute figures on minimum capital requirements. Instead, a work sheet has been developed to assist in the computation of the amount of money needed, based upon the scale of operations and the current costs for equipment, initial organization expenses, labor, and similar items. Exhibit A is an example of one of these sheets.

Established businesses

The importance of the savings of entrepreneurs in the financing of new small businesses has been shown. Of equal or even greater importance to the growth of existing businesses is the reinvestment of new earnings. Existing successful businesses have been financed through the retention of earnings to a far greater extent than through direct investment from outside sources. This makes it highly important to inquire into the characteristics of the profits position of going small businesses.

The profits position of small firms may be characterized by at least three features of considerable importance:

1. Relationship with changing business conditions.
2. A marked variability from year to year.
3. A greater degree of variability in the smaller than in the larger firms.

The observation is frequently made that what small business really needs is prosperous business conditions. This statement is based upon the observable fact that in the upswings of the business cycle, the small firms gain more ground relatively than do the larger firms. Likewise, on the downside of the cycle, the smaller firms suffer much more than do their bigger competitors. This fact may be established by reference to a study of corporate earnings by size of firm for the years 1932 to 1941. These were years in which the business cycle moved progressively from an extremely low point to a condition of prosperity engendered by a defense arming boom, which developed into the war boom of 1942–45. Chart 4 shows the reported net earnings before taxes of all corporate industries by asset size classes. The earnings are shown as percentages in relation to equity for the corporate groups concerned.

It will be observed that the largest concerns, as a group, managed to break even in 1932, while their smallest counterparts were experiencing reported deficits averaging as high as 35 percent of invested capital. Each of the succeeding years was, as a whole, more profitable. Then, by 1941, each group collectively showed a net profit, but by 1941 the largest firms had gone from an approximate break-even point to an average return of 10 percent, while the smallest firms had moved from an average loss of 35 percent to a net profit of approximately 3 percent.

The objection may be raised that this earnings comparison is not entirely realistic, since the majority of the small corporations are owned by their officers and are thus in a position to draw off part of their profits through the salary account. Chart 5 shows data for the same corporations and years adjusted by adding back into reported net profits the amounts deducted as officers' compensation. This gives a

EXPLANATORY NOTES

1. The operating ratios illustrated on page 2 may be briefly defined as follows:

   NET SALES - Gross sales less all returns and allowances, and exclusive of sales tax revenue.

   COST OF GOODS SOLD - Beginning inventory plus gross purchases, less all returns and allowances, plus freight in, less ending inventory. (Percent of net sales)

   GROSS MARGIN - Net sales less cost of goods sold. (Percent of net sales)

   OPERATING EXPENSES - All expenses incurred in business operations - see breakdown in table on page 2. (Percent of net sales)

   NET PROFIT - Gross margin less operating expenses. (Percent of net sales)

   STOCK TURNS (Number of times per year) - Cost of goods sold divided by average inventory.

   The operating ratios shown are for a book store and were estimated on the basis of current and prewar conditions. In general they assume conditions more favorable than those of prewar years and less favorable than those which prevailed throughout 1946-47. It should be noted that the operations of an individual book store may vary widely from the averages for the trade, these variations depending upon location, size, lines of merchandise carried, and services offered. However, the estimated ratios shown may be used as a rough guide in determining how much to spend for an initial inventory and what provision to make for initial operating expenses in relation to anticipated sales.

2. Monthly sales and operating expenses as listed on page 2 should be determined as follows:

   (1) Estimate annual sales volume (see note 3 below).

   (2) Divide by 12 to obtain estimated monthly sales vol.

   (3) Multiply monthly sales volume by each operating ratio to determine dollar amount for each operating expense for 1 month.

   (4) Monthly expenses for the items for which separate ratios are not shown should be individually estimated. The total of these expenses should be approximately the percent of net sales shown opposite the bracket around "all other expenses" (Column 1, page 2).

3. The first step in making an estimate of operating expenses is to estimate your potential sales. How much your sales actually will be cannot, of course, be known in advance, because the amount of business done will depend on how much business there is in the area, the number of competitors already sharing this business, and the amount you will be able to obtain.

   You should talk to people who are familiar with the opportunities for a new business such as yours in the area in which you plan to open your store. Representatives of manufacturers and wholesalers who supply retailers should be of help because, in many cases, they know local conditions and can advise on sales possibilities. Your banker, the chamber of commerce, trade associations, and other business men in the area also should be able to render some assistance.

   Do not be over-enthusiastic in estimating your potential sales. Remember that a business generally grows rather slowly, especially at the start. If you over-estimate your potential sales you are likely to invest too much capital in your initial inventory and commit yourself to payments for rent, insurance, etc., greater than your volume of business justifies. If you underestimate your potential sales, you can always expand. With this possibility in mind, do not move into too small a store space.

4. The amount which should be allowed for owner's salary will depend on the extent to which you must draw on the business income for personal expenses. Some proprietors draw a regular monthly salary and the remainder of net profits irregularly or at the end of each year. Others reinvest a part of net profits in the business. The method of withdrawal of net profits, if the business is unincorporated, does not affect your income tax since salary, withdrawals, or profits retained in the business are all taxable and at the same rates.

   The amount of salary as a percent of net sales will generally decline with increases in sales volume. However, all other salaries and wages, as a percent of net sales, will generally increase. The two items together generally constitute a somewhat constant percentage of sales volume.

5. Occupancy, as used here, applies either to the expenses of renting business property or to ownership expenses. For rented quarters the ratio covers, besides rent, repairs for which the tenant is responsible, janitorial services, light and heat, and in some cases a monthly write-off of improvements paid for by the tenant, such as a store front or remodeling. For owned premises the ratio covers such ownership expenses as property taxes, mortgage interest, insurance, depreciation, maintenance costs, janitorial services, and utilities.

   If real estate is acquired for the business, enter under nonrecurring initial capital requirements on page 2 the total price if purchased outright. If the purchase is to be partially financed by a mortgage, enter the total cash payment. If business property is to be constructed enter the total cost of construction. In each case full provision must be made for all of the initial costs incident to the purchase or construction. This requirement should be discussed thoroughly with the real estate agent, contractor, financing agency, or others whose services are employed in this connection.

6. Allowance should be made for depreciation of all fixtures and equipment in the determination of profits. The monthly depreciation rate should be entered in column 3 in the estimate of monthly operating expenses and profits. However, no provision for depreciation need be included in column 4 in the estimate of initial capital requirements.

7. Types of insurance for which provision may be made include fire, lightning and windstorm, use and occupancy, public liability, compensation, and robbery and burglary. Consult a reputable insurance company for full details of cost and coverage.

8. To estimate average inventory by using the operating ratios shown at the top of page 2 take 65 percent of your anticipated annual sales volume. This figure will represent "cost of goods sold," or the annual sales at cost value. Divide this amount by the number of stock turns per year (3.0) and the resulting amount will be the estimated inventory value at cost. (For estimated sales of $30,000: $30,000 x .65 = $19,500 ÷ 3.0 = $6,500).

   Note that when average inventory is computed on the basis of operating ratios, it applies to the store already in operation, which will keep on hand a somewhat larger stock than a new retailer would need. This figure therefore represents the maximum need for the inventory investment at the time of opening. It may be possible for you to cut down on the initial inventory figure thus arrived at by stocking a reasonable supply of all items you know should sell and then fill in on doubtful items as demand develops. Suppliers frequently will recommend such a "skeleton" stock. As various items began to move off the shelves, you can reorder. Also in making this estimate of initial inventory, allowance might be made in some cases for securing part of it on credit, although this is not a recommended policy.

Acknowledgment is made of the assistance of the American Booksellers Association and the National Association of College Stores in reviewing this Work Sheet.

FOLD HERE FOR FILING

EXHIBIT A

Business Information Service

BOOK STORE

DEPARTMENT OF COMMERCE
CHARLES SAWYER, Secretary

OFFICE OF DOMESTIC COMMERCE
H. B. McCOY, Director

MARKETING DIVISION
Nelson A. Miller, Chief

Washington 25, D. C. — May 1949

WORK SHEET FOR ESTIMATING INITIAL CAPITAL REQUIREMENTS FOR ESTABLISHING A BOOK STORE

Prepared for Publication in the Distribution Cost Section

This work sheet is designed to assist the prospective book store merchant to estimate his total initial capital requirements. The estimate should be completed in full before any commitments are made. It is not advisable to establish any business unless available capital exceeds the initial requirements by a safe margin.

The required investment in furniture, fixtures and equipment constitutes one of the most variable and significant items, and should be carefully estimated on the form below. The total for these items (last column) should be transferred to the form on page two for inclusion in computing the estimate of total capital requirements. (Explanatory notes are provided on page three.)

SCHEDULE OF FURNITURE, FIXTURES AND EQUIPMENT					
ITEM *(SUGGESTED LIST - OMIT OR ADD ITEMS AS REQUIRED. USE SEPARATE SHEETS TO LIST DETAILS UNDER EACH MAIN HEADING)*	IF CASH PURCHASE *(NEW OR USED)* ENTER FULL AMOUNT BELOW AND IN THE LAST COLUMN	IF INSTALLMENT PURCHASE *(NEW OR USED)* ENTER DOWN PAYMENT PLUS AT LEAST ONE INSTALLMENT IN THE LAST COLUMN			ESTIMATE OF YOUR INITIAL CASH REQUIREMENTS FOR FURNITURE, FIXTURES AND EQUIPMENT
		PRICE	DOWN PAYMENT	AMOUNT OF EACH INSTALLMENT	
STORE SHELVING					
DISPLAY CASES					
DISPLAY TABLES					
WRAPPING COUNTERS					
RACKS FOR GIFT CARDS					
DESK AND CHAIR					
WINDOW DISPLAY FIXTURES					
STOREROOM SHELVING					
OTHER STOREROOM EQUIPMENT					
FLOOR COVERING					
LIGHTING					
TYPEWRITER					
CASH REGISTER					
FILE CARD CASES					
OUTSIDE SIGN					
OTHER STORE EQUIPMENT					
TOTAL FURNITURE, FIXTURES AND EQUIPMENT (Enter total on page 2 under "nonrecurring initial capital requirements.")					$

* For a detailed description of the problems involved in organizing and managing a book store see the Department of Commerce Publication, "Establishing and Operating a Book Store," Industrial (Small Business) Series No. 42, Superintendent of Documents, Government Printing Office, Washington 25, D. C.

73003 O - 50 (Face p. 134) No. 1

WORK SHEET FOR ESTIMATING INITIAL CAPITAL REQUIREMENTS FOR ESTABLISHING A BOOK STORE

ESTIMATED OPERATING RATIOS EXPRESSED AS A PERCENT OF NET SALES, WITH EXAMPLES SHOWING THEIR APPLICATION TO VARIOUS ANNUAL SALES VOLUMES

(See note 1, page 3)

	PERCENT	ANNUAL SALES VOLUME		
Net sales	100.0	$18,000	$30,000	$48,000
Cost of goods sold	65.0	11,700	19,500	31,200
Gross margin	35.0	6,300	10,500	16,800
Operating expenses	32.0	5,760	9,600	15,360
Net profit	3.0	540	900	1,440
Average inventory (See note 8, page 3)	-	3,900	6,500	10,400
Stock turn: 3 times per year				

MONTHLY SALES AND OPERATING EXPENSES *(See note 2, page 3)*				INSTRUCTIONS FOR COLUMNS 3 AND 4	YOUR ESTIMATE OF INITIAL CASH REQUIREMENTS
ITEM	ESTIMATED RATIOS PERCENT OF SALES	DOLLARS PER MONTH BASED ON ANNUAL VOLUME OF $30,000	YOUR ESTIMATE OF MONTHLY SALES, AND EXPENSES BASED ON ANNUAL VOLUME OF $ _____	Enter your monthly operating expenses in column 3 based on percentages of sales in column 1, as illustrated in column 2. Enter your initial cash requirements in column 4 based on amounts shown in column 3. For several items a period of months is suggested.	
	COL. 1	COL. 2	COL. 3		COL. 4
NET SALES 1/12TH OF ANNUAL ESTIMATE	100.0	$ 2,500	$	*(See note 3, page 3)*	
OPERATING EXPENSES SALARIES OF OFFICERS, PROPRIETORS OR PARTNERS	8.0	200		Enter 1 month or more *(Note 4, page 3)*	$
ALL OTHER SALARIES AND WAGES	9.0	225		Enter 1 month or more	
OCCUPANCY *(including rent, light, heat and building service)*	8.0	200		Enter 2 months or more *(Note 5, page 3)*	
ADVERTISING	2.0	50		Enter one-fourth annual advertising budget	
DEPRECIATION *(except buildings)*	1.0	25		No entry in column 4 *(Note 6, page 3)*	
ALL OTHER EXPENSES				Make your own estimate for other expenses	
TELEPHONE AND TELEGRAPH				Check local rates	$
WRAPPING MATERIALS AND MISCELLANEOUS SUPPLIES				Include stationery for 6 months	
UNEMPLOYMENT INSURANCE				Consult your State director of unemployment insurance	
OLD AGE AND SURVIVORS INSURANCE				Consult nearest Social Security Adm. Field Office *(located in all the larger cities)*	
OTHER INSURANCE				May have to pay 1 year or more *(Note 7, page 3)*	
DONATIONS AND DUES					
LICENSES AND TAXES *(other than income)*	4.0	100		Consult city and state taxing authorities	
MISCELLANEOUS				List any item not mentioned above	
					$
			Total of these items should amount to 4% est. monthly sales		
AVERAGE MONTHLY OPERATING EXPENSES	32.0	$ 800	$	No entry in col. 4	
NONRECURRING INITIAL CAPITAL REQUIREMENTS PURCHASE OF REAL ESTATE	*(See note 5, second paragraph, page 3)*				$
INITIAL INVENTORY	Estimate and enter initial inventory from instructions in note 8, page 3				
FIXTURES AND EQUIPMENT	Enter total of list on page 1				
INSTALLATION OF FIXTURES AND EQUIPMENT	Enter cost of installing all fixtures and equipment				
DECORATING AND REMODELING	Enter total estimated cost				
DEPOSITS WITH PUBLIC UTILITIES	Enter full amount to be deposited				
CASH	For unforeseen requirements, special purchases, etc., and for absorbing any initial losses				
OTHER	List any item not mentioned above				
					$
TOTAL ESTIMATED INITIAL CAPITAL REQUIREMENTS (Add all items entered in column 4)					$

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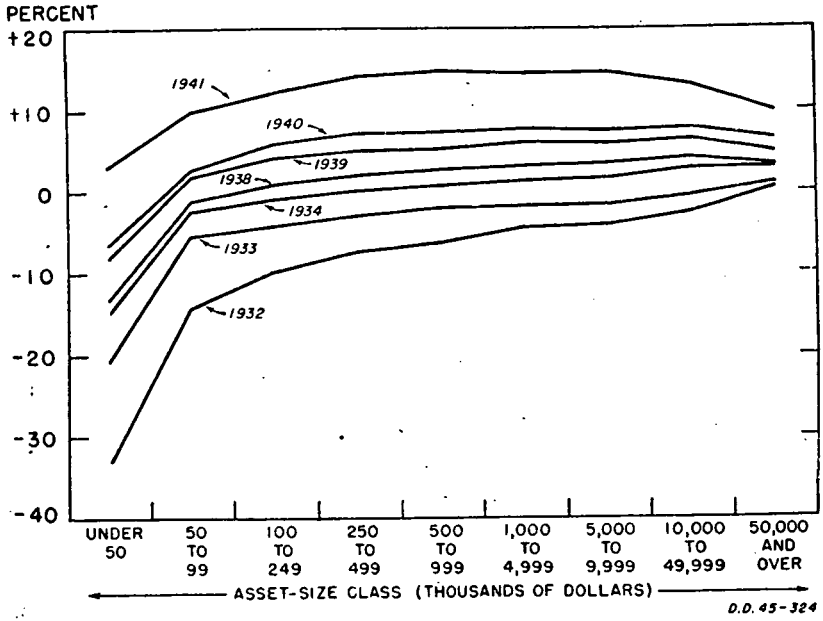
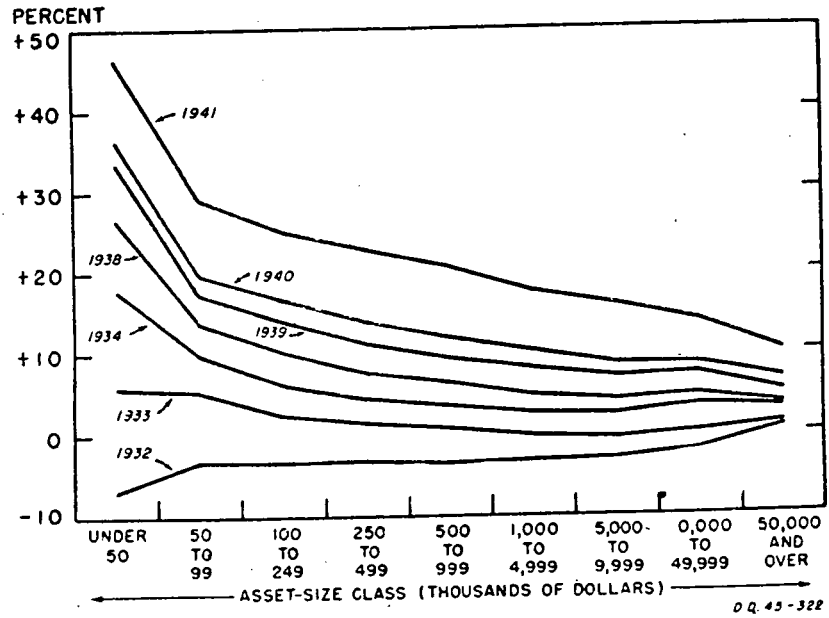
CHART 4.—PERCENTAGE RATIO OF NET PROFITS BEFORE TAXES TO EQUITY FOR ALL CORPORATE INDUSTRIES, BY ASSETS-SIZE CLASSES



Source: U. S. Department of Commerce, based upon data of the U. S. Bureau of Internal Revenue.

CHART 5.—PERCENTAGE RATIO OF NET PROFITS BEFORE TAXES AND OFFICERS' COMPENSATION TO EQUITY FOR ALL CORPORATE INDUSTRIES, BY ASSETS-SIZE CLASSES



Source: U. S. Department of Commerce, based upon data of the U. S. Bureau of Internal Revenue.

little greater measure of comparability as between size groups, as well as between the earnings positions of companies, and different salary policies.

The effect upon the earnings position of the small corporations is marked and the tendency of the smaller firms to gain ground under improving economic conditions is even more obvious. The chart also emphasizes the greater relative importance of officers' compensation in the smaller firms. It also furnishes evidence that personal services are more important in small firms than in large. Indeed, it might be observed that small firms probably tend to be undercapitalized and therefore use relatively more personal services, while larger firms, with their greater access to the capital markets, are more fully mechanized, or make greater use of capital goods in relation to personal services.

While the factors influencing the situation shown in charts 1 and 2 are undoubtedly more numerous than those mentioned here, it is evident that the small-business capital problem would be corrected at least in part if the relatively high and uniform level of business activity can be maintained.

Chart 6 is introduced as evidence of the variability in the earnings position of small business from year to year and quarter to quarter. In the nine quarters for which data are given, the smallest firms, those with assets under a quarter of a million dollars, fluctuate far more extensively than any of the other size groups. Apparently, the small firms are more sensitive to adjustments in market situations and lose ground both sooner and farther. Likewise, they appear to take a longer time in recovering from the poor position, although the percentage by which the recovery is made is much greater than for the larger concerns.

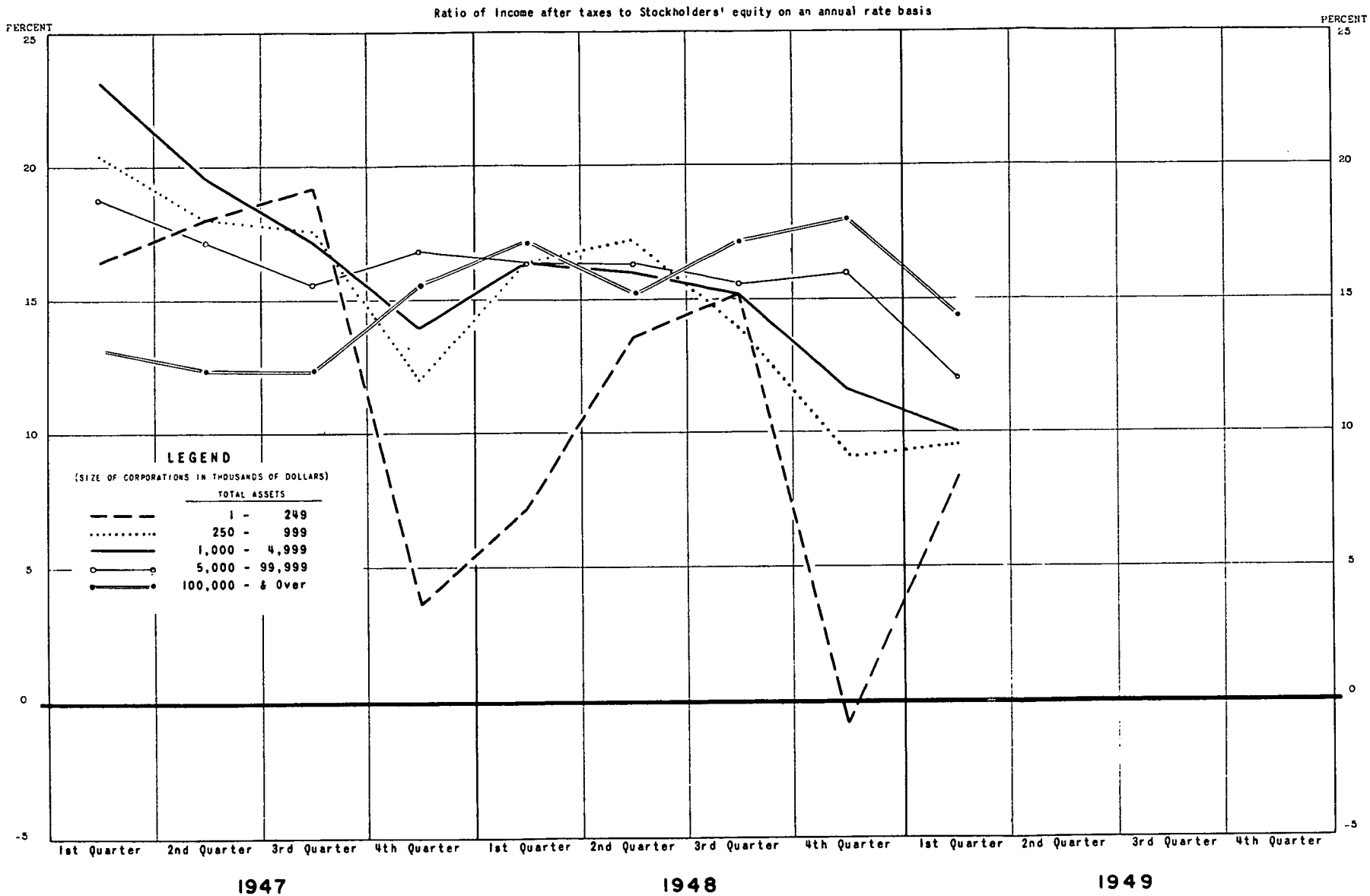
The degree of variability in the profits of small, as compared to large firms, is only partially reflected in charts 4 to 6. It is true that the average profits for prosperous years, as compared with a less prosperous year, show a greater spread of businesses in the smaller-size classes. It is also true that for any given year there is a greater variability within the smaller-size classes than the profits of the individual firms. In other words, the averages shown for the smallest firms are less representative than the averages shown for larger firms.

This is brought out by chart 7 based on a Department of Commerce survey on the representative firms of those corporations in the first three asset-size classes which submitted 1941 and 1942 corporation-tax returns. The reported profits were adjusted so as to achieve comparability between the returns, and then classified into four groups (quartiles) according to their adjusted net profits. Average adjusted net profits were then computed for each quartile. These are the results shown in chart 7. From this chart it may be seen that in the year 1941, as an example, the least profitable firms with assets under $20,000 had average net losses of 40 percent of the equity, while the most profitable firms in that size class had profits of 79 percent, a spread of 126 percentage points. The corresponding spreads between the first and fourth quartiles for the next three size classes were 91, 74, and 58 percentage points, respectively.

The wider dispersion of the small firms than of larger firms with respect to net profits is due in part to variations in managerial abilities. Another large part, however, is due to the fact that the activities of

CHART 6

RATES OF PROFIT FOR MANUFACTURING CORPORATIONS BY SIZE GROUPS



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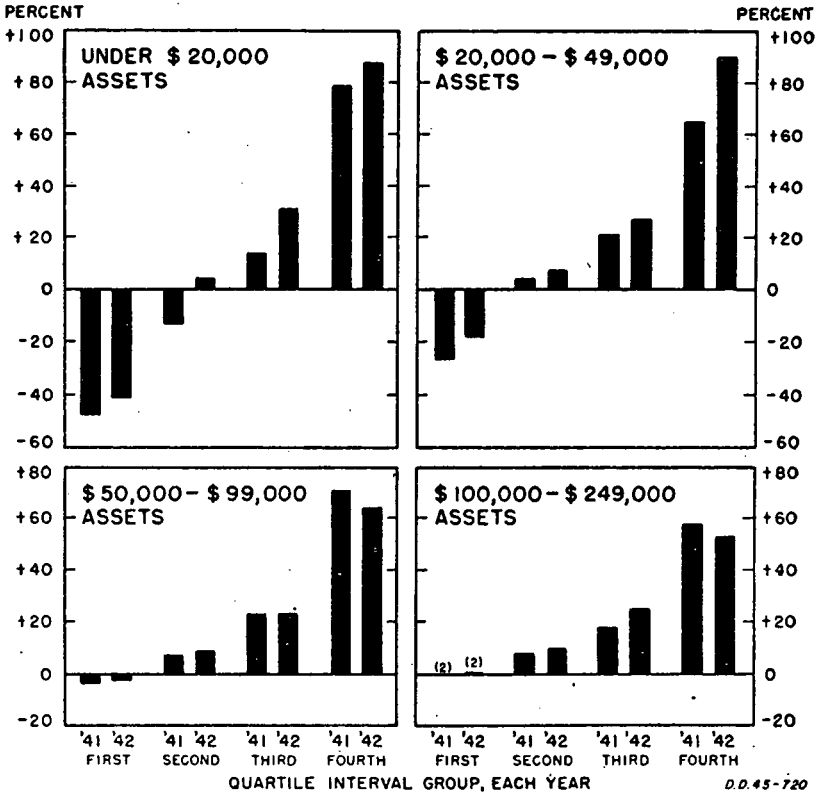
SOURCE: FTC and SEC, Quarterly Industrial Financial Report Series, 1st Quarter 1949

smaller firms tend to be less diversified than those of larger firms and thus to be more sharply affected by the ups and downs of the economy and its various sectors. Compared with a small firm having equally competent management, the larger, more diversified firms ordinarily stand a better chance at any given time of having some prospering activities to counterbalance activities that are less prosperous, and

CHART 7.—AVERAGE ADJUSTED NET PROFITS BEFORE TAXES AS A PERCENTAGE OF EQUITY, 500 SMALL CORPORATIONS, REPRESENTING ALL INDUSTRIES EXCEPT FINANCE, BY ASSET-SIZE CLASSES AND QUARTILE INTERVAL GROUPS [1]



[1] Total assets in 1941 were used to classify the 500 small corporations. The quartile interval groups (low to high) were classified according to their adjusted net profits before taxes for each year.

[2] Net profits before taxes as a percentage of equity was 0 in 1941 and 1 in 1942.

Source: U. S. Department of Commerce, based upon data of the U. S. Treasury Department.

vice versa. Given the same quality of management, the net profits of the larger corporation can be expected to be less erratic, and have a narrower range of variation from year to year than those of a smaller corporation.

The variability in the profits position of small firms means that net earnings are a less satisfactory source for the financing of expense than is true with the larger firms where there are more stable earnings. However, the inability to reach the organized capital markets or to obtain outside equity investment means that earnings must remain the principal if not the sole source of expansion. It follows from this

observation that high income taxation is likely to be more burdensome for small firms than for large. It is true that small corporations pay slightly lower taxes than do large ones. It is also true that under some circumstances unincorporated businesses may pay slightly lower income taxes than do small corporations. However, when businesses are paying taxes ranging from 21 to 38 percent of net income, their ability to grow through the reinvestment of earnings is substantially lowered.

The fact that the larger corporations pay a higher rate is not very important when the small ones have greater fluctuations in earnings and, therefore, are more likely to pay, on the average, a higher amount of taxes than would be true if the same aggregate earnings were obtained more uniformly over the same number of years. This situation develops for the unincorporated firms as a result of the progressive feature found in the personal-tax laws. Taxes on $10,000 received in income in 1 year will be greater than taxes on $5,000 received in each of 2 years.

The law provides a small amount of averaging through the loss carry-back provisions in the code. For unincorporated firms, it is difficult to use these provisions, since a "loss" does not develop unless the firm fails to cover the expenses other than the wages of the proprietor. For all firms, the law limits the averaging through providing an entirely different basis for computing income under loss conditions than under profit conditions.

External sources of capital

As is well known, fixed assets of a business are those having a life greater than 1 year and usually have, in fact, a life of several years. Such assets should be financed under ordinary circumstances by the equity capital contributed to the business by the owners, or by long-term loans having a duration related to the life of the assets financed by such loans.

The current or working assets of the business should usually be thought of in terms of normal, minimum, or usual requirements and peak or seasonal requirements. The minimum working-asset requirements of a business should ideally be financed by the provision of capital from relatively permanent sources such as the proprietor's investment or long-term borrowing. However, every business finds that its working requirements vary materially during the year, reflecting the seasonal pattern of the particular business, or the production cycle, or changing price levels. Since such financial needs are temporary, they should be financed on a relatively short-term basis related to the duration of the need.

The short-term credit needs of small firms are ordinarily met through recourse to one or more of the following channels:

1. Ordinary mercantile credit received from suppliers, usually on 30-day terms.
2. Commercial banks.
3. Loans from nonbanking agencies such as commercial-credit companies, sales-finance companies, and factors.

Practically all small firms make regular use of the mercantile credit extended by suppliers. In fact, it is quite probable that many small businesses receive more credit from this source than is entirely con-

sistent with sound credit policies. This is particularly true in times of intense competition when suppliers are anxious to make sales. Any business which will follow reasonably sound practices in meeting its credit obligations can obtain substantial amounts of financing from this source.

For working-capital needs which cannot be reached properly through mercantile credit, the normal and desirable source is to turn to the commercial banks. Every community of any size has at least one commercial bank, and the proper function of this institution is to provide temporary financing for a term ranging from 30 days up to perhaps as much as 1 year. More recently, banks have been making loans for terms ranging as high as 10 years.

A good view of the extent to which financing is furnished by commercial banks was obtained as a result of a Federal Reserve Board study made in November 1946. This study showed that at that time there were about 671,000 business loans amounting to a sum in excess of $13,000,000,000 on the books of the member banks of the Federal Reserve System. Approximately one-third of these loans in number were unsecured straight loans of the character usually associated with commercial bank financing of temporary needs. Approximately two-thirds were secured by various types of security tangible or intangible. The number of loans and the distribution of security are shown in table XIV.

TABLE XIV.—*Business loans of member banks, by type of security, Nov. 20, 1946*[1]

[Estimates of outstanding loans]

Major type of security	Amount of loans		Number of loans	
	In millions	Percentage distribution	In thousands	Percentage distribution
Unsecured	$7,322	55.3	239	35.6
Secured	5,799	43.8	410	61.1
No information	116	.9	22	3.3
All loans	13,237	100.0	671	100.0
Secured:				
Endorsed and comaker	706	12.2	76	18.5
Inventories	1,195	20.6	35	8.6
Equipment	706	12.2	111	27.1
Plant or other real estate	943	16.3	77	18.7
Stocks, bonds, and mortgages	1,075	18.5	46	11.3
Accounts receivable	190	3.3	13	3.1
Life insurance	148	2.6	22	5.3
Oil runs	191	3.3	2	.5
Assignment of claims	314	5.4	20	4.8
Government participation or guaranty	119	2.1	2	.6
Other security	212	3.7	6	1.5
All secured loans	5,799	100.0	410	100.0

[1] Federal Reserve Bulletin, June 1947, p. 665. Figures may not add to total because of rounding.

Table XV shows the business loans of member banks by size and business borrower. It will be observed that the great majority of the loans in terms of number were made to relatively small firms. That is, those with assets less than $250,000, although as might be expected, a relatively small proportion of the amount of loans was made to such firms.

TABLE XV.—*Business loans of member banks, Nov. 20, 1946, by size and business of borrower*

[Estimates of outstanding loans]

Business of borrower	All businesses [1]	Size of borrower (total assets in thousands of dollars)									
		Under 50	50–250	250–750	750–5,000	5,000 and over	Under 50	50–250	250–750	750–5,000	5,000 and over
	Amount of loans in millions of dollars						As percentage of industry total				
Retail trade	1,458	471	408	146	154	279	32.3	28.0	10.0	10.6	19.1
Wholesale trade	2,400	171	536	401	544	748	7.1	22.3	16.7	22.7	31.2
Manufacturing and mining	5,631	187	594	547	1,141	3,162	3.3	10.5	9.7	20.3	56.2
Public utilites	1,203	72	80	59	108	884	6.0	6.7	4.9	9.0	73.5
Services	478	144	138	48	59	89	30.1	28.9	10.0	12.3	18.6
Construction	444	86	169	77	93	19	19.4	38.1	17.3	20.9	4.3
Sales finance	774	9	52	59	115	539	1.2	6.7	7.6	14.9	69.6
All other	636	86	182	109	154	105	13.5	28.6	17.1	24.2	16.5
All borrowers [1]	13,022	1,226	2,158	1,445	2,368	5,825	9.4	16.6	11.1	18.2	44.7
	Number of loans, in thousands						As percentage of industry total				
Retail trade	251	197	46	5	2	1	78.5	18.3	2.0	0.8	0.4
Wholesale trade	86	40	32	9	4	1	46.5	37.2	10.5	4.7	1.2
Manufacturing and mining	115	52	37	12	9	5	45.2	32.2	10.4	7.8	4.3
Public utilities	38	27	7	1	1	2	71.1	18.4	2.6	2.6	5.3
Services	76	61	12	2	1	(2)	80.3	15.8	2.6	1.3	(3)
Construction	43	27	12	3	1	(2)	62.8	27.9	7.0	2.3	(3)
Sales finance	6	1	2	1	1	1	16.7	33.3	16.7	16.7	16.7
All other	45	27	13	3	2	(2)	60.0	28.9	6.7	4.4	(3)
All borrowers [1]	662	433	162	36	20	11	65.4	24.5	5.4	3.0	1.7

[1] Excludes a small number and amount of loans unclassified by size and business of borrower.
[2] Less than 500.
[3] Less than 0.05 percent.

NOTE.—Detailed figures may not add to totals because of rounding.

Source: Federal Reserve Bulletin, March 1947, p. 256.

While it is probable that the short-term bank-credit needs of established small firms is rather well provided by commercial banks, these figures cannot be taken as complete proof of the adequacy of bank credit. No data are available on the number of loan applications declined, or the reasons for refusing credit. While 671,000 loans were outstanding on the day of the survey, this number is not represented by an equivalent number of firms; and, even if it were, it would represent only about 20 percent of the small firms in existence at that time. It is possible, but not likely, that only one firm in five needed bank credit. The reasons why small firms failed to obtain bank credit are various, but by no means the least important is the inability of many small-business men to make adequate presentations of their cases to loan officers.

Government loan agencies observed during the war that not infrequently banks would decline loans and then accept such loans when the applications were redrawn with the assistance of Government experts. The Government people also found that many small-business men did not understand the problems of bankers and the necessity to present full and complete statements of their financial

position at the time of making an application. In an effort to meet this particular problem, the Department of Commerce has prepared a number of publications explaining, in a simple style, how to keep records and present loan applications to commercial bankers.[3]

Small firms dealing in durable consumer goods such as refrigerators, and washing machines make frequent use of sales-financing companies, rediscounting their installment paper with such companies. Some firms have obtained loans from commercial receivables companies secured by a pledge of accounts receivable or of inventories. Others have resorted to the services of factors. Such agencies accept what commercial banks regard as substandard credit risks and charge relatively high rates of interest in those cases where the risks are definitely greater. However, their existence is not widespread, being centered chiefly in a few large cities, and their use is not fully or widely understood.

An entirely different type of credit need arises when a firm decides to manufacture or sell a new line, to improve its facilities, or when it finds it necessary to finance a relatively permanent expansion in its working assets, occasioned by marked increases in price levels. Such purposes are not self-liquidating operations, and the required funds cannot be repaid within short periods of time. Ideally, any financing on a loan basis should be for a long-term, and it would be still better to resort to equity financing, if it were available.

The data given in tables XIV and XV include many loans which are in fact a provision of long-term capital for small firms. It is not an unusual practice for banks to advance credit for short periods of time, say 90 days, but with an understanding that the loan will be renewed upon maturity. In this way the banks maintain an appearance of complete liquidity and a legal right to require repayment at an early date; but, in fact, provide relatively long-term financing. Such arrangements are hazardous from the viewpoint of the small-business concern, since the bank has the right to call the loan at the end of any loan period. Moreover, they are available only to firms with the highest credit rating, and many bankers are unwilling to make short-term loans for the purpose of financing permanent-capital needs.

In recent years, bankers have developed a new form of loan which may be properly used to expand operations and finance firms on a long-term basis. This is usually referred to as a term loan and means a loan having a maturity greater than a year at the time it is made and payable on some self-amortizing basis, such as in 30 days, or quarterly installments. Such loans provide additional financing for credit-worthy firms on a basis which permits a substitution for equity capital, and, where successful, are repaid at least in part out of earnings.

Table XVI shows the term loans of member banks outstanding to business firms on November 20, 1946. These loans amount to nearly one-third of the dollar amount of loans on the books on that date and about 25 percent of the number. In number, over half the loans had a maturity of less than 3 years. In dollar amount, approximately 50 percent had a maturity of 5 years or less.

[3] Small-Business Man and His Bank, Small-Business Man and His Financial Statements, Small-Business Aid, How to Apply for a Business Loan.

TABLE XVI.—*Term loans of member banks to business, by year of final payment Nov. 20, 1946.*[1]

[Estimates of outstanding loans]

Year loan or final installment matures	Amount of loans [2]		Number of loans	
	In millions	Percentage distribution	In thousands	Percentage distribution
Loans past due	$13	0.3	0.8	0.6
Loans with final payments due in—				
1946	32	0.7	2.7	1.9
1947	437	9.6	39.0	27.0
1948	460	10.1	32.6	22.6
1949	326	7.2	19.1	13.2
1950	454	10.0	10.0	6.9
1951	577	12.7	14.4	9.9
1952	261	5.7	4.3	3.0
1953	327	7.2	3.1	2.1
1954	214	4.7	2.8	1.9
1955	691	15.2	4.3	2.9
1956	675	14.8	9.7	6.7
1957 or later	90	2.0	1.7	1.2
All term loans	4,558	100.0	144.4	100.0

[1] Federal Reserve Bulletin, May 1947, p. 499. Detailed figures may not add to totals because of rounding.
[2] Balances outstanding Nov. 20, 1946, on loans whose final payment falls due in the year indicated.

Table XVII shows the term loans of banks classified by business and size of borrower. It will be observed that approximately 90 percent of the term loans outstanding were made to firms having assets of less than a quarter of a million dollars. On the other hand, only about 15 percent of the amount of such loans went to this group of businesses. At first glance, it would appear that small business was adequately represented in the total number of loans made by banks. Perhaps all businesses meeting the credit standards of current banking practice were taken care of, but it is doubtful if all firms which could have used additional capital successfully had been able to obtain it from this source.

TABLE XVII.—*Term loans of member banks to business, Nov. 20, 1946, by business and size of borrower*

[Estimates of outstanding loans]

Business of borrower	All businesses [1]	Size of borrower (total assets, in thousands of dollars)					All businesses [1]	Size of borrower (total assets, in thousands of dollars)				
		Under 50	50–250	250–750	750–5,000	5,000 and over		Under 50	50–250	250–750	750–5,000	5,000 and over
	Amount of term loans, in millions						Number of term loans, in thousands					
Retail trade	$404	$142	$82	$31	$21	$128	53.4	45.7	6.6	0.7	0.2	0.2
Wholesale trade	223	22	48	26	36	91	9.7	5.8	2.8	.6	.3	.1
Manufacturing and mining	2,367	45	95	95	308	1,824	20.9	10.7	5.0	1.6	1.5	2.0
Public utilities (including transportation companies)	939	37	33	31	70	768	16.6	11.4	2.2	.6	.5	1.8
Services	229	63	52	16	30	69	23.6	19.7	3.3	.5	.1	[2]
All other	325	45	79	38	57	107	17.8	11.8	4.3	1.2	.4	.1
All term borrowers [1]	4,487	354	388	237	522	2,987	142.0	105.1	24.2	5.3	3.1	4.3

[1] Excludes a small amount of loans unclassified by business and size of borrower.
[2] Less than 50.

NOTE.—Detailed figures may not add to totals because of rounding.

Source: Federal Reserve Bulletin, May 1947, p. 503.

Table XVIII shows the average interest rates paid on commercial bank loans classified by type of security and size of borrower. The average interest rate declines progressively from the smallest to the largest size group. This is to be expected, since interest rates are based primarily upon risk and cost of handling the loan. Experience indicates that the risk is larger on loans made to small borrowers, than to large ones, and the cost of setting up a loan on the bank's books is fairly constant. At least, it does not vary in proportion to the size of the loan, and as a consequence, the cost per dollar is higher on small loans. It will be observed that the interest rates on unsecured loans tend to be lower than on secured loans. This may be explained by the fact that security is required only on longer term and more risky loans. However, in no case was the average rate at what might be regarded as an unreasonably high, or unduly burdensome level.

TABLE XVIII.—*Average interest rates on member bank business loans, by type of security and size of borrower, Nov. 20, 1946* [1]

[Percent per annum]

Type of security	All borrowers [2]	Size of borrower (total assets, in thousands of dollars)				
		Under 50	50–250	250–750	750–5,000	5,000 and over
Unsecured	2.5	5.4	4.3	3.3	2.5	1.8
Secured:						
Endorsed or comaker	3.7	5.5	4.2	3.4	2.8	1.6
Inventory	3.1	4.8	4.2	3.6	3.2	2.8
Equipment	4.4	6.3	5.0	4.6	3.6	2.0
Plant and other real estate	4.3	4.8	4.3	4.1	3.7	3.2
Stocks and bonds	2.7	3.8	3.2	2.6	2.5	2.1
Accounts receivable	4.5	5.5	4.9	4.5	3.8	3.6
Life insurance	3.4	3.9	3.5	3.1	2.6	2.3
Assignment of claims [3]	3.5	5.0	4.5	4.0	3.5	2.6
Government participation or guaranty	4.0	4.6	4.3	4.1	4.0	3.3
Other security	2.6	4.7	3.7	3.5	2.4	1.8
All types	2.9	5.2	4.2	3.5	2.8	1.9

[1] Federal Reserve Bulletin, July 1947, p. 816.
[2] Includes rates on a small amount of loans unclassified by size of borrower.
[3] Includes oil runs.

Another external source from which businesses may obtain long-term capital is through the sale of stocks or bonds on the organized security markets. This is an exceptionally low-cost, effective, and absolutely essential method of raising capital for large enterprises. However, it is a method which is geared to large enterprises and is both expensive and unsatisfactory for the smallest concerns.

Table XIX shows the cost of flotation of new issues as a percent of gross proceeds for the years 1945–47, classified by the asset size of the issuing company. The costs decline uniformly as the issues and the size of company increase. Companies with assets of under a million dollars had to pay a cost of flotation amounting to nearly 17 times that experienced by the largest corporations. The flotation expense of 17 percent of gross proceeds is almost prohibitive and is certainly highly disadvantageous from a competitive viewpoint. Such data indicate the desirability of developing mechanisms for selling the issues of small firms on a more favorable basis.

TABLE XIX.—*Cost of flotation of new issues as a percent of gross proceeds, by asset size of company, 1945–47*

Asset size of company in millions of dollars	Number of flotations	Average size of flotation	Cost of flotation	Commission and discount	Other expenses
		Millions of dollars	*Percent*	*Percent*	*Percent*
Under 1	71	1.1	16.94	14.95	1.99
1 to 5	160	1.3	12.44	10.31	2.13
5 to 10	108	2.7	7.77	6.46	1.31
10 to 20	105	3.9	5.09	4.02	1.08
20 to 50	98	8.5	3.09	2.33	.76
50 to 100	65	19.9	2.17	1.56	.61
100 to 200	46	27.8	1.89	1.39	.50
200 to 500	30	53.7	1.46	1.04	.41
500 and over	21	111.6	1.01	.63	.39
Unknown [1]	11	20.7	2.09	1.74	.35
All asset sizes	715	12.0	2.48	1.88	.60

[1] This group includes issues of foreign governments, and companies for which balance sheets were not included in registration statements.

Source: Cost of Flotation, 1945–47, Survey of American Listed Corporations, Securities and Exchange Commission, Washington, D. C. (February 1949), p. 19.

At one time, well-to-do individuals familiar with the locality, its businesses, and their managements were important sources of capital for small firms. This is still true in a moderate degree, as indicated by the Department of Commerce study referred to earlier in this paper. This showed that 11 percent of the initial capital requirements of trade firms was supplied by friends or relatives of the entrepreneur.

Urbanization and industrialization of our system have served to break down much of the personal ties which at one time made possible local venturing by local capitalists. People do not know each other as well or as intimately, and the sources of information which were the basis for earlier investments no longer suffice. Developing along with this change, or caused by it, has been an increasing tendency on the part of savers to seek risk-free investments in contrast to the equity securities which represent venturing. This is evidenced by the growth of savings banks, life-insurance companies, and savings and loan associations. Such organizations are devices for pooling of funds for investment in Government securities such as mortgage bonds, mortgages on residential real estate, and the issues of Federal, State, and local governments.

SUMMARY

Small business is a highly important segment in the American economy, comprising approximately 92.5 percent of the establishments, employing about 45 percent of the workers, and handling 34 percent of the volume of business. The number of business firms in the United States is increasing in relation to population. In 1900 there were 21 firms per thousand of population, and in 1945 there were 26 firms per thousand. This growth represents the net result of the thousands of new firms which enter the field each year minus the discontinuance of almost equally substantial numbers in each year. The bulk of the withdrawals occur in the first few years of the business life and are comprised principally of the small firms. The causes of withdrawal are various, ranging from personal choice on the part of the proprietor, faced by seemingly insurmountable

competitive and financial problems, to outright bankruptcy and forced liquidation.

Capital problems are highly important problems, especially for existing businesses which are struggling to gain a foothold and to expand in the competitive markets. The sources of capital for new firms are principally the savings of the owners, supplemented by bank loans, loans from friends and relatives, and trade credit. The organized capital markets make little or no contribution to the smaller sizes of business in providing initial financing. Established small firms are forced to obtain funds for current or expansion purposes through the retention of earnings supplemented in varying degrees by recourse to commercial banks and private investors. While retained earnings are highly important in the case of the largest corporations, it is not a reliable or satisfactory source for the smallest firms.

The profits of small firms fluctuate much more widely than the profits of large firms and are, accordingly, a less reliable source of funds. Since the net earnings fluctuate more than in proportion to changes in the level of business activity, it becomes highly important to small business to have a high level of economic activity.

Present rates of taxes substantially reduce the earnings of all firms, but this becomes especially important to small firms which have no access to outside sources of financing. Commercial banks make a substantial contribution to the financing of small business through the extension of credit, both on a short-term and a relatively long-term basis. The commercial banks could do an even better job if there was a more widespread understanding on the part of small-business men of the nature of banking, the necessity for proper accounting, and the proper presentation of bank-loan applications.

CHAPTER VI

TAXES AND BUSINESS INVESTMENT

There is no aspect of the problem of investment subject to greater controversy, more uncertainty, and more unsubstantiated and dogmatic pronouncements than that of the impact of taxes on capital investment and the business cycle. There is hardly a group in the economy, whether small businessmen, large manufacturers, bankers making domestic or foreign loans, farmers, union members, universities or philanthropic organizations that does not advocate some type of change in the tax laws of allegedly considerable benefit to the economy. The only unifying principle visible to the detached observer is that as a general rule each group advocates tax reforms which will lighten its share of the tax burden and shift more onto the other fellow.

Such shifting is usually sought to be accomplished in two general ways, either directly by substantive changes of clear intent, or indirectly by complicated technical administrative revisions and interpretations. Individual proposals for one or other or both types of change run literally into the hundreds, each with formidable arrays of arguments pro and con. They represent the continuing grist of research and action by large standing committees in Congress. Obviously nothing save a bare mention is here intended or possible of the more important aspects of tax policy and capital investment.

There are two approaches to stimulating private investment by tax policy. The first calls for a general modification of business tax laws; the second, for the adoption of specific types of tax inducements. Under the first heading only such well-known proposals will be considered as those for revising or eliminating the corporate tax laws and schemes for tax averaging; under the second, flexible income-tax credits and accelerated depreciation.

Modification of corporation income-tax laws

Among the many types of comment and criticism directed at the corporation income tax, such as the allegations that it is inequitable or that it is a disguised sales tax, only one is relevant to the purpose in hand. That is the much publicized proposition that the corporate income tax reduces the ability and willingness of firms to invest. The first question that arises is that of incidence. Does the tax fall mainly on net profits or is it shifted backward on wages or forward on prices? In the short run, at least, the tax is probably borne by profits.

If so, three further questions arise concerning the effect of the corporate income tax on investment.

First, even if the tax reduces the reward for risk taking insofar as the Treasury fully shares in corporate profits, does the Government only partially share in the losses? If true, such, of course, may not invalidate the corporate tax per se, but only the manner in which it is levied, since if provisions existed for full loss offsets the amount

risked would be reduced by the same extent as profits, and the reward for risk taking would remain unchanged. Proposals for amending the corporate income tax to provide for fuller loss offsets are mentioned below.

Second, does the tax decrease the inducement to invest, the risk factor aside, by lowering the return on investment?

Third, does the tax discriminate against equity financing and in favor of debt financing by decreasing the willingness of outsiders to engage in equity investment; by increasing the desirability of debt financing, since interest is exempt from taxable income whereas dividends are not; and by reducing corporate incomes, the most important source of equity funds? This last question is of special concern to small businesses whose access to outside funds is extremely limited and who depend, therefore, on internal funds for expansion.

These questions concerning the corporation income tax as well as the "double taxation" problem have induced many observers to suggest that the tax should be repealed or greatly modified. Four general alternatives have been proposed which have been fully explained and analyzed in the Treasury tax study on The Postwar Corporate Tax Structure:

(*a*) Elimination of corporate income tax and taxation of capital gains when realized or at the time of stockholder's death: One of the difficulties of this proposal is that it might enable stockholders to postpone tax payments on undivided profits throughout their lifetime, and as such would heavily discriminate against other forms of savings.

(*b*) Treatment of corporations like partnerships for purposes of taxation: Although this approach might be feasible for small closely held corporations, it would present insuperable administrative problems for the large corporation with thousands of stockholders and complex financial structure.

(*c*) Treatment of corporation income tax as a withholding levy: The British income tax laws are based on this approach and a variant is currently proposed by the Committee on Economic Development (CED). The CED's proposal would involve a tax on both distributed and undistributed corporate earnings. The dividend recipient would be permitted to credit the tax paid on distributed income to his personal income tax liability; where necessary the Treasury would make income tax refunds.

(*d*) Deduction of dividends from corporate income tax base: A moderate tax is proposed on undistributed profits, but the corporation would be allowed to deduct dividends, either partially or fully, from taxable income.

Both among those who favor a repeal of the corporate income tax and those who are opposed, there is a substantial body of opinion which would favor special tax concessions to small-business firms. Prof. Harold Groves of the University of Wisconsin in his study for the CED recommended that if his proposed revision of the corporate income-tax laws be undertaken (point (*c*) above), special tax consideration be given for reinvested earnings of new small companies, and that if the present corporate tax is retained, they be given the option of being treated like partnerships. Another important proposition is that incorporation laws be amended to provide for private and public corporations—public corporations being permitted as now

to raise funds through the national security exchanges while private corporations would be restricted to local sources of finance. The corporation itself would have the option of determining the type of charter under which it wished to operate. If a corporation wished a public charter, with the attendant advantages, then it would be subject to a corporation income tax; if it desired a private charter, it would be taxed as a partnership. An important advantage of this suggestion over other plans for granting tax concessions to small business is that it avoids the necessity of defining "small business."

Past experience

Before 1936 the method of corporate taxation in vogue in the United States was somewhat similar to method (*c*) above, insofar as cash dividends were subject only to the surtax and exempted from the normal tax. Data are not available to gage, however, how much more favorable to investment it was than the present method. Similarly, the question is often raised whether the more favorable treatment of the higher-bracket incomes in the twenties while contributing to the unhealthy boom in stock-market prices may not have been instrumental in encouraging the mildly greater (than present) volume of investment in stocks at that time. Others point out that the greater pressure then to distribute earnings made business more reliant on outside sources of capital.

The British experience with integrated systems of personal and business taxes permits no general conclusions as to either its stimulative effect on investment, or its effect on the supply of equity funds. To disentangle the effect of the tax from other factors involves in effect an a priori judgment on the economic effects of this type of a system on taxation.

Effect on employment, production, and purchasing power; Fiscal costs

If personal and corporate income taxes were integrated the practical choice would lie between methods (*c*) and (*d*) outlined above. Neither the complete elimination of the corporation income tax nor the treatment of all corporations like partnerships for purposes of taxation seem like reasonable possibilities. As between methods (*c*) and (*d*), an income tax credit to the shareholder, or the deduction of dividends from corporate taxable income—there seem to be several considerations in favor of the latter. If, of course, corporations were managed like partnerships, then there might not be much to choose by way of method used. However, such seems unlikely. The typical large corporation is managed as an entity more independent of the stockholders than partnerships with respect to its partners.

Thus if the corporation were used as a source of collection of individual taxes, as is proposed by the CED, the economic effects on management decisions might well be about the same as under the present tax, assuming that the rates were the same. It would do nothing to reduce whatever effects the existing tax may have on investment by reducing its profitability. It would exert the same influence on the supply of equity capital coming from retained earnings. There would be no diminution in the premium for financing expansion by bond issues. Moreover, the criticism of the corporate income tax, that it may be passed on in lower wages or higher prices, would still apply.

The only change this method of taxation would bring about over the present one—as far as investment is concerned—is that it would increase high bracket incomes,[1] and presumably the supply of outside equity capital. The alleged importance of this effect is, however, easily exaggerated. As is well known, the issue of common stock even in the 1920's did not provide an important part of total financial needs—the lion's share has always come from retained earnings.

As between method (*c*) or method (*d*) above, the latter—namely, adjusting cash dividends at the corporate level—might seem to avoid many disadvantages, assuming, of course, that a change of the present corporate tax laws has been determined upon.

The dividend-credit plan might even be somewhat more favorable to investment than the present corporate tax. It might increase investment incentives insofar as the corporation's return after taxes are greater. Whether or not this method of taxation would increase the supply of equity capital is a question hard to answer. In the first place, the partial or full exemption of dividends from the corporate tax might encourage a more liberal dividend policy, and this in turn might result in a larger volume of outside equity funds. Secondly, if dividends were completely or partially exempt from corporate taxation, the tax advantage to debt financing might be reduced or even eliminated. On the other hand, insofar as the tax resulted in a greater pressure for distribution of earnings than the present tax it might lower retained earnings—at present as in the past the largest and most certain source of funds for meeting financial needs.

The differential impact of the two tax systems over the course of the business cycle is likewise conjectural. On the one hand, one can allege in the first place that the dividends-credit plan might result in a more flexible tax system than the present corporate tax. This because a smaller proportion of total corporate net earnings would be subject to the flat corporate tax and a larger proportion to the progressive income tax.

But the real and ultimate effects of tax on investment might depend on the stage of the cycle. In moderate or very prosperous times more investment might be stimulated under this type of tax system. In fact, in inflationary periods such a tax system might be even too favorable and contribute to the malinvestment so often characterizing a boom. If the plan were adopted at the present time without impairment of total revenue it would be necessary to tax corporate retained earnings at a rate higher than the present 40 percent rate, and also probably necessary to increase personal income tax rates in the higher brackets.

In times of deep depression, on the other hand, when few corporations are making profits at all, and when capacity is greatly redundant, lower taxes would hardly have a significant effect on investment decisions. In moderate recessions it is impossible to guess how much more investment, if any, might result.

As for the effect of the proposed tax on the supply of equity capital, the evidence, as has already been pointed out, is conflicting. This

[1] Extensive publicity campaigns have given an invidious connotation to taxing dividend income. The phrase "double taxation" has gained wide currency. Obviously all taxes are paid fundamentally out of income. Property taxes, pay-roll taxes, excise taxes, etc., constitute deductions from the same incomes that pay income taxes. The number of times and the ways in which incomes from private sources are directly or indirectly tapped to finance public needs is a matter for integrated consideration rather than special pleading.

method of taxation might increase the supply of outside equity funds, but, on the other hand, might decrease retained earnings. Moreover, even if an integration of personal and corporate taxes did increase the total supply of equity funds, such a tax system might so stimulate investment in prosperous times that no larger share of investment will be financed with equity funds than is the case under the present tax system.

Fiscal costs

Total taxes on corporate earnings under the present tax system, a dividends-credit plan, and a withholding plan are estimated in table I.

TABLE I.—*Revenue yield of 3 corporate tax plans*

[Billions of dollars]

	Total	Corporate tax	Individual tax on dividends [1]
Present system (40-percent corporate tax)	10.5	8.6	2.0
Dividends-credit plan (40-percent maximum, 20-percent minimum corporate tax; 25-percent credit for net dividends paid)	9.1	6.4	2.7
Withholding plan (20-percent basic corporate plus 20-percent withholding)	9.1	8.6	.6

[1] Viewing dividends as last increment of income; rates enacted by Revenue Act of 1945.

Source: Division of Research and Statistics, Treasury Department.

These estimates were prepared by the Treasury Department at a time when a national income assumption of about 150 billion dollars was reasonable. Corresponding estimates for present and prospective rates of income have not yet been prepared. The estimates show that, at this level of income, nearly 1.5 billion dollars would be lost in revenue by adopting either of the proposed revisions. Under the dividends-credit plan corporations would be the beneficiaries of the tax reduction; individuals would pay a somewhat higher tax on dividends than under the present corporate income tax. Under the withholding plan, the corporations would pay the same total taxes as under the present tax; individuals would receive the entire benefit of the reduction.

Relation to basic economic structure and long-range economic objectives; political and popular acceptability

The principal long-run effect of adopting a tax system which partially or fully exempted dividends from corporate taxes might be a change in the composition of the gross national product favoring investment, but the amount is impossible to assess. This type of tax plan would probably discriminate against small business concerns who have limited access to the capital markets, unless special provision were made for them. Whether it would discriminate against small firms more or less than the present corporate income tax is conjectural.

BUSINESS TAX AVERAGING

The corporation tax is often said to decrease investment not only by lowering the average returns to, and the supply of funds available for, investment, but also through discouraging the taking of risks.

Unless there is full provision for loss offsets, the Treasury may share fully in business gains but only partially or not at all in business losses, thereby making risk-taking less attractive. More liberal provisions for loss offsets will, of course, result in lower revenues from any given tax structure.

Moreover, more liberal loss offsets probably provide a greater stimulus to investment than an equivalent reduction in tax rates. The principal reason is that in providing loss offsets, the Government is in effect partially insuring business concerns against losses, and such insurance can be provided at a lower total cost by the Government than by business concerns individually.

A tax levied on an annual basis may work a hardship on investors in two types of concerns: those with incomes more volatile than the average; and those whose methods of production require a large amount of fixed plant which can pay for itself only after a considerable lapse of time.

The problem arises: How extend the base period of the tax? There are two ways: by calculating taxable income as a moving average; and by provision for carry-back and carry-forward of business losses. Under the averaging device the income period is equal to the period of the moving average; if the period of the average is long enough, nominal and effective tax rates in all industries are equal. For various economic reasons income averaging provides an ideal tax base, but it is likely to create considerable administrative difficulties inasmuch as business books would never be closed. Loss carry-forward and backward provisions of an income tax reckoned on an annual base represent an approach to income averaging, but with less serious administrative problems.

Past experience

From 1919 to 1933 the Federal income tax laws contained a limited carry-forward privilege. In 1933, when the business situation warranted an extension of the loss carry-forward period, this feature of the tax law was eliminated, and not reinstated until 1939. In 1942 a 2-year carry-back privilege was added, on the premise that business concerns should be allowed to charge some of their reconversion losses to wartime profits. It is not possible to assess the effects of these provisions in concrete terms.

Present position

Both the Treasury Department and the House-Senate Joint Committee on Internal Revenue Taxation favor an extension of the present 2-year loss carry-forward provision, and a reduction of the loss carry-back period so as to aid new businesses which do not have previous income against which to set losses. The House revenue revision bill of 1948, which failed to pass both Houses, proposed an extension of the loss carry-forward provision to 5 years and a reduction of the carry-back period from 2 years to 1 year.

The present tax probably works a hardship on risky business undertakings and on concerns with volatile incomes. A number of studies indicate that for industries experiencing wide fluctuations in income, the present carry-over period permits the offsetting of only a minor portion of total losses. Thus the effective tax rate in these industries over a period of years is higher than the general average.

Because extension of the loss carry-over period would be designed to increase the general level of investment, careful consideration needs to be given to the tax rate at the time any change is undertaken. If private investment is running at a near-record level, fresh stimulus to investment might increase the evils of inflation. In such times a liberalization of loss carry-over provisions should probably be accompanied by an increase in the tax rate.

If an extension of loss carry-over period is decided upon there remains such questions as the direction in time in which losses should be carried, and the length of the carry-over period. The carry-forward of losses possesses several advantages over the carry-back procedure: It results in a more correct statement of current income; it does not discriminate against new firms; and it is administratively more feasible. The carry-back provision, on the other hand, is more effective as a countercyclical device because the investor can be more certain of its effects. For stimulating private investment in depressions, however, it may be preferable to rely on direct tax inducements, discussed below, rather than to achieve the same results by a tax system which discriminates in favor of established concerns.

The time period over which losses may offset income, should theoretically be approximately equal to the depression phase of the business cycle. But there is a great variation in the length of depressions. The cycle has divergent impact on different industries. Thus the length of the period must be based on practical considerations: On administrative feasibility and on the actual number of years required for the bulk of business concerns to fully offset their losses. These considerations indicate a period in the range of 5 to 7 years.

Effect on employment, production, and purchasing power; Fiscal costs

If a certain amount of revenue is to be raised through business income taxes over the course of the business cycle, more investment may be forthcoming if provision is made for loss offsets than if the tax is reckoned strictly on an annual basis. Like other tax inducements to investment, however, provision for loss offsets will be effective in stimulating investment only if profit expectations are reasonably high. This means that such a system of taxation cannot be counted on to have a significant effect on investment in a deep depression. In other phases of the cycle or in mild business downturns, the ability to offset a significant portion of a business loss against future earnings may well prove a factor in investment decisions.

The effect of such a tax system on revenue collections will depend on general business conditions. In the 1920's a 6-year loss carry-forward period would have reduced the corporate tax base by about 7 percent; in the depression years it would have reduced the tax base 17 percent; and at the present time, it would involve about a 5 percent reduction in the corporate tax base. In a mild recession a 6-year carry-forward period might be expected to reduce the corporate tax base by around 10 percent.

FLEXIBLE INCOME-TAX CREDITS

Basic purpose and significance for stabilization

This device would give a tax deduction or credit to the taxpayer amounting to a percentage of whatever investment outlays he makes.

At times of reasonably full employment, no credit would be given. A Government decision to stimulate investment would be implemented by establishing a percentage, which could then be varied, perhaps as often as quarterly, according to the outlook. The plan really amounts to the Government's paying part of the cost of any new investment, and hence represents a direct Government subsdiy. No change in present regulations governing depreciation allowances is necessarily implied.

Variants of the investment-credit plan have proposed a credit for distributed corporate income too, so that what is fully taxed is only undistributed and uninvested earnings. The encouragement of dividend distribution, however, would seem justified primarily on grounds of maintaining consumer income or spending in general, rather than as a direct stimulus to investment.

Past experience

There has been no United States experience in this field. Germany's experience with flexible income-tax credits in the period 1931–33 indicates that such a tax policy may not appreciably stimulate investment when earning prospects are very depressed.

Present and proposed program

The proposal would require amendment of existing income-tax legislation to permit the flexible credit. In drafting such an amendment, careful attention would have to be paid to such policy problems as the attainment of a desirable balance of burdens and incentives between corporate and noncorporate investors, and among different kinds of business and investment. It is possible that a general stimulus to investment would evoke a distorted pattern of investment. For such a policy would clearly favor those industries having high capital costs per unit of output. Unless it is decided as a matter of policy to subsidize the capital-intensive industries, this device would seem better used in depressions. And if used as an antideflationary device, it may be desirable to set different percentages of credit for different categories of investment.

Such an amendment would involve three important new departures in tax policy:

1. The principle of allowing credits for investment outlay;
2. The principle of administrative flexibility of taxes for purposes of stabilization; and
3. (Possibly) The principle of negative taxes when investment was made in such quantity that the indicated credit would exceed the tax.

Effect on employment, production and purchasing power; Fiscal costs

The amount of new investment which might be stimulated by a tax-credit program is impossible to predict, since such investment depends so heavily on general market prospects. If such prospects were not too unfavorable, however, a tax credit might well increase investment outlay by substantially more than the amount of tax revenue loss because:

1. Some beneficiaries might be led to invest additional available internal funds which might otherwise be kept idle or distributed;

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2. Some additional outside equity capital might be attracted by the improved net disposable earnings prospects resulting from the tax concession;

3. Beneficiaries might be put in a position to increase their debt without worsening previous debt/equity and liquidity ratios. Corporations now owe about $100,000,000,000, half of it long term. Total stockholders' equity (net worth) is roughly $190,000,000,000. Maintaining the debt/equity ratio at the present (relatively low) level, then, would permit $1 of new net borrowing for every $1.90 invested in equity.

The following table suggests the magnitude of subsidy to new investment which might be involved at varying percentage rates of tax credit if such credits were instituted at the point where outlay on plant and equipment had fallen from its present level to, say, $12,000,000,000:

	Amount of tax cut (billions)
10 percent of investment allowed as credit	$1. 2
20 percent of investment allowed as credit	2. 4
30 percent of investment allowed as credit	3. 6

Only an elaborate and arbitrary set of assumptions would support a prediction as to whether any one of these subsidy figures would just maintain new investment. No data exist.

The taxation of capital gains arising from sale of assets

Under the present law gains on capital assets held more than 6 months are taxed at rates which do not exceed a maximum of 25 percent. Losses on the sale of such assets are allowed only to the extent of capital gains, except that individuals may offset or carry over unabsorbed capital losses against income from other sources up to $1,000 for each of 6 years.

The capital-gains tax has never been important to the Treasury from the standpoint of revenue. While late figures are not available, the estimated yield of the capital-gains tax on individuals is compared with total individual income-tax receipts in the accompanying table. II. The taxes on capital-gains totaled on the average somewhat less than $150,000,000 a year between 1935 and 1945, accounting for less than 4 percent of total individual income-tax receipts.

The capital-gains tax may slow down the velocity at which private venture capital is turned over. As Senator Flanders puts it: "It is an essential feature of 'venturesome capital' that it is withdrawn from an enterprise after it is solidly established. The established enterprise is sold to the general investing public, and the returned capital again seeks new employment in another venture. The effect of the capital-gains tax is to make it unprofitable to withdraw and reventure. The capital remains in the old undertaking, and, therefore, the amount of funds available for new enterprise is permanently diminished." [2]

To the extent that risk funds are supplied by persons in higher income brackets, that is, by persons whose personal tax rates are in excess of 25 percent, the capital-gains provision represents an advantageous concession. By putting new money into existing enterprises

[2] Unemployment and Relief, special committee. S. Res. 36, 75th Cong. 3d sess., p. 889.

in exchange for stock, or taking in that form their reward for engineering or other services, well-known groups of financiers in every part of the country are able, when the enterprise is on its feet or operating with enhanced profitability to get out by disposing of such stock. The maximum tax they pay is 25 percent.

TABLE II.—*Estimated taxes on capital gains and losses of individuals, total individual income-tax receipts, with percentage, 1935–45*

[Amounts in millions of dollars]

Year	Estimated taxes on individual capital gains	Total receipts individual income taxes	Percentage total individual tax attributable to capital gains taxation	Year	Estimated taxes on individual capital gains	Total receipts individual income taxes	Percentage total individual tax attributable to capital gains taxation
1935	72.0	527	13.7	1942	68.0	3,263	2.1
1936	171.0	674	25.4	1943	266.0	6,630	4.0
1937	41.0	1,092	3.8	1944	354.0	18,261	1.9
1938	12.0	1,286	.9	1945	721.0	19,034	3.8
1939	4.0	1,029	.4				
1940	−7.0	982		Average	146.9	4,927	3.0
1941	−86.0	1,418					

Source: Treasury Department, technical staff.

TAX EXEMPTS VERSUS RISK TAKING

The availability of large amounts of State and municipal securities exempt from Federal taxation is frequently said to offer an attractive refuge for funds which might otherwise flow into business investment. Depending on the income-tax bracket in which corporations find themselves, fully taxable business investments have to yield a higher gross in order to leave the same net as do tax-exempt securities. In tables III and IV such a computation is presented for selected rates of return on tax-exempt securities under the effective rates provided in the Revenue Act of 1948.

TABLE III.—*Corporate taxpayers, rate of taxable return equivalent to selected rates of tax-exempt income*

[Rates as provided in Revenue Act, 1948]

Class of taxpayer	Effective rate of tax	Return on tax-exempt security			
		1 percent	1½ percent	2 percent	2½ percent
		Equivalent taxable returns			
	Percent	*Percent*	*Percent*	*Percent*	*Percent*
Life-insurance companies (taxed as corporations under special net income formula, operation of which in recent years has resulted in effective exemption)	0	1.0	1.5	2.0	2.5
Corporations having net incomes of more than $50,000	38	1.7	2.5	3.3	4.1
Regulated investment companies (generally investment trusts of the open-end variety, satisfying requirements of sec. 361 and distributing 90 percent of net income as dividends) effectively exempt from corporate income tax; distributions taxable to recipients	0	1.0	1.5	2.0	2.5

TABLE IV.—*Individual taxpayers, rate of taxable return equivalent to selected rates of tax-exempt income, by income-tax classes*

[Rates as provided in Revenue Act, 1948]

Income class in thousands of dollars [1]	Number of returns [2]	Adjusted gross income (billions) [2]	Effective rate of tax percent [3]	Return on tax-exempt security			
				1 percent	1½ percent	2 percent	2½ percent
				Equivalent taxable returns percent			
Under—							
1.5	18,149,848	15.1					
1.5	7,894,044	6.4	3.32	1.0	1.6	2.1	2.6
1.8		7.4	5.53	1.1	1.6	2.1	2.6
2.0	7,430,633	16.6	6.64	1.1	1.6	2.1	2.7
2.5	6,021,035	16.5	8.63	1.1	1.6	2.2	2.7
3.0	7,036,187	24.1	9.96	1.1	1.7	2.2	2.8
4	2,796,585	12.4	11.62	1.1	1.7	2.3	2.8
5	1,045,125	5.7	12.62	1.1	1.7	2.3	2.9
6	561,678	3.6	13.65	1.2	1.7	2.3	2.9
7	330,494	2.4	14.46	1.2	1.8	2.3	2.9
8	226,955	1.9	15.08	1.2	1.8	2.4	3.0
9	167,601	1.6	15.55	1.2	1.8	2.4	3.0
10	134,012	1.4	16.21	1.2	1.8	2.4	3.0
11	103,205	1.2	16.82	1.2	1.8	2.4	3.0
12	85,497	1.1	17.33	1.2	1.8	2.4	3.0
13	70,329	.9	17.75	1.2	1.8	2.4	3.0
14	59,228	.9	18.32	1.2	1.8	2.4	3.0
15	192,540	3.2	18.86	1.2	1.8	2.5	3.1
20	100,361	2.2	21.24	1.3	1.9	2.5	3.2
25	56,313	1.5	23.51	1.3	2.0	2.6	3.3
30	59,964	2.1	25.96	1.4	2.0	2.7	3.4
40	28,954	1.3	30.44	1.4	2.2	2.9	3.6
50	16,370	.9	34.40	1.5	2.3	3.0	3.8
60	9,505	.6	37.62	1.6	2.4	3.2	4.0
70	6,128	.5	40.22	1.7	2.5	3.3	4.2
80	4,228	.4	42.47	1.7	2.6	3.5	4.3
90	2,870	.3	44.52	1.8	2.7	3.6	4.5
100	6,373	.8	46.40	1.9	2.8	3.7	4.7
150	1,994	.3	53.58	2.2	3.2	4.3	5.4
200	901	.2	58.76	2.4	3.6	4.8	6.1
250	444	.1	62.67	2.7	4.0	5.4	6.7
300	451	.2	65.44	2.9	4.3	5.8	7.2
400	201	.1	69.39	3.3	4.9	6.5	8.2
500	240	.1	71.93	3.6	5.3	7.1	8.9
750	83	.1	75.33	4.1	6.1	8.1	10.1
Over 1,000	94	.2	77.00	4.3	6.5	8.7	10.9
Total	52,600,470	134.3					

[1] Married person, no dependents entire income earned by one spouse, income class after deductions but before exemption.
[2] Distribution based on individual returns for 1946, last year for which detail is available.
[3] Effective rates, normal and surtax combined (S. Rept. 1013, 80th Cong., 2d sess., p. 2).

Legal reserve life insurance companies are subject to income tax at the same rates as other corporations, the provisions by which their net taxable income is computed have, in recent years, effectively exempted them from income taxation. Under the circumstances the tax-exempt aspects of municipal and State securities is of no practical value to insurance companies as long as investment conditions and the law continue as they are now. The advantages from tax-exempt securities accruing to persons paying taxes at high Federal surtax rates is obvious. Tax-exempts selling at 1 percent are just as attractive to persons with a net taxable income of a quarter of a million dollars as is a business investment yielding 2.7 percent.

Corporations having net income of more than $50,000, and it is only this class of corporations that is likely to own tax-exempt securities, are currently taxed at 38 percent of their income. Such a corporation must receive at least 3¼ percent on a taxable investment to

net, after taxes, the same return as might be obtained from a 2-percent tax-exempt investment. During the war when the rate of the regular corporate income tax was higher, the differential in favor of tax-exempts was, of course, greater. In the case of those (very few to be sure) that were likewise exempt from excess-profits tax, the differential was substantial.

However, there may be a countervailing factor insofar as allowable deductions gain importance. The impact of this during the war was commented on by Fortune magazine in the following terms:

> corporate behavior under wartime tax burdens suggests that a plausible and perhaps significant case can be made for high corporate taxes as an incentive to risk investment * * * Losses incurred in unsuccessful drilling can of course be taken out of taxable earnings. "Intangible" development expenses—supervisory and technical work as well as such other items as labor and fuel—can be charged to current operations. * * * It offers money-making corporations a chance to invest part of their profits before taxes without risking more than a fraction of the investment. What is more, it enables companies to realize what amounts to a tax-free return on the money they actually risk. * * * There has been an unmistakable loosening of corporate inhibitions and an acceleration of corporate metabolism.[3]

[3] Fortune, Business at War, pp. 208–213, vol. XXX, No. 5, November 1944.

CHAPTER VII

DEPRECIATION TAX POLICY AND ITS IMPACT ON INVESTMENT

INTRODUCTION

In this chapter will be given a specific example of the kind of detailed technical consideration that has to be given to each of the areas in which tax policy affects investment. For purposes of illustration the relationship of depreciation policy to business income taxes has been selected for treatment. The problem of depreciation as an allowable deduction in computing taxable income for purposes of Federal income tax shows in striking fashion the relation between depreciation and investment. It considers whether present policies are bad, and if so, how they might be corrected. It casts light on the further problem of whether a special depreciation policy should be adopted as a vehicle for stimulating economic activity in a period of depression or preventing the occurrence of a depression. It also considers appropriate depreciation policy in periods of inflation. It is not the purpose of this chapter to present conclusions or recommendations. Rather, the purpose is to present the facts and arguments, so far as they can be ascertained, and to state them in such a way as to assist others in determining the proper course of action.

In this chapter, four matters will be taken up: Part I, complaints currently or recently made against Federal depreciation policies and administration; part II, proposals offered to correct the alleged errors in such policy and administration; part III, evaluation of complaints of the proposals; and part IV, concluding observations.

PART I. THE PROBLEM

INTRODUCTION

This part aims to show the relation of depreciation to investment and to trace the problem which the taxpayer has in obtaining what he considers to be the proper amount of depreciation. The relation of small business to the problem is outlined, and certain other problems are set forth. The part is rounded out with a discussion of the revenue aspects of increased depreciation, and some of the popular misunderstandings of the purposes and operations of depreciation.

RELATION OF DEPRECIATION TO INVESTMENT

We can assume the importance of investment to the American economy.[1] How then does depreciation tie in with the subject of investment? What is it that leads one business man to say that—

> Among the economic factors which exert a profound influence upon the investment of venture capital, upon stability of employment, and upon the general

[1] The following quotation serves to point this up: "The American workman does not enjoy the highest standard of living in the world because he has more hands and feet or a bigger brain and heart than his European counterpart. It is simply that he has better equipment to work with and, frequently, better management to direct him. According to the National Association of Manufacturers, the investment in new equipment per worker in a modern plant costs $7,500 to $8,000, to which must be added approximately $2,500 for working capital to finance the processing of goods that go through the workers' machinery. To start a business with 100 workers, equipped to modern standards, requires an investment of a million dollars." Taxation and Monopoly, Value Line Investment Survey (New York), February 28, 1949, pt. III, p. 4.

level of prosperity, hardly any one is more important than the treatment of depreciation allowances under the income tax laws.[2]

When business makes a capital investment, it ordinarily does not (and cannot for tax purposes) deduct the expenditure in computing taxable income for the year in which the expenditure is made.[3] Rather, the expenditure is apportioned over a period of years, and the operations of each year are charged with its proportion of the total expenditure until the full amount thereof has been deducted.[4] The original expenditure is in the nature of a prepaid expense. Depreciation is usually computed on the basis of the cost of the property to the taxpayer, less salvage or scrap value.[5]

The income-tax law treats depreciation as an allowable deduction over the life of the asset on account of exhaustion, wear and tear, and obsolescence. Business likewise regards depreciation in this light, but with an added factor which is not emphasized in the same degree by the tax official. Business always has in mind the recovery of its investment tax-free.[6] This additional aspect of the problem is at the heart of much of the controversy which exists between the Bureau of Internal Revenue and business. The investment recovery approach has recently been given official recognition in Canada[7] and to a limited degree in Great Britain.[8]

CONFLICT BETWEEN TAXPAYERS AND TAX OFFICIALS

Evidence of the conflict between taxpayers and tax officials is found in statements of the belief that the deduction to be allowed for depreciation "occasions more controversy between taxpayers and the Bureau of Internal Revenue than any other." [9] Financial executives participating in a questionnaire voted it as their opinion that controversies

[2] Blackall, Frederick S., Jr. (testimony before the House Ways and Means Committee), Hearings * * * on Revenue Revisions, 1947–48, p. 1351.

[3] In the language of the law: "In computing net income no deduction shall in any case be allowed in respect to: * * * (2) any amount paid out for new buildings or for permanent improvements or betterments made to increase the value of the property or estate; (3) any amount expended in restoring or in making good the exhaustion thereof for which an allowance is or has been made * * *". (I. R. C., sec. 24 (a) (2) (3)).

For a statement on the not unusual practice of industry before enactment of the income tax to write off capital expenditures in the year made, or to write them off only in good years, see The Flow of Business Funds and Consumer Purchasing Power, by Ruth P. Mack, New York, Columbia University Press, 1941, p. 214.

[4] Again to quote the law, taxpayers annually may deduct "a reasonable allowance for the exhaustion, wear and tear (including a reasonable allowance for obsolescence) (1) of property used in the trade or business, or (2) of property held for the production of income." (I. R. C., sec. 23 (l)).

[5] I. R. C., secs. 113, 114 (a). There are exceptions which are important in their own way, but are not directly related to the problem at hand. The exceptions relate to property acquired before March 1, 1913, property acquired by transfer at death or by gift, exchange, involuntary conversion, corporate reorganization, liquidation, etc.

[6] The phrase "recovery of its investment tax-free" and the mechanics of the operation may not be quite clear. The word "recovery" is especially misleading. The idea is that business income, which would otherwise be wholly taxable, is reduced by charges for depreciation. Recognition is thereby given to the fact that this part deducted is not truly income, but is really only a return of capital, and therefore should be tax-exempt. Thus the taxpayer is said to recover its investment tax-free.

It may be noted further that there is much loose use of the word "depreciation" and a general confusion and disagreement as to what the word really means, and the purpose for which depreciation is taken. See, for example, the discussion by Bleecker L. Wheeler, Wyman P. Fiske, Roscoe Seybold, and Edward J. Cheney in Determination of Depreciation and Obsolescence Policy, New York, American Management Association (Financial Management Series No. 57), 1939.

[7] Finance Minister Abbott in his budget speech of March 22, 1949, said: "In the past allowances have been granted on the basis of wear and tear of assets used in earning the income subject to tax. Under the new regulations, which my colleague the Minister of National Revenue is proposing, the governing principle will be the amortization of costs of depreciable assets. Incidentally, an effect of this will be to allow for obsolescence hitherto unrecognized under our act." See also Canadian Chartered Accountant (Toronto), April 1949 (Tax Review Supplement, pp. 51–52). The regulations referred to have not yet been issued.

[8] Great Britain in its 1949 finance bill substituted "annual allowances" for "wear and tear allowances" but the new allowances are nevertheless tied to "anticipated normal working life." See Finance Bill, 1949, Proposals, and The New Wear and Tear Allowance, Taxation (London), June 4, June 25, July 2, 1949, vol. 43, pp. 199–203, 267–268, 285–286.

[9] Smith, Paul W. (testimony before the House Committee on Ways and Means), Hearings * * * on Revenue Revisions, 1947–48, pp. 1521, 1816.

over depreciation provide, with one exception, "the most troublesome aspect of Federal tax administration." [10] Official confirmation of this appears in the statement by an investigatory group that "The determination of a fair allowance covering wear and obsolescence of assets has been one of the most troublesome problems of tax administration." [11] The problems which give rise to the conflicts are set out in the following pages. Fundamentally, the problems stem in considerable degree from the Treasury's extra long estimate of the useful life of business assets, and the inability of business to sustain in advance the burden of proving a shorter useful life.[12]

RESULTING OVERSTATEMENT OF PROFITS

Businessmen, presumably responsible businessmen, charge that the present depreciation policies of the Bureau of Internal Revenue do not permit investments in business to be recovered tax-free during the period when they should be recovered, if they are to be recovered at all. These policies, it is alleged, result in an overstatement of profits,[13] and act as a deterrent to desirable investments. They create obstacles, to the modernization of plant and equipment. To the extent these policies result in an overstatement of profits, they create an erroneous impression as to the amount a corporation has available for distribution, and may be the justification for demands of stockholders for increased dividends, or by labor for increased wages, or by the Government for increased taxes.[14]

THE "USEFUL LIFE" CONCEPT [15]

To be more specific, exactly what is it that forms the basis of most of the complaints? Perhaps the most fundamental, and the one most frequently urged, is that business does not have the opportunity to recover its investment with sufficient promptness. The Treasury parcels out the recovery over the "useful life" of the depreciable aassets.[16] As aguide to Treasury agents and taxpayers, the Treasury has published what it considers to be the average "useful life" of

[10] Terborgh, George, Capital Goods Industries and Tax Reform, Chicago, Machinery and Allied Products Institute, 1947, pp. 27–28.

[11] Report to the Joint Committee on Internal Revenue Taxation * * * by the advisory group appointed pursuant to Public Law 147, 80th Cong., Investigation of the Bureau of Internal Revenue, Washington, GPO, 1948, pp. 46–47. See also Report of the Special Tax Study Committee to the Ways and Means Committee, November 4, 1947, Washington, GPO, 1948, p. 26.

[12] See p. 182.

[13] There are two principal reasons at the present time why profits are said to be overstated. The first is that business allegedly is not allowed to take adequate depreciation in the early years of the life of its investment; this is discussed below. The second reason is that while a firm's revenues from the sale of its product are currently stated in terms of 1949 dollars, part of the cost of its product is an allocated share of its former capital outlays made at a time when the dollar was worth more. This point is made at greater length in the discussion in Part II—Replacement Cost Basis, where consideration is given to substituting replacement costs for historic costs as the base for computing depreciation.

For dollar estimates of the alleged overstatement of profits, see also: The Underdepreciation of Corporate Assets, National City Bank monthly letter on economic conditions (New York), August 1949, pp. 90–92; Joint Committee on the Economic Report, Hearings * * * on Corporate Profits, 1948 (see especially testimony of Sumner H. Slichter, William A. Paton, George D. Bailey, and Enders M. Voorhees); George Terborgh, Inflation and Postwar Profits (Chicago), Machinery and Allied Products Institute, 1949.

[14] For an answer to this argument, Part III—Other Consequences to Business.

[15] For answers to arguments here stated, see part III, Useful Lives and Burden of Proof.

[16] Treasury Regulations 3, sec. 29.23 (l)–1, 5. These provide as follows: "The proper allowance for such depreciation is that amount which should be set aside for the taxable year in accordance with a reasonable, consistent plan (not necessarily at a uniform rate) whereby the aggregate of the amounts so set aside, plus the salvage value, will, at the end of the useful life of the depreciable property, equal the cost or other basis of the property.

"The capital sum to be recovered shall be charged off over the useful life of the property, either in equal annual installments or in accordance with other recognized trade practices."

thousands of items.[17] The "lives" set, it is generally contended, are far too long,[18] and in spite of Treasury assurances that these are intended only as a guide to be varied with individual circumstances, they are quite rigidly followed. Further, it is alleged, there is a failure to give full recognition to obsolescence as a factor in reducing value.[19]

The argument on behalf of business of course is that if it does not get back its capital investment tax-free, then part of what the Government is taxing as income is not income at all but capital. Business also emphasizes the need of getting back the investment tax-free prior to, or at least currently with, the decline in value of the asset—not sometime later.[20]

POLICY A DETERRENT TO INVESTMENT

Since the burden is on the taxpayer to show the Treasury determination to be wrong,[21] a feat which is very difficult of accomplishment,[22] the taxpayer has to wait far too long to recover his investment. This may deter investment insofar as recovery within 1 to 3 to 5 years [23] is deemed necessary.

It is often advantageous for a business to scrap a particular machine, even though depreciation theretofore taken had not reduced its book value to zero. Yet so long as the books show that an asset has value there is a tendency to keep it rather than replace it.[24] Several of

[17] U. S. Treasury Department, Bureau of Internal Revenue, Bulletin F (revised January 1942), Income Tax Depreciation and Obsolescence Estimated Useful Lives and Depreciation Rates, Washington, GPO, 1942.

[18] See, for example, George Terborgh's Capital Goods Industries and Tax Reform, Chicago, Machinery and Allied Products Institute, 1947, p. 27.

[19] Seghers, Paul D., Accelerated Depreciation, Taxes (Chicago), July 1947, vol. 25, pp. 652–653. Also Reports of the Special Tax Study Committee to the Ways and Means Committee, November 4, 1947, Washington, GPO, 1947, p. 26; and Norton, Paul T., Depreciation and Obsolescence, Manufacturers' Record (Baltimore), January 1949, vol. 118, No. 1, p. 45.

[20] As one writer views the matter: "* * * it does seem more than a little ridiculous that the Treasury should be so insistent that the annual depreciation allowance should not exceed that amount which is obtained by dividing the undepreciated balance by the estimated future life, even when it is probable that in the last few years of life the asset will be completely unable to earn any part of its investment because it will be obsolete or relegated to occasional stand-by service. This illogical insistence on obtaining the very last dollar of present tax money would be bad enough if it were merely a matter of being unfair to the affected individual taxpayer. What makes the practice much more serious is the fact that it tends to prevent investments at the very time when the economy of the country demands that there shall be no interference with private investment programs." Paul T. Norton, Jr., Depreciation and Obsolescence, Manufacturers' Record (Baltimore), February 1949, vol. 118, No. 2, p. 52.

Another commentator argues: Is it not obvious that the national interest requires that we of the New World foster and encourage those policies which will keep our industrial plant in the pink of condition? Of course it is, but unhappily the depreciation policies followed by our Internal Revenue Department discourage renewals and replacements. The treatment of depreciation by our Treasury Department is short-sighted, based on grabbiness, on the principle of getting all you can now without regard to the future.

"At least one new business is born for every one which falters and dies. Therefore, it makes utterly no difference to the sum total of Federal revenue when or how depreciation is charged off. Not only in the long run, but on the average in any given year, revenue would be just as great even if capital purchasers were permitted to depreciate capital equipment 100 percent during the first year of purchase; but it makes a tremendous difference psychologically to the potential buyer of capital equipment, a tremendous difference in the rate of renewal of plant, and perhaps a tremendous difference in the swings of the business cycle." Frederick S. Blackall, Is Tax System a Bar to Employment? Credit and Financial Management (Philadelphia), vol. 47, June 1945, pp. 7–10 (8, 10). See also his Should the Tax Laws Permit Speeding Up Depreciation? Modern Industry (New York), March 15, 1947, vol. 13, No. 3, pp. 108–112.

[21] Treasury Regulations 3, sec. 29.23 (l)-5.

[22] Fernald, Henry B. (testimony before the House Committee on Ways and Means), Hearings * * * on Revenue Revisions, 1947–48, p. 1580.

[23] See the results of various polls and opinions in Dynamic Equipment Policy, by George Terborgh, New York, McGraw-Hill, 1949, pp. 187–201, 269–275. See also Lewis H. Kimmel's Depreciation Policy and Postwar Expansion, Washington, Brookings Institution, 1946, pp. 38–41.

[24] "* * * an undepreciated balance of a present asset tends in actual practice to make more difficult the replacement of such an asset, even though theoretically the presence or absence of an undepreciated balance should have no effect upon our decision to replace or not replace a present asset," Paul T. Norton, Jr. (testimony before the House Committee on Ways and Means), hearings * * * on Revenue Revisions, 1947–48, p. 1359.

See also George Terborgh's Capital Goods Industries and Tax Reform, Chicago, Machinery and Allied Products Institute, 1947, p. 28, and his Dynamic Equipment Policy, New York, McGraw-Hill, 1949, pp. 4–5. Mr. Terborgh states: "Although authorities on equipment policy are by no means unanimous on the point, the prevailing view—with which we agree—is that replacement decisions should not be influenced by the book value or unrecovered cost, of the asset considered for retirement. Anyone who has sold industrial equipment is aware, however, that this rule is often honored in the breach * * * Right or wrong, rational or irrational, this prejudice exists in many places and must be reckoned with." See also The Depreciation Dilemma, Fortune (Chicago), January 1949, vol. 34; No. 1, p. 68.

Sir Stafford Cripps' working parties emphasized this point in their reports on English industry.[25] Insofar as this is true, failure of the administration to allow adequate depreciation may not only restrict investment in the first place, but help to delay replacement of capital assets, sometimes during phases of the business cycle when increased capital expenditures would be beneficial.

NEED FOR RECOVERY IN EARLY LIFE OF ASSETS

Equal or greater concern is sometimes expressed about inability to recover a larger part of the investment during the early part of its useful life. It is then that a machine, for example, has its greatest efficiency, requires the least repairs, and suffers the greatest proportionate decline in value. Therefore, it is during those years that a greater part of the investment should be returned. There should not be a delay to the last years of life when the asset is used very little, is retained merely for stand-by or occasional services, and in general yields the smallest income return.[26] This of course, emphasizes inadequacies of the straight-line method of depreciation, the one most frequently used.

According to the straight-line method, the cost, less salvage, is divided by the estimated life and the result is the amount of depreciation to be taken each year. By the very mathematics of the case recovery is then apportioned equally over the life.

Another system, more frequently used abroad than in the United States, is the declining-balance method. Under it, the amount to be taken each year is a fixed percentage not of the original cost, but of the original cost minus depreciation previously taken.[27] Other methods of depreciation currently enter very infrequently into discussion.[28]

SMALL BUSINESS ASPECTS OF PROBLEM [29]

Various persons from time to time have made recommendations for special depreciation treatment for small business, or pointed out the importance of a proper depreciation policy so far as it affects small business. Such recommendations have been made in hearings before the Ways and Means Committee,[30] and the House Small Business Committee.[31] Recommendations have also come from groups

[25] Great Britain, Board of Trade, Working Party reports: Pottery, London, His Majesty's Stationary Office, 1946, p. 7; Carpets, 1947, p. 5; Heavy Clothing, 1947, p. 55.
In the report of the Pottery Working Party, it was said (p. 7): "We are convinced that depreciation allowances for income-tax purposes have a direct bearing on the conduct of an industry, and that there is a close association between the small prewar allowances and the continuing employment of antiquated buildings and processes."

[26] Thus one critic believes that the Treasury has the facts to support its tables of useful life, and business wastes its time in attacking on that score. Rather it should base its arguments on the need to recover a larger part of the total in the early years of the life. Norton, Paul T., Jr., Depreciation and Obsolescence, Manufacturers Record (Baltimore), January 1949, vol. 118, No. 1, pp. 45, 50. See also his Accelerated Depreciation, Conference Board Business Record (New York), January 1946, vol. 3, p. 47; and testimony before the House Ways and Means Committee, Hearings on * * * Revenue Revisions, 1947–48, pp. 1357–1367.
Terborgh, George, Capital Goods Industries and Tax Reform, Chicago, Machinery and Allied Products Institute, 1947, pp. 28–31.

[27] See discussion below, Part II—Declining Balance Method.

[28] Among the various methods are the unit of production method, annuity or sinking fund method, retirement accounting, and sum-of-the-digits method.

[29] For answers to arguments here stated, see Part III, Relation to Small Business.

[30] Arent, Albert E., (testimony before Committee on Ways and Means), hearings * * * on Revenue Revisions, 1947–48, p. 976. See also Reardon, O. A., p. 1013–1014; National Tool and Die Manufacturers Association, p. 1337; Boot, Harry E., p. 1853.

[31] Fichtner, Charles C., (testimony before the Select Committee to Conduct a Study * * * of Small Business), "Hearings" (1945), p. 18. See also Winsor, Fred E., p. 319; Eschner, Jules, p. 750, 752; Bach, Ronald P., p. 822; Harvey, Joel D., p. 932; Neumann, Charles W., pp. 878–884; Smith, S. Abbot, p. 909; Blackall, Frederick S., pp. 960–963.

especially close to the problems of small business.[32] The issues have also been discussed in a Treasury study.[33]

The argument with respect to small business is very much the same as for all business with perhaps one added feature, namely, that small business is more dependent on internal financing for growth, and any device which helps small business in its internal financing will promote free enterprise and redound to the benefit of all America. It may also be added that when small business is able to secure a bank loan, let us say, the loan must be paid back within a shorter period than the life of the asset on which it is borrowed. Since the Treasury insists on a long "useful life" as the period for spreading depreciation, it at once sets up a barrier to the securing of bank loans. Witnesses so testify.[34] There is in addition the fact that small business is simply financially unable, and personnelwise unequipped, to battle with the Treasury over differences of opinion as to periods of write-off.

Furthermore if a new invention makes the processes of a small business obsolete, the fact that it had recovered all its investment in the early years would place it in a better position than if it had recovered little. Big business would have the greater advantage of being able to deduct this abnormal depreciation from other operations.

It is sometimes argued that small business has comparatively little to gain from accelerated depreciation, but—

> The fact that small and expanding businesses have in general shown more interest than large and established ones in accelerated depreciation suggests, however, that the benefits would by no means be restricted to large corporations.[35]

OTHER PROBLEMS

Objection is also given to the operation of the law and its administration as follows:[36]

> Proper recognition is not given by the Treasury to substantial increases or decreases from normal use in any particular year.
>
> If a taxpayer suffers a loss in 1 year, or his income before depreciation is less than his depreciation, he fails to get any benefit from the depreciation and he should not be required to deduct it.
>
> Depreciation should be based on replacement cost rather than original cost.
>
> The dollar has so lost its value between the time when most business assets were acquired and the present, that a complete revaluation of assets is necessary in order to show their present realistic economic value.

There may also be some fear that the provision of section 102 of the Internal Revenue Code (which imposes a surtax on corporations

[32] Recommendations of the Small Business Advisory Committee prepared for the Secretary of Commerce, December 11, 1946, p. 9 (mimeographed).
Smaller War Plants Corporation, Taxation, Washington, the Corporation, September 1945, pp. 36-39.
[33] Treasury Department, Division of Tax Research, Taxation of Small Business, October 1947, pp. 23-29 (mimeographed).
[34] Smith, Abbot S. (testimony before House Select Committee To Conduct a Study * * * of Small Business), Hearings (1945), p. 909.
[35] Blough, Roy, The Case Against Tax Reduction, Taxes (Chicago), August 1945, vol. 23, p. 696.
[36] See also Part II.

improperly accumulating surplus) may be invoked against firms building up a surplus for expansion or replacement.[37]

REVENUE ASPECTS [38]

Present Bureau policies were adopted at the bottom of the depression with the immediate end in view of temporarily increasing revenues. But if tax rates remain the same, that which the Treasury gains in 1 year through reduction in allowable depreciation is made at the sacrifice of the same amount of revenue or even more revenue [39] in a succeeding year or years. As one businessman [40] phrased the matter:

> Inasmuch as any portion of the cost of an asset which is not allowed as a deduction for depreciation in the early years of its life will simply be available for deduction in the later years of its life, it follows that it is of little or no consequence to the Federal Government when or how depreciation is taken. In the long run, the Government will gain later whatever it loses at the outset. Thus it becomes obvious that depreciation policy should be determined, not on the basis of revenue at all, but rather on the basis of what will produce in the long run the maximum encouragement to industry to keep its house in order. But such a policy will, in fact, also provide the maximum revenue, in the long run, to the Federal Government, for certainly the plant which is up-to-date and efficient will register, on the average, greater taxable earnings than one which is permitted to run down and become obsolescent.

Statistics indicate that if business were allowed to reduce the useful lives of assets by one-third or some other amount, or was given wide freedom in selecting its own period for writing off depreciation, hundreds of millions or even billions of dollars might be at stake. With corporate tax rates at 38 percent, initial revenue losses would be $380,000,000 for every $1,000,000,000 [41] that increased depreciation reduced profits. But such deductions in most cases, it is argued, would undoubtedly correspond more closely with reality and with sound business thinking.

MISUNDERSTANDING OF DEPRECIATION

At this point, there is presented a brief discussion of some of the accounting aspects of depreciation, and misunderstandings in relation thereto. It is introduced here even though it has little relevance to that which precedes or follows. It is simply presented as a reminder of certain frequently overlooked or misunderstood aspects of depreciation. Many people have the idea that depreciation deductions

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[37] The following quotation will perhaps be helpful in understanding this problem: "Because the majority of corporations look to surplus accumulation to meet the increased cost of capital replacements, the possible impact and restrictions of section 102 of the tax law are being carefully analyzed. It is contended that if business is unduly restricted in the amount of profits it can retain, the future of the enterprise is seriously threatened. One general complaint made against section 102 is the uncertainty it creates. Approximately one-third of the executives (consulted) state that they have felt hampered by the provisions of section 102. The remainder felt that this section has no bearing on their situation and are confident that they can justify the amounts retained in surplus." Hansen, Henry E., and Lusardi, Francis, Depreciation Under Review, Conference Board Business Record (New York), August 1947, vol. 4, p. 237.

[38] The argument made in this section assumes continuance of tax rates at unchanging levels. For arguments counter to these here expressed, see Part III, Revenue Aspects.

[39] The Treasury might actually have gained dollars in revenue had it not taken the steps it did in 1934 in stretching out the period over which depreciation should be taken. In subsequent years tax rates were raised and business took depreciation which would not have existed had fast depreciation been taken in the 1930's.

[40] Blackall, Frederick S., Jr. (testimony before House Ways and Means Committee), Hearings * * * on Revenue Revisions 1947-48, pp. 1351-52. See also Fernald, Henry B., p. 1580.

[41] The Department of Commerce in its national income figures for 1948 estimates business depreciation charges at more than $12,000,000,000. (Survey of Current Business, July 1949, p. 11.) This $12,000,000,000 includes depreciation of farms, tax-exempt organizations, operating businesses, etc., of income recipients not filing tax returns, etc. For tax purposes depreciation for corporate and unincorporated business would be around $10,000,000,000.

somehow result in a fund or a "reserve" or a supply of cash being available to replace an asset when it becomes worn out.[42] Depreciation deductions are simply bookkeeping entries which help to show what part of gross receipts left over after paying the cost of materials, labor, interest, rent, and so forth, is actually profit, and what part is a return of the original investment. The deduction in itself does not increase the cash of the business a single cent. It makes no difference in the cash position of the business at the end of a year, whether the business writes off its assets at 5, 10, 20 or 50 percent. Cash comes from sales, not from depreciation.[43] However, cash is affected to the extent depreciation is anticipated and is reflected in advance in the price for which goods are sold.[44] Cash is also affected to the extent depreciation deductions reduce actual profit, because income taxes are computed on profit. Further, if profits appear higher than they really are, they may be the occasion for excess demands by stockholders for increased dividends, or by labor for increased wages, each of which reduces the business's cash.

Part II. Proposed Answers to the Problems

INTRODUCTION

Numerous proposals have been made for correcting the inadequacies of depreciation policy and practice as viewed by business and as set forth in part I. In succeeding paragraphs, some of the proposed solutions are discussed. Among them is a section which sets forth the case for granting more freedom to business in taking depreciation. It traces the development of the tightening-up process inaugurated in 1934, the feeling of business that the procedure is much too strict (in attempting to be scientific where science cannot provide all the answers), and reviews the liberal Swedish practice. In sequence, then, are summarized proposals for a modified straight-line method of computing depreciation, recognition of excess use, allowance for excess construction costs, the declining-balance method;

[42] This misunderstanding apparently extends to corporation executives as the following quotation indicates. "* * * a principal executive of one of our largest corporations recently called attention to the fact that the replacement cost of their assets was several times as great as these assets had cost when they were installed. He then stated that current profits are being calculated after deductions for depreciation based upon actual past cost and not on replacement cost. He finally made the statement that these past depreciation charges had been 'set aside' to replace the equipment which was being depreciated on the basis of its original cost * * *. The published annual reports of his company prove that this company never 'set aside' the depreciation charged on an asset for use in replacing that asset. Statements of this sort are all too common, and what is even worse, the average person does not seem to realize the fundamental errors in thinking which cause most of them." Norton, Paul T., Jr., Depreciation and Obsolescence, Manufacturers Record (Baltimore), April 1949, vol. 118, No. 4, p. 46.

It should be noted, however, that some companies do set aside sums (depreciation accruals) for the purchase of new equipment, but the typical company does not; 81 percent of 191 companies replying to a question of the Machinery and Allied Products Institute reported that they earmarked no part of the depreciation accrual for the purchase of new equipment. Machinery and Allied Products Bulletin (Washington), October 1, 1948, No. 2119, pp. 6, 10. Increased interest in the practice of setting aside such sums is said to be evident. Hansen, Henry E., and Lusardi, Francis R., Depreciation Under Review, Conference Board Business Record (New York), August 1947, vol. 4, p. 237.

[43] For an explanation, see the article by J. N. Meyer, The Current Depreciation Mirage, Canadian Chartered Accountant (Toronto), June 1949, vol. 54, pp. 279–282. For a contra impression, see Kimmel, Lewis H., Depreciation Policy and Postwar Expansion, Washington, the Brookings Institution, 1946, pp. 8–10; Financial Handbook, New York, the Ronald Press, 1948, pp. 725, 766–768. Cf. Winakor, Arthur H., Maintenance of Working Capital of Industrial Corporations by Conversion of Fixed Assets (University of Illinois Bulletin, No. 49), Urbana, University of Illinois, 1934.

[44] This presents some nice questions which cannot be answered here. Undoubtedly at times of a seller's market, costs will have more influence than at others in determining prices. For some brief discussions see Brown, E. Cary, Tax Allowances for Depreciation Based on Changes in the Price Level, National Tax Journal (Lancaster, Pa.), December 1948, vol. 1, p. 317; Schiff, Michael, Application of the Price Index Adjustment Concept to Depreciation Charges, NACA Bulletin (New York), April 15, 1949, vol. 30, pp. 934–935; Turner, Clarence L., Treatment of Depreciation on Replacement Values, Proceedings of the New York University Seventh Annual Institute on Federal Taxation (November 9–18, 1948), New York, Matthew Bender & Co., 1949, p. 63.

special incentive proposals, a 5-year capital-recovery suggestion, special initial allowances, reserve fund for future investment, substitution of replacement costs for original cost as a basis for computing depreciation, and complete revaluation of assets as in France and other countries. Finally there is a review of the arguments for extending the tax-benefit rule to depreciation deductions. Arguments against the proposals set forth herein will be found in part III.

MORE FREEDOM IN TAKING DEPRECIATION

The desire of business to make sure that it gets back its capital investment tax-free was pointed out above. There is a belief that under the present law it does not get it back tax-free, or does not get it back as early in the life of the asset as it should, or as would be best for the interest of the Nation. The Treasury's useful life concept is thought to be one of the principal barriers to this. Many say the useful lives established by the Treasury are far too long, and should be reduced.

One of the ways to accomplish the desired result would be to allow business more freedom in determining over what period it should write off its assets. In any event, it is argued, the burden should be on the Treasury to prove that the period selected by business is wrong, rather than on business to prove that the period selected by the Treasury is wrong. But before jumping right into this, a bit of history may be helpful in setting the background for much of the present difficulty.

Prior to 1934, taxpayers could generally determine over what period they should write off their assets. Their deductions were permitted to stand "unless shown by clear and convincing evidence to be unreasonable." [45] In other words, if the Bureau felt that the period selected was too short, the burden was on it to prove the taxpayer wrong.

In 1933, a subcommittee of the Committee on Ways and Means recommended [46] that for the years 1934, 1935, and 1936, depreciation allowances be reduced one-fourth. In support of this recommendation, the subcommittee pointed out that depreciation deductions did not result in any cash outgo from the taxpayer, the life of depreciable property was very uncertain, taxable net income was being wiped out by depreciation deductions, and the revenue was suffering. The one-fourth reduction would increase revenue by $85,000,000.

The Treasury, through a letter from the Secretary, suggested an alternate approach and recommended that it be permitted to tighten up its practices in a way which might prove more equitable than the proposed flat reduction on everybody. This was agreed to, and the Treasury adopted Treasury Decision 4422, which paved the way for redetermining the period over which assets should be written off, and placed the burden of proof as to correctness of deductions squarely on the taxpayer. The Bureau subsequently issued Bulletin F containing estimates of the useful life for many classes of property. It is of these things, as applied, that taxpayers complain. One student of the subject, commenting on the 1934 change, said: [47]

> The most important consequence of the stricter policy was that it tended to have an adverse effect on capital expansion, which at that time was regarded as

[45] Treasury Regulations 77, art. 205.
[46] Preliminary Report of Subcommittee of the Committee on Ways and Means, Prevention of Tax Avoidance (1933), pp. 4–5.
[47] Kimmel, Lewis H., Depreciation Policy and Postwar Expansion, Washington, Brookings Institution, 1946, p. 28.

essential. Liberal depreciation allowances for tax purposes reduce the risk; conversely, reduced allowances mean increased risk. Moreover, the more venturesome the undertaking, the more important a reasonably liberal depreciation policy becomes. To the extent that the change to a stricter policy resulted in lower rates of depreciation, the investment of risk capital was affected adversely.

There is a general feeling among businessmen that there can be no scientific method of estimating the useful life of property, and that business should fix its own depreciation schedule. The usefulness and life of assets vary greatly, not only as between various categories of machines but between one machine and another similar machine. The difficulty of accurate measurement of annual depreciation was expressed by Justice Brandeis [48] as follows:

> There is no regularity in the development of depreciation. It does not proceed in accordance with any mathematical law. There is nothing in business experience, or in the training of experts, which enables men to say to what extent service life will be impaired by the operations of a single year or of a series of years less than their service life. The main purpose of the charge is that irrespective of the date of depreciation there shall be produced, through annual contributions, by the end of the service life of the depreciable plant, an amount equal to the total net expense of its retirement. To that end it is necessary only that some reasonable plan of distribution be adopted.

One business group [49] advocating a more liberal depreciation policy has stated the problem and its solution in this way:

> The reasonable allowance for exhaustion, wear and tear of physical properties, more commonly termed "depreciation," is probably the one allowable deduction which occasions more controversy between taxpayers and the Bureau of Internal Revenue than any other. The difficulty seems to rise from the Bureau's attempt to determine the allowance for depreciation on a mathematically exact basis and to take advantage of hindsight not available to the taxpayer when the return is filed.
>
> The useful life of a physical asset and the amount of depreciation required to be deducted each year in order to recoup the capital invested over the period of useful life is at best a matter of opinion and judgment. It would seem, therefore, that the taxpayer is in the best position to exercise such judgment rather than the Bureau of Internal Revenue. This is not to suggest that no limitations be placed upon the taxpayer in this respect. However, the rigid rules of the Bureau should be so relaxed as to allow a freer play of such judgment. Within certain minima and maxima as to useful lives of assets, which limits the Bureau could easily determine based upon the wealth of information and experience gained by the Bureau since the inception of taxes on income, the taxpayer should be allowed to determine depreciation under any reasonable method or combination of methods aimed at the recovery of the capital investment over the useful life of the investment. The method adopted should be consistently applied but should be subject to change, particularly with respect to estimates of useful lives of assets, when the need for change can be reasonably demonstrated. When such a change is made, no retroactive adjustments with respect to depreciation should be permitted either to the taxpayer or to the Bureau. So long as the taxpayer has kept within the minimum and maximum limits of useful lives determined by the Bureau for the particular classes of assets and for the particular industry, the taxpayer's determination of depreciation allowances in prior years should be presumed to be correct.
>
> The amount of the capital investment to be recovered in depreciable property is fixed. Differences of opinion occur with respect to the speed of recovery. We believe that, if taxpayers are allowed more latitude in determining the speed of recovery, the effect on revenues over a period of time will be negligible. Moreover, much time and effort will be saved by taxpayers and the Bureau through the elimination of controversy and the attendant protracted negotiations.

[48] *United Railways and Electric Co.* v. *West* (280 U. S. 262) (dissenting opinion in a rate-making case).

[49] Tax Executives Institute (testimony before House Ways and Means Committee), Hearings * * * on Revenue Revisions, 1947–48, pp. 1816–1817. See also Eaton, George S., p. 1322; Blackall, Frederick S. Jr., pp. 1351–1353; Grimes, Edmund L., p. 1426; Fernald, H. B., p. 1861; Terborgh, George, pp. 3303–3306.

Students and other writers [50] likewise have advocated (or at least suggested) that greater discretion be left with the taxpayers. One fairly simple device which has been proposed would permit taxpayers to use the rates now offered by the Bureau as normal, or vary them up to 25 percent,[51] or 50 percent [52] either above or below such normal. Another would provide that the rate and manner of accrual, within the reasonable limits of generally accepted accounting principles, be left in all cases to managerial judgment.[53] Similar to this last proposal is another [54] which suggests that—

* * * in the case of assets with a life of more than 5 years, a deduction shall be allowed for the depreciation claimed by the taxpayer on his return, in accordance with the method of computing depreciation and the rate used in his books of account. The taxpayer, once having determined a rate and method of depreciation for an asset, will be required to continue its use, unless permission to change is granted by the Commissioner.

It is also argued that the burden of proof, instead of being on the taxpayer to prove the Bureau wrong, should be shifted back and placed on the Bureau to prove the taxpayer wrong. As one commentator expressed it: [55]

Subject to the basic requirement that the taxpayer must follow consistently whatever method of depreciation he elects to use, his judgment should stand except where the Bureau is able to prove his method an unreasonable one. The shift of the onus of proof from the taxpayer to the Bureau should be accomplished by statute, in unequivocal language.

When liberal methods of handling depreciation are talked about, reference is sometimes made to the Swedish procedure. This is true in the United States, but it is more especially true in Great Britain. Under the Swedish procedure,[56] which gives very great freedom, the practi-

[50] See, for example: Committee for Economic Development, A Postwar Tax Plan for High Employment, New York, the committee, 1944, p. 36; Groves, Harold M., Production, Jobs, and Taxes, New York, McGraw-Hill, 1944, pp. 3, 63–65, and his Postwar Taxation and Economic Progress, New York, McGraw-Hill, 1946, pp. 153–161, 164; Kimmel, Lewis H., Depreciation Policy and Postwar Expansion, Washington, Brookings Institution, 1946, pp. 58–66; Committee on Postwar Tax Policy, A Tax Program for a Solvent America, New York, Ronald Press, 1945, pp. 91–94; Simons, Henry, Postwar Federal Tax Reform, National Tax Association Proceedings, 1943, p. 438.

[51] This recommendation is attributed to the American Institute of Accountants. See Report to the Joint Committee on Internal Revenue Taxation * * * by the Advisory Group Appointed Pursuant to Public Law 147, 80th Cong., Investigation of the Bureau of Internal Revenue, Washington, GPO 1948, p. 47.

[52] McDowell, M. E. Carry-back, Carry-forward and Refund Provisions. (National Industrial Conference Board, Studies in Business Policy, No. 4, p. 8).

[53] Committee on Postwar Tax Policy, A Tax Program for a Solvent America, New York, Ronald Press, 1945, p. 94.

[54] Report of Special Tax Study Committee to the Ways and Means Committee, November 4, 1947, Washington, GPO, 1948, p. 26.

[55] Terborgh, George, Capital Goods Industries and Tax Reform, Chicago, Machinery and Allied Products Institute, 1947, pp. 31–32.

[56] See the following:

"DEDUCTIONS FOR DEPRECIATION OF MACHINES, INDUSTRIAL FIXTURES AND SIMILAR ASSETS IN THE SWEDISH TAX LEGISLATION

"In 1938 certain changes were made in the Swedish tax legislation with regard to the above subject.

"According to previous rules concerning the taxable profit of a business enterprise, yearly maximum deductions for depreciation were determined by rules set out in the law and not by economic calculations as reflected in the bookkeeping of the enterprise.

"Corporate profit valuation having largely become a controversial subject between business and the local tax boards, a Government committee was appointed in 1936 to study this problem. The committee proposed new rules aimed at eliminating these controversies and, at the same time, at consolidating industry by allowing higher deductions being made in profitable years.

"In 1938 legislation was enacted in general accordance with the suggestions of the above committee. The main principle of the new law is still that the yearly deductions for depreciation have to be made in conformity with fixed depreciation schedules. These schedules, which are drawn up by the enterprise in accordance with the rules laid down in the law, shall provide for equal deductions determined so as to allow for the entire procurement value of the asset to be written off not earlier than at the time when the asset cannot any longer be economically used. The schedule may successively be modified if certain conditions prevail, viz (1) if the enterprise shows widely varying business results during different years, (2) if, on account of inadequate profit margin during a certain year, it has not been possible to deduct the amount scheduled for that year, (3) if the procurement value is subject to abnormal depreciation—for instance, if the

cal effect has been, so far as machines, industrial fixtures and similar assets (but not real estate) are concerned, to allow business to deduct for tax purposes whatever it deducts in its regular books of account.

A company can allocate to depreciation in any one year and claim as an allowance against income tax as great a percentage of the original cost as it wishes or is able. It may even * * * write off the whole cost of new machinery in the same year as it is purchased. This rule has been made because, in the words of a Swedish tax expert, "it is considered that businessmen themselves are in the best position to judge the annual depreciation, and that, therefore, no departure from their judgment ought to take place". How many businessmen here (in England) must wish that the tax authorities took as enlightened a view of their abilities.[57]

The Wool Working Party in Britain also attributed the existence of so many Swedish machines in English woolen mills to Sweden's policy with respect to depreciation. The party said: [58]

One of the most striking features of the mills visited is the vast amount of new machinery which is employed. Most of the machines are Swiss, German, or Swedish, and they are of the very latest design. This has been made possible by the fact that the Swedish Government, which has been in power for the past 14 years, allows any firm to write off its machinery within 1 to 3 years according to the desire of the firm concerned. It is emphasized that only in this way can Sweden produce economically, because in future she will have to compete with countries in which the standard of living is much lower than at home. Thus, while the incidence of taxation may be very heavy—it is estimated at 90 percent on profits over a certain level—industry is given a very big advantage indeed by the allowance.

It is generally recognized that the straight-line method of depreciation is about the simplest there is,[59] although even in this opinion is not unanimous.[60] It is sometimes said that an easy solution, and a reasonably correct one, is simply to reduce the estimate of useful lives. This would have the effect of allowing taxpayers a greater return of investment in the early years of the life of the asset. One recommendation is to substitute two-thirds of Treasury's estimate of useful lives.[61] In effect, this would increase depreciation allowances by 50 percent. The proposal is somewhat similar to the action taken in Britain in recent years, under which wear-and-tear allowances were increased by 25 percent.[62]

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asset is destroyed by fire—or (4) if, for economically justifiable reasons, an unusually high procurement price had to be paid.

"The most important new feature of the 1938 legislation was the right it gave to industry to make, in certain cases, deductions without a fixed schedule, or so-called 'free depreciation'. This means that the tax boards should, under certain circumstances, accept the depreciation as shown in the bookkeeping of an enterprise, as a basis for the yearly deductions. Applications for 'free depreciation' have to be filed with the local tax board and can be granted only to certain categories of industrialists, viz, incorporated companies, economic associations, mutual insurance companies, and savings banks. Furthermore, the right applies only to machines, industrial fixtures and similar assets. Finally, the applicant must meet certain requirements with regard to the bookkeeping. It must appear clearly from the books to what amount the annual depreciation is estimated, so that potential profits from a future sale of the asset cannot be withdrawn from taxation. Also the taxpayer must show how much of the original procurement value has actually never been subject to tax deductions" (Memorandum of Swedish Embassy in Washington).

[57] Depreciation Allowances, the Swedish Example, The Accountants Journal (London), November 1948, vol. 40, p. 168.

[58] Great Britain, Board of Trade, Working Party Reports: Wool, London, His Majesty's Stationery Office, 1947 p. 169.

[59] Accountants' Handbook, New York, Ronald Press, 1943 (3d ed.), p. 752.

[60] Norton, Paul T., Depreciation and Obsolescence, Manufacturers Record (Baltimore), May 1949, vol. 118, No. 5, p. 65.

[61] Thus it is said "To avoid profitless controversy over the question of reasonableness, Congress should specifically authorize the depreciation of productive facilities, by the customary straight-line method or its equivalent, over a period materially shorter than their full service life. This would permit the restoration of the practice common before Treasury Decision 4422, which worked, as we have seen, a rough but essential compensation for the tendency of the straight-line write-off to lag behind capital consumption. We suggest the authorization of any period not less than two-thirds of the estimated service life, on the assumption, generally valid, that what is left of the value and usefulness of capital assets after two-thirds of their life has expired is not worth haggling about. This would restore a substantial area of freedom to management without being unfair to the Treasury." George Terborgh, Capital Goods Industries and Tax Reform, Chicago, Machinery and Allied Products Institute, 1947, p. 32.

[62] Income Tax Act, 1945, sec. 16. Increases of 10 percent had been allowed 1932–38, 20 percent 1938–46, and 25 percent since 1946.

EXCESS USE

Excess use of equipment over the use during a normal period is sometimes urged as a basis for additional allowance during such period of excess use. It is asserted that the Treasury fails to give due recognition to this,[63] although considerable recognition was given to it during the war. It is the Treasury's policy, however, not to allow an increase in depreciation in respect of increased usage and other unusual operating factors unless they actually result in a shortening of the remaining useful life; in this the Treasury is supported by the Tax Court.[64]

When United States Steel Corp. abandoned its 1947 and early 1948 practice of taking excess depreciation based in part on the expected replacement cost of its property,[65] it adopted another policy of accelerated depreciation based on excess use, which it made retroactive to January 1, 1947.[66] The company's long-time average rate of operation, the chairman said, was 70 percent capacity. For years in which operations exceed 70 percent it will take accelerated depreciation on—

> * * * the cost of postwar facilities in the first few years of their lives, when the economic usefulness is greatest. The amount thereof is related to the excess of current operating rate over United States Steel's long-term peacetime average rate of 70 percent capacity. The annual accelerated amount is 10 percent of the cost of facilities in the year in which the expenditures are made and 10 percent in the succeeding year, except that this amount is reduced ratably as the operating rate may drop, no acceleration being made at 70 percent or lower operations. The accelerated depreciation is in addition to the normal depreciation on such facilities, but the total depreciation over their expected lives will not exceed the cost of the facilities.

This practice of United States Steel is for internal-control purposes only. The accelerated depreciation deduction is currently not allowable for income-tax purposes.

EXCESS CONSTRUCTION COSTS [67]

In the years immediately following the war, there was great pressure to expand production facilities to meet the pent-up demand for consumers goods. Prices of materials and labor were very high, higher than they could be expected to remain over the years. Therefore, it seemed prudent to a number of firms to reduce immediately the value of their newly constructed facilities to what could be considered the normal postwar construction cost. They did this fully realizing that the reduction in value—which they sometimes called depreciation—could not be taken for tax purposes. They did it because it seemed the fair way to show the true picture. If the increased construction cost was a product of the times, then it it was to the income of those particular times that the burden of excess

[63] Office Equipment Manufacturers Institute (testimony before the House Ways and Means Committee), Hearings * * * on Revenue Revisions, 1947-48, p. 1633.
[64] Copifyer Lithograph Corporation v. Commissioner of Internal Revenue, Docket No. 16420, promulgated May 10, 1949.
[65] See pp. 178–179.
[66] Irving S. Olds, chairman, in reporting earnings for the fourth quarter, 1948; see Commercial and Financial Chronicle (New York), January 31, 1949, vol. 169, p. 539. See also United States Steel Corporation Annual Report for 1948, Commercial and Financial Chronicle (New York), March 21, 1949, vol. 169, p. 1219.
[67] For statements in opposition to these arguments, see Part III—Excess Construction Cost.

depreciation should be charged. This made good sense, it was argued, in showing the true financial picture.

This was frankly recognized by the Housing Expediter,[68] who, in order to get rental housing built, urged that builders be permitted to write off the excess cost of construction (i. e. the amount by which the current cost exceeded the expected postwar normal cost) over a period of 5 years.

The case for a special charge against near-time income on account of abnormally high construction costs for business in general has been stated as follows:[69]

> Current capital expenditures are generally considered to involve at least 25 percent excess cost over normal postwar cost. The recovery through depreciation over their useful life of capital investments currently made should not be burdened with this excess cost. A taxpayer making present investments would consider it only prudent that excess costs currently paid should be charged against near-time income and not be deferred as a burden on normal earnings of future years. If this is not permitted, the taxpayer naturally will hesitate to make such expenditures and face the expectation that he will be carrying in his accounts the depreciable property at an amount in excess of its future replacement costs. Permitting prompt recovery of excess costs will not involve any ultimate loss of Government revenue because in no case can the amount thus to be written off, plus the amount to be allowed as depreciation, exceed the actual cost. It is only a matter of timing as to when the cost should be written off.
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> We believe this plan will help to stabilize construction and equipment industries and will encourage replacement of old equipment which should be replaced and installation of new and improved equipment which should be supplied.
>
> We join with others who are urging that provision should be made to cover the amortization of such excess cost. As a simple and equitable method for its allowance we recommend the adoption of a provision to substantially the following effect:
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> Allow a deduction at the election of the taxpayer, for amortization of 25 percent of any expenditures on or after January 1, 1947, for depreciable property, such deduction to be allowed in the year of expenditure, or spread over a period of not more than 5 years. So much of any expenditure as is not thus amortized would be subject to depreciation as provided in section 23 (1).

Among the businesses which felt this way were Chrysler, du Pont, General Motors, R. J. Reynolds, International Shoe, and Hercules Powder.[70] Chrysler provided for the—

> accelerated depreciation of postwar additions to facilities by the short-term amortization of the estimated cost thereof above the prewar price level.

International Shoe's—

> depreciation policies with respect to new plant are set to recover today's excess cost over a comparatively short period of time—so that in 3, 4, or 5 years, not even these plants will become a burden in time of recession.

Du Pont in 1 year deducted $20,900,000 for excessive construction costs. However, because of the opposition of the American Institute of Accountants and the Securities and Exchange Commission, at least some of the companies have terminated this policy in favor of certain other more acceptable policies of accelerated depreciation.[71]

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[68] Woods, Tighe E. (testimony before the Joint Committee on Housing), Hearings * * * on Study and Investigation of Housing (1948), p. 5890.

[69] Fernald, Henry B. (testimony before House Ways and Means Committee), Hearings * * * on Revenue Revisions, 1947–48, p. 1862.

[70] Several of these are set out in Accounting Trends in Corporate Reports (for 12 months ending June 30, 1948), by the American Institute of Accountants, New York, the Institute, 1949, pp. 59–62.

[71] For example, effective as from January 1, 1948, with the concurrence of independent accountants, du Pont is applying an accelerated rate to postwar constructed facilities during the early years of production when economic usefulness is greatest. The amount for 1948 was $17,915,821. This deduction is not recognized, however, for tax purposes. Moody's Manual of Investments—Industrials, p. 2521.

DECLINING BALANCE METHOD

In simplest terms, the argument for a higher depreciation allowance in the early years of the life of an asset runs that then it is used the hardest, yields the greatest return, and suffers the greatest proportionate decline in value. During the later years, it may be used only for stand-by purposes, be used infrequently, need the greatest amount of repairs, and in general yield the smallest income return. Even if the Treasury's useful-lives concept is accepted as correct, a declining balance system at the proper rates, it is argued, will result in writing off more depreciation in the first years.

The declining-balance method is the only method (for practical purposes) which has been followed throughout parts of the British Empire.[72]

Under this method a fixed percentage is taken each year, though not a fixed percentage of the original cost. It is a fixed percentage of what remains of the original cost after deducting the depreciation of preceding years.[73] Thus a substantial part of the value of the asset is taken in the early years.

The Treasury has approved a form of declining-balance method, subject to certain limitations and restrictions. The principal limitation is that the rate of depreciation may not exceed 150 percent of the straight-line rates. This, most comment indicates, makes use of the system unsatisfactory. As one writer said:[74]

> For several years past, the Treasury has permitted taxpayers to use the declining-balance method, but has limited the maximum rate to 150 percent of the corresponding straight-line rate, with the straight-line rate based on full service life. With this rate limitation, the declining balance method is even worse than the straight-line method with the rates now insisted upon by the Treasury, because only a little more than half the investment is written off during the first half of the estimated life, and there is a remaining balance of about 20 percent of the investment at the end of the estimated life. The only situation in which the method might be satisfactory is where the life is long and it is expected that the original owner will dispose of the asset during the early years of its life.

This same writer then went on to explain that he believed a faster rate of depreciation was justified and urged the adoption of 250 percent (instead of 150 percent) of the straight-line rates as the

[72] See the discussion in Depreciation in the Tax Laws and Practice of the United States, Australia, Canada, Great Britain, New Zealand, and South Africa, by Raymond E. Manning, National Tax Journal (Lancaster, Pa.), June 1948, vol. 1, pp. 154–174.

[73] For example, depreciation on a $100 asset computed at 20 percent would be taken as follows: first year, 20 percent of $100; second year, 20 percent of $80; third year, 20 percent of $64, etc.

The foregoing gives a rough idea of the method, but more precisely, it goes like this. Assume an asset cost $150, has a useful life of 5 years, and a salvage value of $50. The rate of depreciation in such case would be 19.726 percent. Applying this percentage to $150, the allowed depreciation in the first year would be $29.59. The next year, it would be 19.726 percent of $120.41, or $23.75, and so on. At the end of 5 years, the value would be reduced to $50, the estimated salvage value.

[74] Norton, Paul T., Jr., Depreciation and Obsolescence, Manufacturers Record (Baltimore), May 1949, vol. 118, No. 5, p. 65. See also his Declining Balance Depreciation Permitted by Internal Revenue Is Not Realistic, Journal of Accountancy (New York), July 1947, vol. 84, pp. 32–34.

Mayer, Gerhard J., Declining Balance Depreciation, Taxes (Chicago), February 1947, vol. 25, pp. 162-171; Seghers, Paul D., Accelerated Depreciation and the Treasury's New Declining Balance Method of Computation, Journal of Accountancy (New York), February 1947, vol. 83, pp. 113–116; and Accelerated Depreciation, Taxes (Chicago), July 1947; vol. 25, pp. 645–654.

maximum.[75] He had previously recommended 200 percent as a sufficient ratio.[76]

SPECIAL INCENTIVE PROPOSALS [77]

In an earlier section the proposal was discussed to allow considerable freedom to business in determining its rate of write-off for depreciation. Although preservation of investment was a motive for these and other proposals, the doing of equity had an important place. In succeeding paragraphs attention will be given to certain proposals which have a directly stimulative purpose in mind. They aim at more than eq ity or just setting off some of the deterring effects of the income tax. They seek rather to provide a definite incentive. The success of Nazi Germany [78] with such a program is sometimes cited.

In a period of depression or declining economic activity, when prices are going down, there undoubtedly is a tendency on the part of investors to hold back. At such time, or when such times are feared, we may expect attempts to forestall some of the evil consequences or to start business rolling again by devices which will lure money out of hiding. Some of these lures are in the form of a quite liberal depreciation policy,[79] premised on the theory that if an investor sees a chance

[75] "The writer believes that no depreciation practice can possibly be satisfactory unless it recognizes the fact that, because of such factors as obsolescence, it frequently happens that if the investment in an asset is to be recovered at all, the larger part of the investment must be recovered in the early years of life. For somewhat the same reasons, it is often economical to continue to use an asset for a considerable period after it has lost all ability to earn any recovery of its original investment. To state the matter in still another way, the value to the owner of an asset often decreases quite rapidly in the early years of life and often is practically zero during the latter part of life.

"In order that any liberalized practice shall be completely satisfactory, it is necessary that the general public be convinced that the practice is economically sound, and not merely a method by which the owners of depreciable assets are permitted to reduce their taxes. The writer believes that it should be possible to convince all persons having any connection with the problem that it is economically sound to write off investments more rapidly in the early years of life than is true with straight-line depreciation, with rates based on full service lives.

"Once it is accepted that the investment should be written off more rapidly in the early years of life, there become available a number of ways of actually doing the job. The writer believes that the simplest and best method is the declining-balance group method with a maximum rate equal to 250 percent of the straight-line rate corresponding to the estimated average life. Using this method, with the maximum rate just mentioned, about half the investment is written off during the first quarter of the estimated life, about three-quarters of the investment is written off during the first half of the estimated life, about seven-eighths of the investment is written off during the first three-quarters of the estimated life, and there is a remaining value equal to about 7 percent of the investment at the end of the estimated life." (op. cit.)

[76] Norton, Paul T., Jr., Declining Balance Depreciation Permitted by Internal Revenue Is Not Realistic, Journal of Accountancy (New York), July 1947, vol. 84, pp. 32-34.

[77] For statements in opposition to the argument, see Part III, Incentive Aspects.

[78] For several years in Germany beginning in 1933, reinvestments of business profits in equipment with a normal depreciation period of 5 years or less could be written off in full in the year of acquisition. Under another arrangement, firms holding tax credit certificates—i. e., certificates issued by the Government in partial payment for deliveries under public contracts—were allowed "superdepreciation" ranging from 20 percent to 35 percent in excess of normal depreciation, depending upon the amount of certificates held and the length of time held. An additional 10 percent in excess depreciation allowances was permitted to firms engaged in export activities. Speaking of the first of these, one writer said that it "provided an effective incentive to reinvest corporate reserves in expanded plant. The concession * * * fully justified the expectations which motivated its enactment." Lurie, Samuel, Private Investment in a Controlled Economy, Germany, 1933-39, New York, Columbia University Press, 1947, pp. 138-143.

[79] An example of the belief that accelerated depreciation would stimulate investment, make more jobs, and increase profits is furnished by the declaration of high Government officials in 1944 when a postwar depression was beginning to be feared. See, for example, the Soldiers Field address of President Roosevelt Chicago, October 28, 1944 (in Nothing To Fear, edited by B. D. Zevin, New York, Houghton Mifflin, 1946, p. 425). See also Wallace, Henry A., New York Times, November 3, 1944; Byrnes, James F., A Report to the President from Director of War Mobilization, September 7, 1944 (S. Doc. 237, 78th Cong., 2d sess.), p. 12. See also Byrnes' Report of the Director of War Mobilization and Reconversion as of January 1, 1945 (H. Doc. 9, 79th Cong., 1st sess.), pp. 57-58.

of getting a substantial part of his money back over a short period he may be willing to take a chance that he otherwise would be loath to take.[80] As a committee of the National Tax Association recently said:[81]

> * * * the committee is favorably disposed to the idea of accelerated depreciation as an investment stimulus during slack periods. The opportunity to telescope the write-off of equipment would probably speed up replacement and expansion, because it would reduce the risk and clear the accounts of undepreciated balances. This would also be in accord with the interest in technological progress. This form of incentive taxation would probably prove less inimical to business confidence than any other variety.

Among these devices (which may have a role in normal as well as depressed times) are a large special initial allowance and permission to write off the entire investment in 5 years or other relatively short period. These two formulas are discussed immediately below. It may be noted, too, that all accelerated depreciation partakes of the stimulus or incentive characteristic, but the formulas discussed immediately below are especially geared to that objective.

FIVE-YEAR OR OTHER SHORT PERIOD RECOVERY

One of the most liberal of the incentive proposals was labeled by one of its proponents the Capital Recovery Allowance Act.[82] It would do away with all Treasury regulations with respect to life of assets, permit taxpayers annually to take up to 20 percent as depreciation, and limit the amount to be taken in any year to the profits of the year (exclusive of depreciation). Support for this proposition was forthcoming from a representative of the National Machine Tool Builders Association,[83] who would "jettison the useful-life concept for once and for all." Recovery over 4 to 5 years has also been recommended by Henry J. Kaiser.[84] The Journal of Commerce has editorially advocated such a plan,[85] and it is incorporated in the proposed Economic Expansion Act of 1949 as introduced by Senator Murray and others.[86]

In their results, these proposals resemble the 60-month amortization provision in effect during World War II.[87] The purpose of that provision was to stimulate investment in facilities for war and national defense.[88] The basic difference, of course, between the proposal currently being offered and the wartime provision is that many of the facilities erected during the war period had a life limited to the war itself. Nothing of that kind is contemplated in the present proposal.

[80] Cf. Groves, Harold M., Postwar Taxation and Economic Progress, New York, McGraw-Hill, 1946, p. 158.

[81] National Tax Association, Preliminary Report of the Committee on Federal Corporate Net Income Tax, July 1949, p. 21 (mimeographed).

[82] Walker, Alden D., (testimony before the Committee on Ways and Means), Hearings * * * on Revenue Revisions, 1947–48, pp. 1338–1344.

[83] Blackall, Frederick S., Jr. (testimony before the House Committee on Ways and Means), Hearings * * * on Revenue Revisions, 1947–48, p. 1351. See also his article, Is Tax System a Bar to Employment? Credit and Financial Management (Philadelphia), June 1945, vol. 47, pp. 9–10.

[84] The New York Times, September 15, 1947, p. 28.

[85] Inadequate Depreciation, Journal of Commerce (New York), August 9, 1949, p. 6.

[86] Numerous bills carry the provision, but see, for example, the amendment (in the nature of a substitute) to S. 281, by Senator Murray (and others), and H. R. 5696, by Representative Patman.

[87] I. R. C., sec. 23 (t), 124. This plan was enacted by the Second Revenue Act of 1940 and variously amended in later years. The emergency period for amortizing war facilities was terminated as of September 29, 1945.

[88] "The extension of existing facilities is a necessary and vital part of the national defense program. To obtain the needed facilities will require the investment of hundreds of millions of dollars. Your committee has been informed by the Advisory Commission to the Council of National Defense that substantial amounts of private capital will not be invested in the construction of such facilities unless corporations are assured, in view of the fact that such facilities will be of use chiefly only during the period of national emergency, that they will be permitted to amortize the cost thereof over a shorter period than would be permitted under the depreciation provisions of the Internal Revenue Code." Report of the House Committee on Ways and Means, Second Revenue Bill of 1940 (H. Rept. 2894).

Nevertheless, it is argued that provisions similar to those in effect during the war should be restored for all industry. As one editorial stated it: [89]

> It should be the positive policy of government to encourage plant modernization and replacement by every reasonable means, in view of the clear lesson taught by two world wars. Industrial modernization, it has been proved abundantly, is the most effective known way to further the national defense. * * *
>
> During the war it was found necessary to grant business the right to depreciate investment in defense facilities within 5 years or less. This privilege powerfully stimulated new plant investment. The wartime experience demonstrated the soundness of accelerated, flexible depreciation as a stimulus to new plant investment.
>
> In the interest of an efficient peacetime economy, as well as in that of adequate national defense, a similar privilege should be extended to business generally on a permanent basis. The Government's figures prove that business is not making adequate provision for the replacement of fixed assets, if the constant modernization made possible and desirable by rapid technological progress is to be achieved.

The Chairman of the Board of Governors of the Federal Reserve System [90] has added his voice to those advocating relatively short-term amortization of additions and betterments, declaring that such a practice would result in stimulating business investment and lessen the short-run contraction of internal sources of funds that characterize a downward drift in business activity.

Not exactly similar, but at the same time related, to proposals such as these is the practice in Canada which (subject to administrative approval) permitted double depreciation rates (until 80 percent of the investment was written off) on new investments made between 1944 and 1949,[91] taken on a selective basis.[92]

SPECIAL INITIAL ALLOWANCES

Special large initial allowances represent another of the devices calculated to stimulate investment. If taken, they reduce taxes in the first year in which an asset is acquired. They have found favor in Great Britain, Australia, New Zealand, and South Africa.[93] Similar proposals are pending in the Netherlands Parliament.[94] The amount to be deducted in Britain originally was 10 percent for industrial buildings and 20 percent for machinery, etc.; the 20 percent rate was doubled in 1949.[95] This 1949 increase stemmed at least in part from the request of the Federation of British Industries to the Chancelor of the Exchequer.[96] The Chancelor, in offering his proposal to increase the initial allowance, said: [97]

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[89] Journal of Commerce (New York), August 9, 1949, p. 6.

[90] McCabe, Thomas B., The Equity Capital Situation (personal statement prepared for Senate Committee on Banking and Currency, August 5, 1949). Reprinted under title, The Possibilities of Improved Equity Markets, Commercial and Financial Chronicle (New York), August 11, 1949, vol. 170, p. 574.

[91] Orders in Council, P. C. 8640, November 10, 1944; P. C. 1449, April 16, 1946; P. C. 2804, July 18, 1947 Income War Tax Act, R. S. C., ch. 97, sec. 6, as amended to 10 Geo. VI (1946), ch. 55, sec. 5 (i).

[92] For a detailed statement on the operation of this provision, see the Department of Reconstruction and Supply's report on Encouragement to Industrial Expansion in Canada, Ottawa, Edmond Cloutier (King's Printer), 1948, 117 pp.

[93] See Manning, Raymond E., Depreciation in the Tax Laws and Practice of the United States, Australia, Canada, Great Britain, New Zealand, and South Africa, National Tax Journal (Lancaster, Pa.), June 1948, vol. 1, pp. 160, 170.

[94] The Netherlands proposal is interesting in that it allows a writing off of one-third of the cost of postwar installations and buildings; the one-third deduction may be taken in any year selected by the taxpayer between 1948 and 1952. Typed memorandum of the European Branch, Office of International Trade, U. S. Department of Commerce, July 29, 1949.

[95] Sir Stafford Cripps, Budget Speech, London Times, April 7, 1949, p. 6,

[96] Memorandum of the Federation of British Industries to the Chancelor of the Exchequer, Taxation and Shortage of Industrial Capital, Accountancy (London), February 1949, vol. 60, p. 41. An increase in the initial allowance had previously been asked in the reports of the Pottery and Wool Working Parties. See Great Britain, Board of Trade, Working Party Reports: Pottery, London, His Majesty's Stationery Office, 1946, pp. 7-8; Wool, 1947, p. 89.

[97] London Times, April 7, 1949, p. 6.

The whole question of calculating profits in a way which can take care of marked changes in price formed part of representations made to me by the Federation of British Industries. The proposals I have just described will, I hope, go far to meet the immediate needs of industry.

In the light of this statement, it appears that the initial allowance at present is not greatly different in purpose from excess construction cost deductions earlier taken (and since abandoned) by Du Pont and others. The response in Britain to the increase to 40 percent was that it would—

* * * go a long way to mitigate the hardships under which industry has been laboring for the past few years. * * * There can be little doubt that the demand of industry for an increased allowance was urgent and reasonable, and some maintain that it could have been granted already 12 months ago. * * * The new wear-and-tear allowances, however, cannot wholly satisfy the demands of industry since no provision is made to alleviate past deficiencies.[98]

A similar recommendation was made as early as 1944 by the Director of War Mobilization. He urged a special allowance such as that which Britain granted for the year of purchase,[99] or spread over the "earlier years" rather than just the year of purchase.[1]

Requests for such allowances deductible for tax purposes have been made by business representatives. One of them,[2] in arguing for an allowance of 25 percent to be deductible in full in the year of expenditure or over a 5-year period, said:

The high cost of equipment and construction at the present time is a serious deterrent to expenditures therefor, and the resultant diminution of production necessarily involves a loss of taxable income. Manufacturers needing equipment presently are faced with the prospect of having on their books after a few years property which, after normal depreciation, will appear at values greater than replacement cost. The anxiety of businessmen in this respect is widespread and serves as a depressant not only on the progress of their own business but on that of their potential vendors of equipment and construction material. A grant to taxpayers of the privilege of recovering out of taxable income a portion of the cost of an asset over an accelerated period would unquestionably encourage and increase currently needed expenditures therefor, promote higher production, and ncrease the revenue. An amendment of the Internal Revenue Code along the foregoing lines is accordingly urged.

Another recommendation [3] urged a 50-percent initial deduction in the first year of the life of motor-vehicle equipment, the remaining 50 percent to be distributed over the remaining years of normal life.

PLANS FOR FACILITATING REPLACEMENTS

Financial strength in business to replace its equipment when worn out or obsolete is important. When replacement costs far exceed the original investment, grave problems may exist. Profits needed for replacement at increased cost may be lessened by taxation.[4] Borrowing may be undesirable. Flotation of stock, if possible, may lead to a dilution of control. What, then, is the solution? Among the possible answers are (1) allow a deduction for sums set aside for investment, (2) base depreciation allowances on replacement cost rather

[98] Notes and Comments, Accountants Journal (London), May 1949, vol. 41, p. 90.
[99] A Report to the President from Director of War Mobilization, September 7, 1944 (S. Doc. 237), p 12.
[1] Report of the Director of War Mobilization and Reconversion as of January 1, 1945 (H. Doc. 9), pp. 57–58.
[2] Chamber of Commerce of the United States (testimony before the House Committee on Ways and Means), Hearings * * * on Revenue Revisions. 1947–48, pp. 1581, 1585.
[3] Boot, Harry E. (testimony before the House Committee on Ways and Means), Hearings * * * on Revenue Revisions, 1947–48, p. 1853.
[4] National Tax Association, Preliminary Report of the Committee on Federal Corporate Net Income Tax, July 1949, p. 20 (mimeographed).

than historical cost, and (3) revalue all assets and base depreciation on the new values. Each of these proposals is discussed below.

FUND FOR FUTURE INVESTMENT

Deduction for sums set aside for future investment has been recommended in several forms. In the language of one recommendation made in 1946,[5] tax-free replacement reserves (limited in their creation from 3 to 5 years after the war) should be authorized. The annual deduction might be limited to not more than one-half the regular depreciation allowance on assets acquired before the war. Provision might also be added which would require that reserves be used in not less than 8 or 10 years, and when the replacements are made the replacement reserve might be charged by not more than one-third of their cost. A variant of this would permit deduction of depreciation surcharges up to 3 percent in addition to regular depreciation deductions, the surcharge deductions to be invested in interest-bearing nonnegotiable bonds.[6]

A third proposal, designed especially for small business, would permit deductions up to 25 percent of net income (but not exceeding $25,000) for sums set aside for capital expenditures to be made within 2 years.[7] Amounts so deducted would be eliminated from the taxpayers' cost basis so as to eliminate any possibility of a double deduction through depreciation. It is in effect depreciation in advance. General approval of the idea of tax-free reserves without specification as to detail has also been expressed.[8]

Attention may be called to the French experience with tax-free reserves which has since been abandoned. Beginning in 1939, French businesses were authorized to set up reserves for the replacement of plant and machinery. For assets which had been theretofore acquired, the reserves could not be deducted currently, but could be deducted when, and to the extent that, costs upon replacement exceeded original costs. For assets acquired after 1938, immediate annual deductions were allowed for reserves set aside for the replacement of such assets. To the extent the reserves are not used by the end of 1951, they will be includible in the taxable profits of 1951. Although benefits under the foregoing provisions are not surrendered, a new law provides for a revaluation of assets, thus providing an entirely new basis for computing depreciation.[9]

Note may also be taken of the Swedish authorization of 1947 under which a deduction from taxable income is allowed for sums set aside in an investment fund for future use, but only as the Labor Market Commission may authorize such future use. Sums set aside may not exceed 20 percent (35 percent in some cases) of the profits of the particular year. The purpose of the provision is to induce business during boom times to set aside funds for the erection of buildings and new machinery in periods of lesser economic activity.[10] A recent

[5] Kimmel, Lewis H., Depreciation Policy and Postwar Expansion, Washington, Brookings Institution, 1946, pp. 50-53.
[6] Landman, J. H., Replacement Accounting, Dun's Review (New York), February 1949, pp. 65-68.
[7] Arent, Albert E. (testimony before the House Committee on Ways and Means), Hearings * * * on Revenue Revisions, 1947-48, p. 876.
[8] The Postwar Problems of Capital Replacement, Guaranty Survey (New York), September 24, 1947, vol. 27, No. 6. pp. 1-4.
[9] See Nortcliffe, E. B., Revisions of Balance Sheets in France, Accountant (London), June 25, 1949, vol. 120, pp. 532-537. See also the discussion below, Revaluation of Assets.
[10] This outline is based on a summary prepared by Sveriges Industriforbund. Apparently the provision has been availed of but little due to the fact that if the labor market is such that the fund is not required to be used within a 10-year period, not only the sums set aside but 2-percent interest thereon may be subjected to tax.

Austrian law also authorizes business to set up tax-free reserves from their 1949 and 1950 profits to be used by the end of 1952 for acquiring capital equipment or restoring buildings.

REPLACEMENT COST BASIS [11]

A much-discussed aspect of the current depreciation controversy is this: Should replacement cost [12] be substituted for original cost as the basis for computing depreciation. According to generally accepted accounting principles the answer is "No," but there is a considerable minority in the accounting profession, including some of its leaders,[13] who feel that accounting is not currently doing the job it is supposed to do. The need is pointed up by estimates that underdepreciation of our industrial plants in 1948 amounted to 4.4 billion dollars, and for the last 3 years to 12 billion dollars.[14]

There can be no question but that the cost during periods of inflation of replacing our industrial establishment is far in excess of its original cost.[15] While it is true that the purpose of depreciation deductions is not to provide funds for replacement,[16] it is likewise a fact that—

> The only substantial support for the view that depreciation charges in the income statement should reflect current prices, rather than dollars of an earlier vintage, is found in the conception of cost as a measure of actual economic sacrifice incurred and the general thesis that true net income cannot emerge until all actual costs in this sense have been deducted. In other words, the case for replacement-cost depreciation grows out of recognition of an inherent weakness of conventional accounting. In accounting procedures changes in prices are generally ignored, except as they become embodied in new transactions. * * * As a rule we think and act in terms of current dollars, and when a mixture of current dollars and past dollars is presented without classification we inevitably tend to regard them as homogeneous.

The United States Steel Corp. (and other companies),[17] beginning in 1947 and ending with the third quarter of 1948, showed in their

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[11] For statements in opposition to arguments here made, see Part III, Replacement Cost Basis for Computing Depreciation.

[12] The phrase "replacement cost" will be used even though the real idea is usually something less than that, and is the result of a process of adjustment for changes in price level usually through the use of index numbers. See, for example, Dohr, James L. Depreciation and the Price Level, Accounting Review, (Chicago), April 1948, vol. 23, p. 118.

[13] See, for example, May, George O. Should the LIFO Principle Be Considered in Depreciation Accounting When Prices Vary Widely? Journal of Accountancy, (New York), December 1947, vol. 84, p. 453; Paton, W. A., Depreciation and the Price Level, the Accounting Review (Chicago), April 1948, vol. 23, pp. 118-123; Replacement Accounting, Accountant (London), January 15, 1949, vol. 120 pp. 33-34.

[14] The Underdepreciation of Corporate Assets, National City Bank Monthly Letter on Economic Conditions (New York), August 1949, pp. 90-92.

It has also been said: "The gross inadequacy of present depreciation allowances for a dynamic economy is illustrated by comparisons between total business depreciation charges for 1939 and for 1948. In 1939, according to the Department of Commerce, such charges aggregated 6.9 billion dollars. For 1948, despite the great rise in prices and the unprecedented expansion of America's industrial plant in the interim, depreciation charges totaled 12.2 billion dollars, or 176 percent of the 1939 figure.

"Adequate allowance for replacement of the greatly increased industrial plant of this country, at the very much higher cost level now prevailing, would be substantially larger than 176 percent of the 1939 depreciation charge, it goes without saying." Inadequate Depreciation, Journal of Commerce (New York), August 9, 1949, p. 6.

[15] Some estimates of the increase follow:

1946 estimate:—"* * * the dollar requirements of business will inevitably be much larger than for comparable prewar purchases of machinery, equipment, and other capital assets. This increase, as variously estimated, ranges from a minimum of about 30 percent for some lines to roughly 60 percent for others." Kimmel, Lewis H., Depreciation Policy and Postwar Expansion, Washington, Brookings Institution, 1946, p. 1.

1947 estimate:—"The price index for all capital goods (equipment and construction), compiled by the National Bureau of Economic Research through 1941, would probably stand somewhere around 50 percent above 1939; estimate based on partial data." Terborgh, George, Depreciation Policy and the Postwar Price Level, Chicago, Machinery and Allied Products Institute, 1947, p. 5.

1948 estimate:—"* * * expenditures by manufacturing industries for new construction and producers durable equipment from 1929 to 1947 are estimated at $125,000,000,000 with a current replacement cost of over $200,000,000,000." Broad, Samuel J., Effects of Price Level Changes on Financial Statements, NACA, Bulletin (New York), July 1, 1948, vol. 29, p. 1331.

1949 estimate:—At the present time (May 1949) the replacement cost of corporate net fixed assets is above historical cost by around $60,000,000,000. Terborgh, George, Inflation and Postwar Profits, Chicago Machinery and Allied Products Institute, 1949, p. 26.

[16] See Part I, Misunderstanding of Depreciation.

[17] American Institute of Accountants, Accounting Trends in Corporate Reports, New York, the Institute, 1949, pp. 59-62.

accounts many millions of dollars in total wear and exhaustion in addition to normal depreciation based on the original cost of facilities. The additional sums taken by United States Steel were based partly on experienced cost increases and partly on a study of construction cost index numbers. It was an effort toward stating total wear and exhaustion in an amount which would recover in current dollars of diminished buying power the same purchasing power as the original expenditure.[18] This action was taken counter to the feeling general among accountants. The American Institute of Accountants opposed this action in principle and so did the Securities and Exchange Commission,[19] and in deference to these opinions United States Steel abandoned its policy though still believing that the principle which it adopted in 1947 and continued in 1948 is a proper recording of the wear and exhaustion of its facilities in terms of current dollars as distinguished from the dollars which it originally expended for those facilities.

Arguments for allowing replacement costs as the basis for depreciation find justification both in economics and equity. They may be illustrated by an example. Assume the original cost of a particular machine in 1937 was $1,000. It has an estimated life of 20 years. Assume further that the same machine has to be bought and that no newer, less costly, and more efficient machine will be developed in the 20-year period. Furthermore, assume that prices will not fall by 1957 back to 1937 levels, but will stay at 1949 levels. Then the replacement cost of the same machine is $2,000. During 1949, the owner of the machine suffers an economic loss of $100 (i. e., $2,000÷20). He is allowed by law to deduct only $50 (i. e., $1,000÷20) for income-tax purposes—$50 of the 1937 variety invested in the machine are quite different from $50 of the 1949 variety. The true 1949 capital cost to the owner of the machine, it is argued,[20] is the amount required to replace the asset by reason of its use in 1949. That, in the illustration, is one hundred American dollars of the 1949 variety. It may, of course, if prices fall greatly, be only $25 of the 1957 variety.

If true capital costs are not recognized, capital instead of income is being subjected to income tax. The result might be, if prices continued upward, an erosion of the Nation's tools of production. Current profits are a source both of additions to real capital and replacement of existing assets at a higher than original cost. If the so-called profits continue to be eaten up by taxes as though they were true profits they will not be available for expansion or even replacement. Such taxes might be heavy enough actually to infringe on capital.[21]

The manner of determining replacement costs, assuming such a base were to be used, is one which presents many problems. The

[18] The foregoing is a paraphrase of the United States Steel Corp. Annual Report for 1948, Commercial and Financial Chronicle (New York), March 21, 1949, vol. 169; p. 1219.

[19] See Part III, Replacement Cost Basis for Computing Depreciation.

[20] This illustration is adopted from the testimony of Enders M. Voorhees at the hearings before the Joint Committee on the Economic Report (1948), p. 593.

[21] This thought is the subject of a resolution of an international organization: "*Resolved*, That one of the most important questions with regard to the taxation of business profits is whether or not the tax law is based on a concept of profit which is, from an economic point of view, sound. Legislation employing the full or partial taxation of 'imaginary profits' resulting from a rise of the general price level, insofar as such taxation affects the productive capacity of the enterprise, is unsound. In view of the postwar situation, both in and outside Europe, the difficulties presented by such an unsound concept of profits assume grave proportions and form one of the most important obstacles on the road to the reestablishment of normal economic relations." Resolution of the Third International Fiscal Congress of the International Fiscal Association, Rome, October 3–6, 1948. Included (loose) with Bulletin for International Fiscal Documentation (Amsterdam), vol. 2, Nos. 8–9, 1949.

general principle involved is derived from an application to fixed assets of the last-in first-out (Lifo) method (or a variant of it) applicable to inventories. Index numbers are often used for determining the new base. Under some proposals, total deductions for depreciation would not exceed the original cost; under others they would.[22]

REVALUATION OF ASSETS

A step beyond depreciation based on replacement costs is an actual revaluation of all assets in terms of replacement costs with depreciation being based on the new values.[23] Recommendations of this kind have appeared from time to time in Britain, where some writers have looked favorably on the "highly creditable piece of pioneering" [24] which France inaugurated in 1945. The revision of 1945 has been followed subsequently by two further upward revisions in 1948 and 1949.[25] Italy has adopted a system similar to that in France;[26] Belgium in 1947 authorized a revaluation at 2½ times the 1939 replacement cost less depreciation through 1945;[27] and a proposal is now pending before the Netherlands Parliament under which prewar machinery may be valued with double the amount of the book value declared for tax purposes in 1947–48.[28] The press has also carried incomplete details on the proposed revaluation in Japan.[29]

Annual revaluations of plants and facilities by the application of price indexes is recommended by some accountants.[30] In the language of one explaining (but not advocating) it, these accountants—

* * * contend that a more realistic picture would be created by the substitution of economic values for costs on the balance sheet and that depreciation charges computed thereon more adequately would express "true" costs in terms of current purchasing power. It is argued that such methods are not departures from the cost basis but merely the measurement of dollars expended translated into terms of current dollars at present price levels.[31]

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[22] May, George O., Should the LIFO Principle be Considered in Depreciation When Prices Vary Widely, Journal of Accountancy (New York), December 1947, vol. 84, pp. 453–456; Blackie, William, What Is Accounting For—Now, NACA Bulletin (New York), July 1, 1948, vol. 29, pp. 1349–1378; Freeman, E. Stewart, Capital Price Adjustment Method for Deflating Inflated Profits, NACA Bulletin (New York), February 1, 1948, vol. 29, pp. 635–660; Egerton, R. P., Replacement Accounting, Canadian Chartered Accountant (Toronto), June 1949, vol. 54, pp. 275–277; Kovacs, Leo, Inflation and Depreciation—A Case for Reform, the Accountants Journal (London), October 1948, vol. 40, pp. 158–159; Schiff, Michael, Application of the Price Index Adjustment Concept to Depreciation Charges, NACA Bulletin (New York), April 15, 1949, vol. 30, pp. 927–936; Dohr, James L., Depreciation and the Price Level, the Accounting Review (Chicago), April 1948, vol. 23, pp. 115–118.

[23] Some European countries engaged in this practice after World War I. Some United States companies also undertook a reappraisal. There is very limited feeling at this time for wholesale revaluation.

[24] Northcliffe, E. B., Revision of Balance Sheets in France, Accountant (London), June 25, 1949, vol. 120, pp. 532. See also Berry, Bernard M., Appreciation of Fixed Assets, Accountant (London), February 21, 1948, vol. 118, pp. 138–139.

[25] The French system goes like this: Businesses generally have been empowered, but not required, to revalue their fixed assets. Even assets which have been written out of the balance sheet through depreciation may be revalued if still capable of use. There is no fixed plan of revaluation, but the law lays down maximums beyond which revaluation may not go. There is a moral obligation not to revalue beyond actual values. The maximums are expressed in terms of coefficients. There is a different coefficient for each year since 1914. The maximums are computed by multiplying the original cost by the coefficient (e. g., 108 for 1914 or before, 17.6 for 1929, 1612 for 1939, 3.6 for 1945, etc.), and subtracting the aggregate of annual tax-free depreciation provisions multiplied by the coefficients of the years in which the depreciation was provided. The surplus created by these operations is carried to a special revaluation reserve, where it is exempt from profits tax so long as it is used for purposes not inconsistent with the objects of the revaluation. Permanent exemption for such surpluses may be secured by incorporation of the reserve in capital by the issuance of free shares. If this course is followed, a tax of 6 percent is imposed on the capitalized amount for registration fees. This summary is based on the Northcliffe article (noted in footnote 24), pp. 532–537.

[26] Berry, Bernard M., Depreciation of Fixed Assets, the Accountant (London), February 21, 1948, vol. 118, p. 138.

[27] Controllership Foundation, Depreciation Policy When Price Levels Change (New York), the Foundation, 1948, p. 80.

[28] Typed memorandum of European Branch, Office of International Trade, U. S. Department of Commerce, July 29, 1949.

[29] New York Times, August 26, 1949.

[30] Sweeney, Henry W., Stabilized Accounting, New York, Harper & Bros., 1936, 219 pp.

[31] Turner, Clarence L., Treatment of Depreciation of Replacement Values, Proceedings of New York University Seventh Annual Institute on Federal Taxation, New York, Matthew Bender & Co., 1949, p. 69.

TAX-BENEFIT RULE

Finally, the problem of actually getting a tax benefit from depreciation requires brief attention. At present no tax benefit is obtained if depreciation is taken in a year in which a business suffers a loss. Yet—

> * * * the basic purpose of such (depreciation allowances, states one observer) is to permit a taxpayer to recover the cost of an asset tax-free. Obviously, a taxpayer cannot recover any part of his cost in a year in which the result of his operations before depreciation or depletion is a loss. Losses create no fund out of which cost can be recovered. To the extent to which a taxpayer's cost of an asset is reduced by the depreciation or depletion allowance for a year or years in which he has suffered losses, he is being denied the recovery of his capital expenditure. It would seem both logical and just that the appropriate adjustment to cost or other basis of a physical asset should be determined by reference to the extent to which a business concern has actually recovered the cost of the asset out of income. From a tax point of view, the recovery is related to the extent to which tax saving has resulted from the deductions for depreciation or depletion. The vice in section 113 (b) (1) (B) lies in its failure so to provide. The statute, in its present form, requires reduction of tax basis by depreciation or depletion allowed or allowable in prior years, without reference to the extent to which taxpayer has had taxable income out of which cost could in fact be recovered. It is accordingly submitted that the statute should be amended to permit a taxpayer to recover cost out of taxable income. No depreciation or depletion should be considered as having been allowed or allowable unless it could be effectively applied to decrease income tax in prior years. This is known as the tax-benefit rule.[32]

In further support of such a policy, it is pointed out that the law [33] already has such a provision which applies the principle to the recovery of bad debts, prior taxes and delinquency amounts. Thus, for example, if a taxpayer makes a deduction for a bad debt in a given year in which he has no net income, he does not have to report as income a later payment on the debt because he got no benefit from the deduction in the earlier year. The Regulations [34] have extended the principle to many other classes of cases, but not to depreciation.

Additional support is drawn for the proposition in the practice of Great Britain,[35] and France,[36] which allow unused depreciation to be carried forward indefinitely. Australia has a provision which permits the mining industry to carry forward any depreciation which does not result in a tax deduction,[37] and in New Zealand a taxpayer is not required to report more depreciation for tax purposes than he sets up on his books.[38] In Canada, only one-half the regular depreciation need be reported in a year of loss.[39]

In lieu of the tax benefit rule, or an unlimited carry-forward of unused depreciation allowances, any amendment of the present carry-over period [40] which would lengthen the time during which a tax

[32] Alvord, Ellsworth C. (Supplemental Memorandum to House Committee on Ways and Means), Hearings * * * on Revenue Revisions, 1947-48, p. 1585. See also Grimes, Edmund L., p. 1425; Mann, Joseph F., pp. 1497, 1508; Fernald, Henry B., pp. 1861-1862.

[33] I. R. C., sec 22 (b) (12).

[34] Regulations 111, sec. 29.22 (b) (12).

[35] Income Tax Act, 1945, sec. 6, 55, 56.

[36] Northcliffe, E. B., Revision of Balance Sheets in France, Accountant (London), June 25, 1949, vol. 120, p. 536.

[37] Income Tax Assessment Act, 1947, clause 19.

[38] Cunningham, H. A., and Dowland, S. E., Taxation Law of New Zealand, Wellington, Butterworth, 1942, p. 477.

[39] Plaxton, Herbert A. W., Income Tax and Excess Profits Tax of the Dominion of Canada, Toronto, Carswell Co., 1947 (2d ed.), p. 167. See also Rowland Swift's Depreciation Allowance Under the Income War Tax Act, Canadian Chartered Accountant (Toronto), May 1938, vol. 32, p. 385.

[40] The law, I. R. C., sec. 23 (s), 122 now permits losses in general to be carried back for 2 years and forward for 2 years. The President has recently recommended that this provision be liberalized. See Mid-year Economic Report of the President, July 11, 1949, pp. 8, 13.

benefit would result, would, of course, be considered helpful. Such a provision might be important in the event of prolonged economic depression. At such a time there is often a debate whether to aid business or tap immediate sources of revenue. The need for revenue won out at a time when carry-backs and carry-overs would have been of greatest help—namely during the depression of the 1930's. Congress repealed them [41] and did not restore them until 1941 and 1942.

PART III. OPPOSITION ARGUMENTS

INTRODUCTION

This part is devoted to arguments against the charges and proposals made in parts I and II. It examines the considerations in favor of the useful-lives concept followed by the Treasury and its placing of the burden of proof on the taxpayer to prove Treasury errors. It presents the evidence indicating the way in which some of the proposals would distort income. The question is also raised whether more liberal depreciation policies would result in investment at a time when we needed it, and whether the tax law should be made the vehicle for stimulating investments which would not otherwise be made. Some of the undesirable consequences to business of accelerated depreciation are also noted together with the relation of small business to the problem. The arguments against two specific proposals—allowance of excess construction cost, and basing depreciation on replacement costs—are stated. Final sections take up the question of revenue losses, the tax-benefit rule, and the inflation angle. Part IV will consist of a brief rebuttal of some of the arguments contained in part III.

USEFUL LIVES AND BURDEN OF PROOF

One thing must be abundantly clear and understood. The one aspect of a tax on income here considered is that of accurately determining depreciation for the purpose of ascertaining true income subject to tax. In appraising diverse schemes, the critical question is whether they lead toward or away from the goal of a more accurate determination of income.

A large segment of business recognizes the validity of this principle just as much as does the Treasury. In fact it urges the principle as the basis for change, alleging that Treasury practices distort income. The principal error charged—or at least the one charged most frequently—is that the Treasury overstates the useful lives of property. The result is to require the taxpayer to take depreciation over a longer period of time than the asset is economically useful.

However, Treasury determinations have only infrequently been questioned in the courts and are rarely overturned. They are the result of long years of study of average lives. The Treasury is perfectly willing to assign a longer or shorter useful life where the taxpayer can show that the particular circumstances justify a longer or shorter period. As Bulletin F says:

> The estimated useful lives and rates of depreciation indicated in this bulletin are based on averages and are not prescribed for use in any particular case. They are set forth solely as a guide or starting point from which correct rates may be

[41] National Industrial Recovery Act of 1933.

determined in the light of the experience of the property under consideration and all other pertinent evidence.

True, the burden is on the taxpayer to prove that the estimate fixed by the Treasury is not correct, but who could be in a stronger position to establish this than the taxpayer? The accuracy of Treasury determinations is recognized by one of the most thorough students of the whole problem; he has repeatedly pointed out that[42]—

> There can be little doubt that the Treasury has the facts to back up the lives shown in its tables.

Contenders for more freedom in taking depreciation,[43] and shifting the burden of proof, forget that the system in effect prior to 1934 was the source of much dissatisfaction in Congress and the Treasury. Taxpayers were writing off their assets over a period shorter than their useful life. They were thus able to postpone taxes, and shift their burden, temporarily at least, to others. If it is a tax reduction or tax postponement that business or a segment of business wants, then, if warranted, it should be given directly rather than in the guise of increased depreciation allowances. It may also be observed that the pre-1934 liberal depreciation policies failed to prevent the great depression of the late 1920's and early 1930's. If certain proposals were adopted it is doubtful that thereafter businesses in general would follow sound accounting systems.[44] The result would be serious administrative problems and inequities even greater than those current before 1934, because tax rates have increased substantially since that time. In other words, equity cannot be sacrificed to too great a degree in the name of removing administrative problems. Further, it is not too much to suppose that, with changing economic conditions, business might find that it had guessed wrong and that it would at some later time be more advantageous to follow another system. Then the Treasury, in addition to an increased administrative load as business sought to make revisions, would be condemned again as it tried to find logic to support business pleas for amended systems conceived for financial advantage rather than sound accounting and fair determination of income.

DISTORTION OF INCOME

Characteristic of a number of the plans for changing depreciation allowances is that they are arbitrary. They would add 25 percent or 50 percent to present allowances, they would let taxpayers take depreciation as they wished, they would permit recovery in 4 years or 5 years, they would give special initial deductions of 25 percent or 50 percent in the first year (or in the first few years), they would authorize taxpayers to guess today what the cost of a building or machine will be 10 or 20 years from now, or what is the excess cost

[42] Norton, Paul T., Jr., Depreciation and Obsolescence, Manufacturers Record (Baltimore), January 1949, vol. 118, No. 1, pp. 45, 50.

[43] See Part II, More Freedom in Taking Depreciation.

[44] "To let the taxpayer determine the asset's life within the bounds of 'sound accounting principles' implies a strength of character and reserve that is not present in every case. Some accountants would not permit ridiculous rates of depreciation to be set up on the books. But other accountants would not be able to enforce this position. The result would be that either we would have a depreciation of sound accounting practice with great variations in depreciation rates, or else the accountants would have to police themselves and set up machinery for the enforcement of sound accounting practice. As I understand it, the accountants are not ready to do that, if they ever will be. Under these circumstances, if depreciation is to be apportioned in harmony with the cost of using the asset, it is necessary for the Bureau of Internal Revenue to set some limitation—some restrictions—on a free exercise of choice on the part of the business community." Blough, Roy, Accelerated Depreciation, Conference Board Business Record (New York), January 1946, vol. 3, p. 49.

over the normal postwar cost and deduct it from this year's income. Proposals such as these cannot but distort income.

Do those who propound arbitrary or irregular schemes [45] for altering the method of determining income, sanction or actively sponsor actual income distortion? As one commentator said: [46]

> Perhaps the strongest objection * * * is that our economy is bound to suffer from artificial distortions of income for tax purposes, which complicate the tax system, result in unforeseen inequities, and, worst of all, influence businessmen to undertake transactions with an eye to tax savings rather than a wholesome economic policy.

If a plan presents a grossly inaccurate method of writing off values, the benefits of the plan would be uneven, and would vary as between industries, and even within industries. Businesses having a large part of their capital in heavy industry with a long useful life would secure an advantage not given to other industry with a smaller part of their investment in capital goods. These latter might then be forced to absorb part of the burden from which others had been relieved. The benefits would depend upon the amount of undepreciated assets held by each firm and the willingness of the firm to present a distorted income picture in order to secure immediate tax reduction. Such action would further reduce the already limited usefulness of corporate financial reports. By taking excessive depreciation some business could also gain another unfair advantage, namely, the conversion of ordinary income into a capital gain through the sale of fully depreciated property which actually still had a substantial market value.

INVESTMENT ASPECTS

Most of us would be willing to tolerate the consequences just outlined both to business, the public, and the administration, if the result were a stimulus to an economy that needed stimulating, and provided there were no other serious economic consequences. It is not without significance that the cry for increased depreciation allowances came largely at a time of rapidly increasing prices. It also came at a time when investment needed little if any stimulating. In fact, it has been pointed out that overinvestment in producers' goods may be a powerful force in furthering an inflation already under way. Labor and materials that might have gone into consumers' goods are diverted to increasing our industrial plant.[47] It may be argued that we need producers' goods in order to have consumers' goods, but an element of timing is involved.

If business had been authorized to write off additional depreciation during the last few years, and the result was increased investment in producers' goods, would not the result have been bad? If we were suffering a period of depression now, or should have one in the future, would accelerated depreciation stimulate investment? [48] It might not. In boom periods when profits are high, accelerated depreciation

[45] See throughout part II.

[46] Austin Maurice, Should the Tax Laws Permit Speeding Up Depreciation? Modern Industry (New York), March 15, 1947, vol. 13; No. 3, p. 116.

[47] See, for example, the testimony of Secretary of Commerce Harriman before the Senate Committee on Finance, Hearings * * * on Reduction of Individual Income Taxes (1948), pp. 420–421.

[48] One commentator sees the problem this way: "One danger of some accelerated depreciation plans is that they would accentuate investment in the good years and call forth even less investment in depression years. I should add that I don't think accelerated depreciation must necessarily have this result; plans can probably be devised which get away from it, but I haven't seen them as yet." Blough, Roy, Accelerated Depreciation, Conference Board Business Record (New York), January 1946, vol. 3, p. 50.

may encourage investment. In depressed periods, when there are no profits, there is no advantage in writing off depreciation quickly. In fact, there may be a positive advantage to delay in writing it off.

INCENTIVE ASPECTS

Assume accelerated depreciation would produce a positive stimulus to investment at times when needed. The question then becomes "Is incentive taxation wanted?" Should the tax system be the vehicle for causing business to embark on an undertaking which, not given favored tax treatment might never be undertaken? To give special advantages to new investment might result in added burdens to others who must continue to carry the load. Businessmen are said to be suspicious of proposals for incentive taxation. Skepticism in this regard is found not only in the administrative and academic field,[49] but in business.[50]

On the other hand, special amortization provisions during World War II worked well. Reference should also be made to Germany's remarkable development in the 1930's, and to the recent post-war experience of Canada in granting special depreciation allowances or new investment.

There may be other factors to be considered. First, the World War II situation was anomalous. The producer was assured an immediate market for his goods. He was assured of an immediate return of his investment. He had little to lose. Other conditions likewise varied far from those in times of peace. Concerning German experience, opinion is by no means unanimous. It may have been the big war orders of the German Government that spelled success for industry.[51] Similarly the story in Canada might have been much the same with or without accelerated depreciation. The report of the Canadian Government which reviewed activities under accelerated depreciation made very limited claims concerning its efficacy.[52] The United States without accelerated depreciation has had quite as extensive a boom since the war as did Canada.

OTHER CONSEQUENCES TO BUSINESS

The attitude of business in desiring to write off depreciation at rates in advance of those actually incurred, may often work against business. To be sure, taxes will be reduced in the early years, but they will be increased in the later years. If tax rates remain constant, the total tax paid over the life of the asset will remain unchanged. Yet taxes

[49] "* * * without going over to the extreme position that you should never have tax incentives, it does seem to me that tax incentives involve definite dangers. As has been pointed out, the incentive somehow or other has a tendency to backfire. Instead of resulting in the social and economic benefit which was intended, it has a tendency to degenerate into something else. One group of people might benefit from an accelerated depreciation provision. Although it might for that group be soundly conceived, and carefully worked out, somebody else would come in and demand equivalent benefits. Within a few years the whole purpose of it might be destroyed by its application to situations for which it was not originally intended." Blough, Roy, Accelerated Depreciation, Conference Board Business Record (New York), January 1946, vol. 3, p. 50.

[50] Norton, Paul T., Jr. (testimony before the House Committee on Ways and Means), Hearings * * * on Revenue Revisions, 1947-48, p. 1366.

[51] "I have talked to a number of people who have looked into the German situation. Some say accelerated depreciation certainly was a very important influence in the development of the German economy between 1933 and the war. Others say it was really a very minor factor; that the major factor was the big orders placed in the hands of business by the Hitler government. In 1934, it started to tell the businessmen what to do and when to do it and how to do it. The policy of heavy spending on armaments, plus a directed economy through government orders would lead to the same result, with or without accelerated depreciation." Blough, Roy, Accelerated Depreciation, Conference Board Business Record (New York), January 1946, vol. 3, p. 50.

[52] Canada, Department of Reconstruction and Supply, Encouragement to Industrial Expansion in Canada, Ottawa, Edmond Cloutier (King's Printer), 1948.

will be reduced during the early and most fruitful years of the life of the asset, and increased in the later years. If rates actually go up in the later years, the business is penalized because it distorted its income in the early years. If tax rates go down, the business enjoys a Government subsidy. And, further—

> If depreciation is a large element of cost, understatement of costs in the later years might result in unjustified and unsound sales-price policies, an illusion of competitive advantage, leading to price wars and a mistaken idea of the actual profitableness of the business.[53]

Furthermore, there are various other ways in addition to accelerating depreciation whereby accountants disclose the extent to which industry requires larger portions of current revenue to replace production facilities. This information can be readily supplied to labor, stockholders, and the public.[54] Moreover, so far as stockholders and boards of directors are concerned, accounting is a method of informing financial management; it is not a substitute for it.[55] No board of directors can be forced to declare dividends, nor accede to union demands if the directors feel that it would amount to a distribution of capital or that a surplus is needed to insure replacement of capital assets.

RELATION TO SMALL BUSINESS

Accelerated depreciation, while said [56] to be helpful to small business, might be of more benefit to big business than to small business. It is during the early years of the life of a small firm that it has its toughest sledding. Profits are small or nil. In such cases there would be no advantage or small advantage in taking additional depreciation. No benefit would be derived. Big established business on the other hand might be able to write off the accelerated depreciation from a new and perhaps not yet profitable plant from the profits made from the remainder of the established profitable business.[57]

EXCESS CONSTRUCTION COST

It is not without significance that some of the claims business makes with respect to depreciation are not acceptable to the accountants. This is true as to a write-down of excess construction cost. The accountants have actively opposed the practices of particular firms, and the auditors have felt it necessary to qualify their certificates attached to the reports of some such firms.[58] The committee on accounting procedure of the American Institute of Accountants had this to say:[59]

> The committee disapproves immediate write-downs of plant costs by charges against current income in amounts believed to represent excessive or abnormal cost occasioned by price levels.

Because of the opposition of the American Institute of Accountants and the Securities and Exchange Commission, at least some of the

[53] Austin, Maurice, Should the Tax Laws Permit Speeding Up Depreciation? Modern Industry (New York), March 15, 1947, vol. 13, No. 3, p. 116.
[54] Schiff, Michael, Application of the Price Index Adjustment Concept of Depreciation Charges, NACA Bulletin (New York), April 15, 1949, vol. 30, p. 935.
[55] Fitzgerald, A. A., Depreciation and Fixed Asset Replacement, Australian Accountant (Sydney), February 15, 1948, vol. 18, p. 33.
Cf. Blough, Carman G., Depreciation and Reserves, in Forecasting Financial Requirements, American Management Association (Financial Management Series No. 87), p. 39.
[56] See Part I, Small Business Aspects of Problem.
[57] Paul, Randolph, Taxation for Prosperity, New York, Bobbs-Merrill, 1947, p. 380.
[58] See, for example, the American Institute of Accountants' Accounting Trends in Corporate Reports, New York, the Institute, 1949, pp. 58–62.
[59] Depreciation and High Costs (Accounting Research Bulletin, No. 33), December 1947.

companies have terminated this practice. Moreover, while some businesses claimed a deduction on the theory that prices were so high that they would have to fall, others (to be discussed in the next section) were arguing that prices would go higher and were contending that they should be allowed additional depreciation against assets now held. One company got results by straddling the fence and looking in both directions. It said: [60]

> If this high level of construction costs should continue into the future, our normal depreciation allowances for replacement of existing prewar plant would be inadequate. On the other hand, if future costs should prove to be substantially lower, our new construction costs would be out of line with normal values. Therefore, against the earnings of the second quarter, a charge of $1,000,000 has been made with an offsetting credit to a reserve for revaluation on the assumption that one or the other of these two possibilities must be faced in the future.

Under such conditions, corporate financial reports might become somewhat less informative. Due to such excursions and departures from established standards in measuring income, any system of taxation based on income might be substantially impaired.

REPLACEMENT COST BASIS FOR COMPUTING DEPRECIATION

Accountants, both in this country,[61] and in other countries [62] are in general opposed to basing depreciation charges on replacement costs. They favor retention of historical costs as the base. As a committee of the American Institute of Accountants said: [63]

> It has been suggested in some quarters that the problem be met by increasing depreciation charges against current income. The committee does not believe that this is a satisfactory solution at this time. It believes that accounting and financial reporting for general use will best serve their purposes by adhering to the generally accepted concept of depreciation on cost, at least until the dollar is stabilized at some level. An attempt to recognize current prices in providing depreciation, to be consistent, would require the serious step of formally recording appraised current values for all properties, and continuous and consistent depreciation charges based on the new values. Without such formal steps, there would be no objective standard by which to judge the propriety of the amounts of depreciation charges against current income, and the significance of recorded amounts of profit might be seriously impaired.

Those who are critical of the historical cost basis of computing depreciation are really critical of the fluctuating dollar, or rather the deflated dollar, because there will be little argument for substituting replacement cost for historical cost in a period of declining prices. They are critical of the fluctuating dollar in only this one respect. They are not offering to pay their bondholders the face value of the bond plus an amount equal to the change in the cost of living. The business with a machine that will sell for more is complaining because it will cost more to replace, whereas the bondholder can get no more than the face value. If it is going to cost twice as much to build a new plant as it did to build an existing one, the value of the latter has gone up and the stockholder gets the benefit in increased prices for goods sold. Why should he also currently get a tax deduction for

[60] Libbey-Owens-Ford Glass Co. Footnote to report for second quarter, 1947.
[61] American Institute of Accountants, Committee on Accounting Procedure, Depreciation and High Costs (Accounting Research Bulletin No. 33, December 1937). See also Security and Exchange Commission, Survey of American Listed Corporations, Data on Profits and Operations Including Surplus, 1946–47, pt. III, p. XI; also its Fourteenth Annual Report, 1948, p. 111.
[62] Council of the Institute of Chartered Accountants in England and Wales, Rising Price Levels in Relation to Accounts (Accounting Principle No. XII), the Accountant (London), Jan. 15, 1949, vol. 120, pp. 48–50.
[63] American Institute of Accountants, Committee on Accounting Procedure, Depreciation and High Costs (Accounting Research Bulletin, No. 33, December 1947.)

money to be spent in replacing it, as well as depreciation later after it is replaced, and in addition be permitted to pay back in depreciated dollars the bondholder who may have helped finance the investment? In other words, benefits would accrue to holders of property already the primary beneficiaries of an inflation that has squeezed salaried workers and other fixed-income groups. To the injury already done by inflation will be added the burden of an increased share of the tax load.

The producer with a low-cost plant has a very great advantage over the producer with a high-cost plant.[64] In addition, depreciation allowances are being asked for a plant not yet built. And, after the plant has been built, full depreciation will be wanted on the new plant. Depreciation will be obtained both before and after. Whereas a new plant just starting out will have to rely on the capital supplied by the proprietors, the existing plant will be getting its new capital from increased prices charged consumers and the reduced taxes granted by the Government. Depreciation charges based on replacement cost would confer a very great advantage on established business and would handicap newly established firms competing in the same industry.[65]

An analogy is frequently drawn between the replacement base cost for computing depreciation and LIFO treatment of inventories. One commentator agrees with economic analogy but not with the accounting analogy. He says:[66]

> In the case of LIFO the cost of goods sold which are charged against the income statements are actual costs incurred in actual purchases of goods, which in most cases will have actually been consumed in production and sold. Inventories likewise are stated at actual incurred costs, though perhaps not recent ones. In the case of plant, replacement costs have not yet been incurred, are indeed unknown, and therefore invite the criticism of conjecture referred to above. No conjecture is necessary as to what the costs of LIFO inventories are; the only problem is that of selecting, among a number of incurred and recorded costs, those which shall be charged off against current income and those which are to be carried forward in the balance sheet inventories.
>
> Even if the analogy held, the LIFO argument would not be entirely convincing. Suppose, as some fear, we were to have a continuously progressive inflation, with continuously higher prices of inventory quantities. Then the question would arise whether it was advisable, both from a business standpoint and from a tax standpoint, to retain in the balance sheet base inventory prices from which current prices were constantly departing by a wider margin and to which they probably would never return. The more usual theory of LIFO inventory prices assumes, among other things, that they represent low levels to which actual prices will from time to time approximately return. If there is never to be a return to the inventory prices, the tax recognition of LIFO would be likely to fall into jeopardy and doubt would arise about its business expediency. As a matter of fact, though the course of recent events makes the prospect of continuously rising prices less likely, they show no promise of dropping back to prewar levels.

Among the many difficulties incident to adopting the replacement cost as the basis for computing depreciation,

> The most striking is the impossibility of predicting the eventual cost of replacing a productive asset. How many are prepared to state what the price level will be 2 years from today, to say nothing of trying to guess what it will be 5 or 10 years hence when many of these assets are to be replaced? To complicate the problem

[64] If he does not think so, as one writer suggests, let him junk his low-cost plant and buy a new one at the latest inflated cost. Snyder, Ralph W., Journal of Accountancy (New York), October 1948, vol. 86, p. A-8.

[65] Keown, K. C., Charging of Depreciation on the Basis of Replacement Cost, Australian Accountant (Sydney), May 1948, vol. 18, p. 142.

[66] Sanders, Thomas H., Depreciation and 1949 Price Levels, Harvard Business Review (Boston), May 1949, vol. 27, pp. 303-304. See also The Depreciation Dilemma, Fortune (Chicago), January 1949, vol. 34, No. 1, p. 67.

further, productive assets are not generally all replaced at the same time. Most plants are made up of assets having varying life expectancies, and the price levels are not at all likely to be the same in the several years in which those replacements are made. Accordingly, it would be necessary, not only to guess the price level in a particular future year, but to guess what proportion of the facilities are likely to be replaced in that year.

Price levels may rise and fall, and rise and fall again, before many of these assets will have to be replaced. Are the depreciation charges to remain constant on the basis of expected cost of replacement in the year it is thought these facilities will be replaced, or are they are to rise and fall as current replacement costs rise and fall as though they were going to be replaced at current prices? Either way, any attempt to depreciate in such a way as to provide for replacement cost would only by the wildest luck result in an accumulation of charges that would come anywhere close to the actual replacement cost of identical facilities.[67]

Beyond this, it would be very difficult to distinguish between higher replacement costs due to price changes and those due to other causes, and in addition—

* * * any attempt to establish replacement as a function of depreciation only serves to obscure the importance of the cost-recovery function.[68]

REVALUATION OF ASSETS

The principal argument against a revaluation of all assets in terms of replacement costs, and permitting depreciation for tax purposes to be taken on the new value is much the same as the argument against the replacement cost basis. The argument in the latter case has been stated as follows: [69]

If we want our accounting statements to present income and expense items only in terms of their current purchasing power, let us adopt some arbitrary unit of measurement having constant value to which all transactions in dollars may be adjusted and do our reporting on that basis. What point is there in trying to make adjustments for the purchasing power of the dollar in some phases of the accounts while other large segments are unadjusted? Suppose a company has for years carried a million dollars' worth of Government bonds to assure itself of ready working capital; does it take into consideration the fact that the million dollars it can get for those bonds may not buy more than half the goods and services that it would have bought when it was put into the bond 10 years ago? Or if the company has $20,000,000 of bonds outstanding which it borrowed 10 years ago, is it going to recognize that it can pay off that $20,000,000 of obligation by using dollars which have only one-half of the purchasing power they had on the date the money was borrowed? The same question may be asked regarding all the other items reflected in the financial statement in terms of dollars.

Frequent reference is made to the unpleasant experience in the United States in the 1920's when many businesses wrote up their assets only to write them down again in the 1930's. As one writer said: [70]

Time cannot have dimmed management's memory of this act. The accounting profession countenanced the write-up of assets and depreciation in the inflationary period of the 1920's and their write-down with equal agility and discredit in the depression years in the 1930's.

It brought as many new problems as it solved, and its imperfections have led most of us who went through those eras to say, Never

[67] Blough, Carman G., Depreciation and Reserves, in Forecasting Financial Requirements, American Management Association (Financial Management Series), p. 38.
[68] Dohr, James L., Depreciation and the Price Level, the Accounting Review (Chicago), April 1948, vol. 23, p. 118.
[69] Blough, Carman G., Depreciation and Reserves, in Forecasting Financial Requirements, American Management Association (Financial Management Series, No. 87) p. 37. See also E. B. Nortcliffe, Revision of the Balance Sheets in France, Accountant (London), June 25, 1949, vol. 120, p. 533.
[70] Landman, J. H., Replacement Depreciation, Dun's Review (New York), February 1949, pp. 57–58.

again![71] Clearly then, unless inflation proceeds to a much further degree than currently appears likely, this seems to be much too difficult a problem for the accountants.

REVENUE ASPECTS

The Government may lose billions of dollars if any of several of the proposals frequently advocated for accelerated depreciation are adopted. If, for example, underdepreciation of corporate assets for the last 3 years has totaled $12,000,000,000[72] and such amount had been actually deducted from income, revenues would have been reduced by $4,560,000,000 (38 percent of $12,000,000,000). One of the most conservative proponents of sound depreciation practice admits that a return to the pre-1934 practice would result in a revenue loss that would be too great during the first several years.[73] Another concedes that even a moderately liberal plan of accelerated depreciation might cost as much as $1,000,000,000 a year for several years.[74] In the face of the budget deficit for 1949 and the contemplated deficit for 1950, it hardly seems feasible at this time to introduce radical changes in depreciation policy as proposed in some of the plans which are admittedly arbitrary and not based on sound economics or accounting principles.

It is also clear that the assertion that in the long run there would be no revenue loss from accelerated rates is without foundation. For example, suppose a firm whose machinery has a 10-year life has the policy of installing one new machine each year which costs $1,000. With 10 machines in operation it would take depreciation of $1,000 annually. If depreciation rates were doubled for existing assets as well as new assets, the firm would take $1,900 depreciation deduction the first year after the doubling, $1,700 the second, $1,500 the third, $1,300 the fourth, $1,100 the fifth,[75] and $1,000 each year thereafter.

[71] Broad, Samuel J., Effects of Price Level Changes on Financial Statements, NACA Bulletin (New York), July 1, 1948, vol. 29, p. 1341. See also Turner, Clarence L., Treatment of Depreciation of Replacement Values, Proceedings of New York University Seventh Annual Institute on Federal Taxation, New York, Mathew Bender & Co., 1949, pp. 69–70.

[72] The Underdepreciation of Corporate Assets, National City Bank Monthly Letter on Economic Conditions (New York), August 1949, pp. 90–92.

[73] Norton, Paul T., Jr., Depreciation and Obsolescence, Manufacturers Record (Baltimore), May 1949, vol. 118, No. 5, p. 65.

[74] Bowen, Howard R. The Future of the Corporation Income Tax, New York, Irving Trust Co., 1946, p. 25.

[75] The mathematics are as follows. In the first year of the doubled rates, there will be 1 machine with a depreciated value of $100, and there will be 9 with a depreciated value of $200 or more to which the doubled rates (20 percent or $200 per machine) may be taken. The depreciation would thus be $100 plus 9 times $200 equals $1,900. For the second year, there would be 1 machine with a depreciated value of $100 and 8 with a depreciated value of $200 or more. The depreciation in the second year would thus be $1,700. Similar computations for the third, fourth, and fifth years would yield results of $1,500, $1,300, and $1,100.

Another example will further illustrate the permanent revenue loss aspects. Suppose the case of a business adding one new machine each year at a cost of $1,000. Assume it would ordinarily be written off in 5 years, but under accelerated depreciation all is written off in the first year. The write-offs under the two schemes would be as follows:

Year	Cost of asset	Equal write-offs over 5 years						Write-off all in 1 year					
		1949	1950	1951	1952	1953	1954	1949	1950	1951	1952	1953	1954
1949	$1,000	$200	$200	$200	$200	$200	------	$1,000	------	------	------	------	------
1950	1,000	------	200	200	200	200	$200	------	$1,000	------	------	------	------
1951	1,000	------	------	200	200	200	200	------	------	$1,000	------	------	------
1952	1,000	------	------	------	200	200	200	------	------	------	$1,000	------	------
1953	1,000	------	------	------	------	200	200	------	------	------	------	$1,000	------
1954	1,000	------	------	------	------	------	200	------	------	------	------	------	$1,000
		200	400	600	800	1,000	1,000	1,000	1,000	1,000	1,000	1,000	1,000

Therefore, during the first 5 years a total of $2,500 additional depreciation would be taken and the taxes thereon would be permanently lost so long as the firm remains in business and replaces machinery at the rate that it writes it off, because it would still continue to take $1,000 depreciation annually the same as it took before the depreciation rate was doubled. So long then as the firm—or the economy in general with new firms coming into the picture—continues to expand or replace machinery as fast as it writes it off, there will continue to be a permanent loss in revenue.

Even if we assume that in the long run the Government has nothing to lose so far as revenue is concerned (which assumption is contrary to fact) accelerated depreciation which distorts income and reduces taxes during the early years of the life of an asset actually results in an interest-free loan by the Government. This comes about in this way. Assume a 10-year useful life for an asset and a normal annual depreciation on a million dollar investment of $100,000. Let us further assume that the investment is to be written off in 5 years instead of 10 so that for 5 years the annual deduction will be $200,000. Thus the taxpayer's income is reduced by $100,000 and its taxes by $38,000, assuming continuance of the present 38 percent rate. Therefore, taxpayer has $38,000 more in cash than it otherwise would have had. At the end of 2 years, it would have $76,000, at the end of 3 years, $114,000, at the end of 4 years, $152,000, and at the end of 5 years $190,000. To be sure over the next 5 years, additional taxes may recover the "loan" but in the meantime the business will have had the use of these sums interest-free, at the expense of the public at large.

TAX BENEFIT RULE AND CARRY-OVERS

While it is true that business in years of income loss gets no tax benefit[76] from the depreciation deduction, it likewise may get little if any tax benefit from the deductions for salaries and wages paid, for interest paid, for rent paid, and other expenditures. Depreciation is an expense just as truly as are these other items. It represents the wear and tear and obsolescence of the machine during the 12-month period. The tax law recognizes that deductions of this kind may create hardships especially for business with alternately lean and fat years and seeks to correct the hardship through the instrument of carry-backs and carry-forwards.[77] A net operating loss (including one contributed to through depreciation deductions) may be carried back to reduce the profits of the two preceding years or carried forward to reduce the profits of the two succeeding years. Thus a firm has a 5-year period in which to average out its losses. The President has recently recommended that this period be lengthened.[78] By and large this provision may adequately take care of the vast majority of cases.

THE INFLATION ANGLE

With the peak of inflation having passed, there may be little point in discussing accelerated depreciation other than as an aid in a period of depression. But often in a period of declining business activity, business may desire to take less depreciation, maintenance, and

[76] See pt. II, Tax Benefit Rule.
[77] I. R. C., sec. 23 (s), 122.
[78] Economic Report of the President, transmitted to the Congress July 1949, pp. 8, 13.

so forth, rather than more. Thereby its earnings statement may look better to the bank or to merchandise and other suppliers whose support it feels it may need.

PART IV. REBUTTAL OF OPPOSITION ARGUMENTS

INTRODUCTION

This part IV offers a brief rebuttal of some of the major arguments presented against the complaints and proposals by and on behalf of business. It is true that throughout parts I and II some of the opposition arguments were anticipated. But briefly here there are summarized certain aspects of the argument that might have confused the flow of the statement had they been made earlier. The most important of the considerations are rebuttal of the distortion-of-income argument, estimates of loss of revenue, and the role of Government as the protector of business against its own weaknesses.

THE DISTORTION OF INCOME ARGUMENT

The argument that various depreciation plans distort income ignores the fact that it is the present law, regulations and administration which are distorting income. Court decisions are numerous, showing income subject to tax as different from income as recognized by accepted accounting principles. Writers set forth lists of the differences,[79] including "horrible examples" of violations of good accounting practice.[80] There is also strong evidence of the ability of accounting organizations to keep industries in line when they depart from accepted accounting principles; the action of United States Steel and du Pont are cases in point.

The contention that the Bureau of Internal Revenue, upon production of proof, readily grants departures from the useful life averages as published in Bulletin F and that court cases challenging its determinations are infrequent and reversals rare takes no account of the great difficulty of proving in advance that a "useful life" established by the Bureau is not going to be the real useful life. Thus the practical course is to pay up in spite of the injustice rather than to resort to the expensive gamble of taking a case to court. But even beyond this, the argument that the Bureau is supported by the courts proves little. In the first place, the courts may be interpreting a bad law economically incorrectly drawn and administered. Further assuming the law is correctly drawn, this would not be the first time legal interpretations have violated economic concepts.

REVENUE LOSSES

Revenue losses must of course be considered seriously in any change in the tax laws. But if current depreciation policy results in taxing capital rather than income, it is both uneconomic and unjust. To lose such revenues is to increase economic health, equity, and justice.

The conditions cited under which a permanent revenue loss will be

[79] Edelman, Chester M., Is Income Tax Accounting "Good" Accounting Practice? Taxes (Chicago), February 1946, vol. 24, 112-134; Lasser, J. K. and Peloubet, Maurice E., Tax Accounting versus Commercial Accounting, Journal of Accountancy (New York), April 1949, vol. 87, pp. 279-287.

[80] Seghers, Paul D., Tax Accounting Compared With Recognized Accounting Principles, National Tax Journal (Lancaster Pa.), December 1948, vol. 1, pp. 341-352.

experienced through accelerated depreciation include the rapid writing off of existing equipment and the continued replacement of that equipment as soon as 100 percent depreciation has been taken. There are at least two countervailing considerations. Such an argument assumes a period of considerable economic prosperity which in itself would bring additional revenue. Moreover, business is not likely to engage in wasteful practices and scrap perfectly good and efficient machinery. Even though full depreciation has been theretofore taken, the machinery will be continued in operation and taxes paid on income (without benefit of depreciation allowances in the later years) until it is economically beneficial to replace the equipment.

As for fears of revenue losses based on the thought of business abandoning established accounting practices and taking depreciation without reference to any good sense or judgment, they may be dismissed as groundless. Business will realize that if it is imprudent today in deducting excess depreciation, it will pay for it in future years when it has no depreciation to deduct. But even if business did fail to exercise good judgment, the fact is that by and large the dollar gain to business in the early years of the life of an asset would be made up later after the assets are fully depreciated. Then business would have to pay on income without benefit of further deductions for depreciation.

OTHER ASPECTS

The point is sometimes made that business would adopt policies that would prove detrimental to itself if it were given the opportunity to take depreciation without limitation or restriction. However, only a small minority of business asks unrestricted depreciation. The accounting profession and the Securities and Exchange Commission will go far toward preventing radical departures from accepted accounting practices. Even more it raises the question whether the tax administration must be the protector of business against the harms it might inflict on itself, a question not susceptible at present of an a priori answer inasmuch as even in tax matters no business can do serious injury to itself without to some extent injuring its workers, stockholders, customers, and the general public.

Another aspect of the opposition argument is to point out how there may be undesirable consequences to accelerated depreciation in times of inflation and that there may be a minimum of benefits in times of depression. These arguments overlook the long run consequences of depreciation policy. They seemingly proceed from the premise that we will always be either in a period of boom or depression and give no recognition to a normal period of economic activity or at the beginning of a decline. It is at such time that it is important to preserve stability and promote investment. A sound liberal depreciation policy for reasons previously stated will help to do that.

One final point may be made. There is at times a reluctance to correct one inequity because another and equally important inequity is not, or cannot be, corrected at the same time. For example it may be and is argued that advocates of the replacement-cost basis for computing depreciation are in fact complaining of one of the consequences of inflation. The answer, of course, is that because a correction of depreciation policy does not correct all the other ills con-

sequent upon inflation is no reason why the depreciation aspects should not be corrected.

SUMMARY

The principal points and pro and con arguments of the entire paper are presented below in very summary form. It must be recognized that the summary is only a summary and many of the seemingly "precise" statements therein are somewhat modified in the body of the paper.

The Problem

Depreciation exerts a profound influence upon the investment of venture capital. It is important to business that it be able to recover its investment tax-free.

The law and regulations as currently phrased and administered, make depreciation a great source of controversy between taxpayers and the tax administration.

Because of the restrictive policies of the Bureau of Internal Revenue, depreciation is understated and profits are overstated. Business is not able to recover its investment tax-free. Capital as well as income is being taxed. This is a deterrent to desirable investment.

A large part of the problem stems from the unreasonably long period over which the Bureau requires taxpayers to write off their assets.

The law and regulations are directed toward a fair determination of income. The claims of business, if granted, would often result in a distortion of income. It is the duty of the Bureau to work for a fairly administered tax law, applied with equal justice to all. The complaints of business against the administration of the law are infrequently carried to the courts, and are rarely sustained when carried there. This lends support to the belief of fair and accurate determinations.

More Freedom to Business

Greater freedom to business to select its own method and rate of depreciation is frequently urged. The proposals sometimes take the form of giving business free rein to do just about what it wishes in the way of depreciation (so long as it sticks to a recognized system). The proposals also shift to the Bureau the burden of proving the error of business action.

The Bureau has made estimates of useful life of assets to which it rigidly adheres. It is well-known that the useful life of an asset is largely a matter of opinion and is beyond scientific ascertainment. There can be no advance accurate measurement. Business believes the Bureau has selected too long a period over which depreciation is to be taken and this has become a source of very great controversy. It is a fruitless controversy which could be eliminated by letting business select its own method and period for writing off the assets. Business is certainly in a better position to estimate the lives of its assets than is the Treasury, and the Treasury has really little in the long run to lose no matter how fast or slow business writes off its assets. But it is extremely important to the individual business.

A rough sort of justice could be attained by letting taxpayers vary Bureau depreciation by one-quarter or one-half. A declining balance method

Much is made of the overestimates of useful lives as determined by the Treasury. Yet, it is a fact that taxpayers infrequently think enough of their cases to take them to court, and when they do they are less frequently successful. Students of the problem recognize that the Bureau has the facts to base its determination of useful lives.

The Bureau is interested in an accurate determination of income, because it is that with which we are concerned. Many of the proposals made ignore this, and head away from the goal of really trying to determine what is true income. This may create inequity, complicate the tax system, and have unwholesome economic consequences.

Much of what is currently being asked was in operation for the years before 1934, but it proved so unsatisfactory to the Congress and the Bureau that a change was made. The result of a change back to this earlier system would present serious administrative problems. It may also be observed that pre-1934

of 250 percent of present straight-line rates would also aid in giving an especially large return of capital in the early years of an asset's life.

In any event, the burden of proof should be on the Treasury to prove the taxpayer has been unreasonable, rather than vice versa.

Much can be learned from the experience of Sweden in its liberal law.

The fact that few cases are taken to court and fewer are successful proves little. It assumes that the law as now drafted and interpreted by the courts correctly defines and regulates depreciation. Further, the time and expense may just not be worth it, and the taxpayer may hope that his income will hold up so that eventually he may get his capital back.

policies lacked any effective stimulus to investment in the early 1930's.

As for shifting the burden of proof from the taxpayer to the Treasury, that does not seem logical. The Bureau has determined over the years the average life of most types of assets, and if the taxpayer believes his assets will depreciate faster or slower than the average, he should be able to prove it. It may also be observed that pre-1934 policies lacked any effective stimulus to investment in the early 1930's.

Much of the agitation for a change in depreciation policy has come in recent years of great expansion without benefit of liberalized depreciation and it is a real question whether greater industrial expansion fostered by more liberal depreciation might not have resulted in a greater inflation than we have already suffered.

Special Incentive Proposals

Rapid write-off of assets is sometimes proposed as a method of stimulating investment especially during periods of depressed economic conditions. Two devices suggested are a large initial allowance in the first year, or permission to write off the entire investment over a period of 5 years.

Either proposal would go far toward taking the risk out of investment. If business felt sure that it could get back much of its capital in the first year, or all of it back in a few years, this would remove much of the hesitance present at any time. Our experience during World War II with 5-year amortization of defense facilities showed the powerful stimulus provided by such a device. Note may also be taken of Germany's accelerated depreciation program in the 1930's and Canada's postwar experience.

The result of such a program might be to stimulate industry in good times when it needed no stimulation, and fail to provide a stimulus in bad times because there would be no income against which to write off the extra depreciation. But even assuming we had a plan which would provide the needed stimulus, there may be other problems. Most incentive tax schemes are suspect, even by industry itself. We may well question whether any scheme would not produce more problems than it solved. Little can really be drawn from our World War II experience of Germany or the postwar experience of Canada

Effects on Small Business

There is some disagreement as to whether accelerated depreciation would be helpful to small business.

Small business must depend largely on internal financing. Temporary reduction in taxes through increased allowances for depreciation might well provide the necessary capital to allow the business to expand and prosper. The contention that small business in its early years would have little income against which to write off increased depreciation can be answered by allowing the increase to be taken in any of the first 5 years, for example. But perhaps the best answer of all is that small business is an earnest advocate for the increased allowance.

Accelerated depreciation may well work to the benefit of big business. Small business in its early stages may have little or no profits against which to write off additional depreciation. Big business on the other hand though losing money on a new operation may write off the loss and increased depreciation against the profits of other operations.

Depreciation Based on Replacement Costs

In periods of inflation when construction costs are rapidly rising or have leveled off far above earlier normals, and business is unable to finance replacements out of the depreciation account, it is proposed that business be permitted a deduction for sums set aside for investment, that depreciation be based on replacement cost, or that all assets be revalued and depreciation be based on the new values.

To avoid technological stagnation, business must replace worn-out and obsolete equipment. However, when depreciation is based on original cost, business cannot deduct sums adequate to finance replacement. Underdepreciation for the last 3 years has been estimated at $12,000,000,000. This sum then has been taxed as profits, which were really illusory profits because needed to replace assets which wore out at this rate so far as replacement cost was concerned but which the tax law did not recognize.

The Securities and Exchange Commission, along with the accountants' associations throughout the world, condemn the practice of basing depreciation on replacement costs. In the first place, there is no objective standard for measuring replacement cost. Critics of historic cost are really critical of inflation. To compute depreciation on replacement cost would give very great advantage to the business already established which has a plant built during a time of low cost to the disadvantage of the business with a new high-cost plant. Further, business will quickly lose its enthusiasm for a replacement cost basis once prices have declined substantially.

Revenue Aspects

The effect on the revenues of any proposition is very important in these days as we seem to be headed toward another series of Federal deficits. Any allowance of increased depreciation would cause a short-term reduction in revenues. There is a conflict in the thinking as to the long-range effects of increased depreciation.

Admittedly there will be some immediate loss in revenue from increased depreciation allowances. But what the Treasury loses in substantial part in the early years, it will get back in later years, because the taxpayer is limited in his deductions to his total investment, whether he takes the deduction early or late in the life of the asset. Further, the stimulus to business will in the long run bring in more revenue. Further, this should not be looked upon as "giving" something away; rather (at least in many cases) it is a refraining from continuance on the part of the Government from taking revenues which it should not have been taking.

For each $1,000,000,000 of increased depreciation allowed, the Treasury will suffer a loss of $380,000,000. (Business estimates of underdepreciation for the last 3 years are $12,000,000,000.) It is clear that there will be a long-run loss, which might be quite substantial under many plans of accelerated depreciation. It is important too to remember that even a short-term loss (which is in effect a loan by the public) must be financed by someone. This may mean added taxes, which will be imposed on persons who will not benefit by increased depreciation allowances.

Tax Benefits From Deductions for Depreciation

If a taxpayer suffers a loss in a particular year, he must continue to take his deduction for depreciation even though such deduction simply increases the loss, and the taxpayer thereby gets no benefit from the deduction. The difficulty is tempered somewhat by the carry-over provisions which permit taxpayers to carry-back losses and charge them against income of the preceding 2 years, or carry them forward as a charge against income of the following 2 years.

To require a taxpayer to deduct for depreciation in a year in which he suffers a loss is to deny him the opportunity to recover his investment tax-free. Losses create no fund for the recovery of capital. Taxpayers should not be required to deduct depreciation

Depreciation is an expense of operation just as truly as wages, interest, or rent. These expenditures must be deducted, profit or no profit. The tax law does recognize the problem and makes allowances through carry-forward provisions under which each

in a year in which they have a loss; or as an alternative they should be permitted to carry forward the loss indefinitely as is permitted in certain countries.

In reply to the argument in the opposite column, there is a difference between deductions for depreciation and deductions for wages, etc. Some control can be exercised over the latter or they can be cut off entirely. But depreciation is the return of capital on an expenditure made years before. To insure investments, its return must seem reasonably clear before an investment will be made.

business has a 5-year period against which to set off its losses. This will certainly take care of most cases, but even this could be lengthened if considered helpful.

CHAPTER VIII

MISCELLANEOUS PROPOSALS FOR STIMULATING PRIVATE CAPITAL INVESTMENT

Proposals advocated as necessary to sustain or increase the flow of private funds into capital formation are obviously as varied as the views taken of the nature and urgency of the investment problem. Prescriptions vary with diagnoses.

There are, first of all, those who ask, Why do anything at all? If the government only keeps its hands off, natural forces will take care of maladjustments. According to Dr. Willford I. King:

> * * * whenever * * * new equipment for producing direct goods is much needed, interest and profit rates rise, and, as a result, we invest more and spend less. Thus adjustments in the direction of equilibrium are always being made. The process is automatic, hence economists have no occasion to worry either about lack of opportunities for investment or about a surplus of funds awaiting investment.[1]

A point of view almost diametrically the opposite is found in the words of Dr. Alvin H. Hansen, of Harvard University, and shared in general by followers of Lord Keynes.

> The high savings economy, barring government intervention, can escape a fall in income and employment only through the continuous development of new outlets for capital expenditures. As far as private investment outlets are concerned, this requires continuous technological progress, the rise of new industries, the discovery of new resources, and growth of population, or a combination of several or all of these developments.[2]

In between these two schools of thought, one can find almost every gradation of recommendation. In order not to labor the point, one citation will suffice. Prof. Howard Ellis, of the University of California, and president in 1949 of the American Economic Association, maintains that an economic policy which combines the positive contributions and rejects the extravagances in both the oversaving and classical positions would not be directed—

> * * * toward the reduction of saving nor the conjuring up of created investment outlets; it (would be) directed against those factors which both wings of theoretical opinion envisage as impeding the flow of saving to investment—price rigidities, monopoly, inequality, political obstacles to free private enterprise and initiative. The philosophy is liberal in that it seeks to rehabilitate and perpetuate private enterprise and competition; but it is also radical. In the first place, it accepts extensive government expansion into the field of investment as a means of breaking industrial and labor-union monopolies and price rigidities; and as a means of launching production to correspond with the social wants of a relatively high-income country—into slum clearance, hospitals, recreational opportunities, free public education, and the like. In doing so, the state must seek to compete with private, competitive industry directly as little as possible, and it must avoid a ruinous indirect competition through failure to charge to its projects their full opportunity costs in labor, land, and capital. The creation of a separate capital

[1] King, Willford I., Are We Suffering From Economic Maturity? Journal of Political Economy, October 1939, vol. 48, p. 616. This quotation and a similar one by Dr. Alvin H. Hansen are quoted by Howard S. Ellis in his essay, Monetary Policy and Investment, American Economic Review, March 1940, vol. 30, p. 27.

[2] Hansen, Alvin H., Fiscal Policy and Business Cycles, pp. 346-347.

budget for public investments would eliminate the anomaly of charging capital expenditures to current income; on the other hand, since the breaking into monopoly profits might show some handsome returns upon the public ventures, it might be wise to record that fact also. In the second place, inequality of wealth and income must be vastly decreased. Investment opportunities for capital and careers open to the talents must be widely distributed if a system is to be competitive. If business interests adopt an attitude of irreconcilableness, they prolong and intensify unemployment and sow the seed of crackpot schemes for "30-Thursday," "share the wealth," or social revolution.[3]

For purposes of convenience this chapter will be divided into three parts: The first summarizing certain monetary and credit proposals for stimulating private investment, the second paying attention to various proposals for direct government action in individual industries with special emphasis on housing, the third giving brief mention to a hodge-podge of miscellaneous prescriptions.

MEASURES AFFECTING AVAILABILITY OF CREDIT

In its broadest aspect, monetary policy is virtually indispensable to any positive investment stabilization program, since it is only the creation of funds through the central bank that enables the government to plan its expenditure programs with some degree of independence from its tax programs. Here, however, attention will be focused only on those aspects of monetary policy which influence the availability and cost of credit to private business and individuals.

Two are made: First, that monetary measures can in themselves provide a powerful inducement to investment, and hence forestall any serious recession or initiate a business recovery; secondly, that they offer a highly effective means of mitigating the severity of a business decline. The first claim concentrates on interest rates as a strategic determinant of investment; the second regards the pursuit of liquidity as an important factor intensifying the severity of a downswing.

The basis of the first claim is that by appropriate open-market and rediscount-rate policy the rate of interest can be lowered to a point where business will find it desirable to expand investment. The process thus begun will be cumulative: once the system is pushed off dead center, a rising national income and a low stable rate of interest will induce an ever-expanding volume of investment.

The second claim starts from the fact that an initial downswing, whatever the originating causes, is certain to be followed, unless counteracting measures are taken, by a period of liquidation which may add to the cumulative forces of decline even more than the initially disturbing factors. The effort on the part of members of the business community to achieve liquidity at each other's expense by calling loans, withdrawal of funds, et cetera, is inevitably self-defeating, and results in a further contraction of business activity and an increasing number of business failures. It is argued that this move for liquidity can be forestalled by appropriate monetary action, and the severity of the recession therefore greatly reduced.

Some lessons out of the past

There have been three periods within recent decades during which the Federal Reserve pursued an easy money policy: during the relatively mild recessions of 1924 and 1927, after both of which a rapid

[3] Ellis, Howard, Monetary Policy and Investment, American Economic Review, March 1940, vol. 30, p. 37; reprinted in Readings in Business Cycle Theory (1944), pp. 419–420.

revival of business activity took place; and 1930 to the present. None of these periods yields conclusive evidence as to the effectiveness of such a policy as an independent stimulus to investment.

The experience of the 1930's seems to indicate that monetary policy cannot serve as a strong and independent stimulus to investment once depression has reached a point where a large fraction of industrial capacity lies idle, and business expectations have become blackly pessimistic. Although the Federal Reserve System did not pursue a consistent and vigorous easy money policy from 1929 to mid-1932, after that time bank reserves were made plentiful and interest rates greatly reduced. From July 1932 until early in 1937 there was a steady increase in member bank reserve balances, from 2.0 to 6.8 billion dollars, and excess reserves mounted from 200 million to over 2 billion dollars. Concurrently there was a very substantial fall in interest rates; customers' rates in New York City declined from 4¼ percent in mid-1932 to 1¼ percent in mid-1935, and fluctuated around that level thereafter. Bank rates in other sections of the country and bond yields showed about the same movement. Despite this substantial increase in the availability of credit and reduction in its cost, there was no expansion of lending operations and no substantial recovery of private investment.

Beginning in 1930, years before the advent to power of the New Deal, when Government only tried those monetary policies wholly approved by business, such as open market operations and the rediscount rate—and then only to the extent business wanted—a vast wave of liquidation took place. During the 3 years 1930, 1931, and 1932 bank failures averaged 1,700 a year; 86,462 businesses with combined liabilities of more than 2.3 billion dollars went into bankruptcy; and 486,000 farm mortgages were foreclosed or the property transferred to avoid foreclosure. The extent of the panicky withdrawal of bank deposits by individuals is indicated by the fact that money in circulation increased from 4.2 billion dollars in mid-1930 to 6.7 billion dollars in March 1933, despite the fact that real business and personal needs for cash balances were steadily declining.

Open market operations and manipulations of the rediscount rate proved totally inadequate to provide relief. Banks faced unprecedented withdrawals and shrinking of asset values. Eligibility requirements for rediscounting limited their access to Federal Reserve credit, and the Reserve banks themselves were limited by the requirement that collateral against Federal Reserve notes had to consist of gold and eligible paper.

Fresh measures and changes in the rules were not undertaken until the beginning of 1932, after the wave of liquidation had already progressed far. The Glass-Steagall Act of February permitted the Reserve banks to lend to member banks on any sound asset, and permitted the use of United States obligations as collateral for Federal Reserve notes. One of the major reasons for establishing the RFC in this period was to permit banks and other financial institutions to obtain adequate funds for withdrawals and to aid in the liquidation or reorganization of closed banks. Even here, however, the law required that all RFC loans had to be fully and adequately secured, a provision which prevented those institutions most in need of funds from obtaining them. The Banking Act of 1933 sought to remove the strain of runs on the banking system by providing deposit insur-

ance. Not until 1938, however, were any positive steps taken to ease the conservation valuation methods of bank supervisors, which tended to intensify the move for liquidity by enforcing drastic write-downs of assets; the steps taken then were limited, applying only to bond valuations.

Government monetary action outside the banking field, designed to meet credit needs where access to private sources was difficult, was rather limited in magnitude, and was initiated only tardily. In the industrial field, the RFC and the Federal Reserve banks were the chief lending agencies, and their activities were modest. From February 1932 to March 1938, total RFC authorizations to nonfinancial institutions amounted to only 825 million dollars, or an average of only about 120 million dollars a year; the bulk of this, 80 percent, went to railroads. From 1934 to 1938 direct advances of the Reserve banks totalled only 105 million dollars, and in addition they guaranteed 85.5 million dollars of loans made by member banks. Only a small percentage of both the RFC and Reserve bank loans went to small businesses, whose needs for capital were frequently most acute.[4]

Measures designed to reduce market rates of interest and increase the availability of credit are likely, thus, to be ineffective in stimulating investment. Over the short periods of 3 to 5 years within which most businessmen insist that a new investment be paid out, interest costs are a relatively small percentage of total expected returns, and hence exert little influence on the decision whether to make the investment. As a possible exception should be noted such fields as public utilities, where the physical life of plant is very long and where demand can be forecast for long periods with fair certainty, interest costs may there have more proportionate weight in the scale of market prospects.

Present governmental monetary powers

The Government now has three major types of monetary powers to help avert or combat a collapse of private capital formation. The first relates to the action which may be taken by the Federal Reserve Board in regard to bank reserves and interest rates; the second to the provisions for using bank deposits; and the third to the provisions for Government loans to business.

Used with customary judgment and liberality, the powers of the Reserve Board to engage in open market operations, to vary reserve requirements and rediscount rates, and to advance funds to member banks on any sound asset, seem adequate to satisfy the demands of the banking system for liquidity under any probable circumstances. If a liberal construction is maintained on what constitutes sound assets, banks will be able to secure funds to meet their withdrawals, and thus remove a powerful motive for adoption of restrictive credit practices. Deposit insurance under FDIC also reduces banks' desires for liquidity, since it minimizes the threat of large-scale panicky withdrawals.

Two agencies—the Reconstruction Finance Corporation and the Reserve banks—have the power to make direct loans to business in cases where private credit facilities are inadequate. The authority

[4] Recent data are not available. The TNEC found that of all business loans disbursed by RFC up to February 29, 1940, only 1.7 percent of the funds (and 40.5 percent of the loans) were in the $5,000, or under, class. Loans of $25,000, or less, represented 72.9 percent of the number and 10.9 percent of the funds. On the other hand, those borrowing $200,000, or over, constituted 4.3 percent of the number and received 53.6 percent of the total funds disbursed in business loans. See TNEC Monograph No. 17, The Problems of Small Business, GPO, 1941, p. 300.

of the Reserve banks in this respect is strictly limited: The law permits them to make direct business loans only when recourse to private means of financing is exceptionally difficult; directs that loans only be made to provide working capital; and limits the maturity to 5 years. The Reserve banks also have the power to guarantee advances made by member banks, but under the same limitations.

The authority and responsibility of the RFC in making business loans is much broader. Authority is given to the Reconstruction Finance Corporation "to aid in financing agriculture, commerce, and industry, to encourage small business, to help in maintaining the economic stability of the country, and to assist in promoting maximum employment and production." The principal limitations are that loans cannot be granted unless assistance is not otherwise available on reasonable terms, that the term of the loan cannot exceed 10 years, and that the total amount of loans made subsequent to June 30, 1947, cannot exceed 2 billion dollars.[5] As of July 30, 1948, 1.5 billion dollars of this was uncommitted.

In the event of a downturn, therefore, there is no doubt that the RFC has the power and means to do a great deal toward forestalling a mass liquidation movement. The real question is whether the RFC will come to the aid of those firms most in need of financial aid, or insist in confining financial assistance to businesses which offer the greatest certainty of repayment. In particular, will the RFC be generous in its loans to small business, whose access to outside funds is extremely limited in depressed times?

Proposals

Eligibility standards.—It has been suggested that Reserve banks adopt the policy, and that member banks be fully informed of this policy, that any member bank which the supervisory authorities allow to remain open be permitted to borrow freely in order to meet withdrawals. Moreover, it is argued that the banking world needs to be educated to the belief that financial prudence—in the broadest sense of the word—does not require that in a depression banks get into a liquid position with the utmost speed, and that they refrain from getting into debt with the Reserve banks.

Deposit insurance.—Another proposal for minimizing the pressure for liquidity in a business downturn is a substantial raising of the limits of deposit insurance coverage, or possibly the provision of 100-percent insurance. At the present time, the depositor with an account over $5,000 is reasonably assured of no loss in the event of a bank failure, because the FPIC has the power to see that the depositors obtain the full amount of their balance. Some have suggested raising the insurance limits to $15,000 or $20,000, or completely eliminate this threat by 100-percent deposit insurance.

Valuation of assets held by banks and other financial institutions.—Criteria for valuing assets have an important bearing on investment policies. If assets are valued strictly according to market, financial institutions make money and are unduly bullish about investments during upswings and bearish during downswings. Bank examiners in times of depression may insist that particular assets are worth only

[5] The percent made to small business in amounts under $100,000 cannot be exactly determined from existing information but must be relatively small inasmuch as the complete list of loans of $100,000 and under for the period July 1948 through April 1949 totals roughly $171,000,000 or about 8.55 percent of the $2,000,000,000 figure. See RFC loan policy, hearings before a subcommittee of the Committee on Banking and Currency, United States Senate, 81st Cong., 1st sess., GPO, 1949, p. 22 et al.

what they will bring in the market which may be somewhat less than the amount at which they are being carried on the books. This writing down of assets provides additional impetus to restriction of credit.

Some suggest that valuation of assets be based on long-run earning prospects rather than the market situation of the particular moment. In other words, bank examiners should not act on the premise that a continuance of the depression is a normal state of affairs. The value of a particular asset, however, reflects not only general market conditions, but also factors peculiar to it. In the case of bank-held bonds, a reasonably satisfactory solution to the problem was reached by valuing those considered to be of investment quality by private rating agencies at cost, those of a lower quality, but not in default, between cost and market price, and defaulted bonds at market price. It is a much more difficult problem, however, to set up such a system of valuation for stocks, loans, and other assets. If a definite system of valuation rules cannot be set up, at least bank supervisory agencies might agree that the principle of valuation need not be market price.

Federal loan agencies.—The problems involved in direct or guaranteed Government loans to business are quite similar to those of bank supervision. In either case the Government's prime responsibility is to contribute as fully as its means permit to the stability of the economy. Yet, in these activities political and popular approval of its operations depends on a much narrower interpretation of the Government's responsibility. Bank supervisors may not win popular recognition for attempting to persuade a banker that his credit policies are unduly restrictive and injurious to the well-being of the community, but they certainly will be condemned if they fail to criticize a bank for unsound financial policies that may lead to failure. For this reason the supervisory authorities commonly err on the conservative side. While this may not be open to serious criticism in times of prosperity, in depression it does not permit the fulfilling of what should be the wider responsibilities of the supervisory authorities.

About the same is true of Federal organizations engaged in making loans to private business. Though the prime purpose of their creation was to aid in economic stabilization, their sensitiveness to public criticism politically transmitted impedes them from carrying out this responsibility effectively. The authorities are apt to feel that their organizations should be managed with some degree of financial prudence, as a private bank; that their primary responsibility is to operate with a minimum of losses. This in turn restricts the effectiveness of these organizations in terms of the broader purposes for which they were created.

It is not suggested here that public loan assistance be confined to the weakest businesses in the economy—those on the verge of bankruptcy. But neither should assistance be limited to those firms which are currently in the strongest position to repay the loan. In times of depression the aim of Federal lending organizations is to provide credit as liberally as possible to those concerns with limited access to private sources of finance. The firm's ability to repay the loan need not be judged in terms of its financial position at the moment, but what its position might be under more normal business conditions.

Such a policy might well result in greater financial losses than if public lending agencies were managed like private banks. These

losses, however, must be compared with revenues lost through tax reductions or deficits incurred through public works programs. Given the facts that the inability of many concerns to obtain working capital is an important factor in the wave of bankruptcies usually witnessed during a depression, and that these contribute heavily to the downswing—a program of generous loans to business may be just as effective a way of combatting a depression as tax reductions or public works. Indeed, if the size of the deficits in relation to the total loan program is very small, this can be taken as prima facie evidence that the program is not making an important antideflationary contribution, that only those firms in the strongest financial position are obtaining assistance.

One of the greatest dangers of public lending organizations is that in insisting that loan assistance be confined to firms where the chance of loss is very small, they will compete with private banks and other financial intermediaries. First thought must be given to strengthening the ability of the banks to meet the demands for credit. Public assistance should be granted only when private funds are unavailable on reasonable terms.

There is no single solution for the finance problem of small firms. Suggestions run in terms of preferential tax treatment, the development of investment companies specializing in small business financing, and public credit assistance. It seems very doubtful if either of the first two would be of much help in a depression when profits in any event are very low and when the prospect of issuing securities, for any type of business, is not very bright. However, if a program of public loan assistance in cases where banks are unwilling to take the risk is to be successful, the RFC and the Federal Reserve banks may have to loan and guarantee loans to small businesses on a much larger scale than they have in the past.

In summarizing the first part of this chapter, namely stimulating investment by means of monetary and credit policy, note that in the past 50 years numerous factors have been at work increasing the availability of funds for investment purposes.[6]

(1) The establishment of the Federal Reserve System. Before the Federal Reserve System was set up, the supply of money and savings was inefficiently mobilized and insufficiently flexible to meet the seasonal and cyclical needs of business. Under the Federal Reserve System, the supply of money and credit can be geared to business and governmental needs.

(2) The influx of gold into this country, especially during the 1930's.

(3) High profits during and immediately following World War I, which went largely to high-income groups. Current tax rates have not been high enough to prevent a recurrence of this development in and after World War II. World War II seems to have produced proportionately as many millionaire individuals and businesses as did World War I.

(4) The increased concentration of wealth and income in the United States. In large measure the greatest increases in the concentration of wealth occurred before 1920.

(5) The increased use of trusts and endowment funds.

[6] The following lists are suggested by and in considerable measure derived from: Dauten, Carl A., Investment and Business Activity (1944), pp. 29–33.

(6) The rapid expansion of life insurance. During expansion periods, reserves of life insurance companies increase rapidly and provide new investment funds. At the same time, since money which has been used for insurance could have been used for consumer goods, the resultant decrease in demand for consumer goods also reduces the need for the new capital equipment which would be used in producing those goods.

(7) The growth of social-security funds, with effects similar to that of life insurance.

(8) The growing practice of setting aside adequate funds for depreciation by corporations since enactment of corporation income taxes. Note in table V, chapter IV, that depreciation charges plus retained earnings generally were equal in amount to total funds used for plant and equipment. This has increased the amount of money available to many businesses for replacement expenditures and may have kept dividend payments down, some of which might have been used for consumer goods.

(9) Monopoly prices which result in increased short-run profits. This has the twofold result of increasing the funds, which profits recipients would have available for investment, and of decreasing the real purchasing power of consumers and thus reducing the effective demand for consumer goods.

(10) Federal housing programs. This has an effect comparable to life insurance and social security. Repayment of housing loans is continually making additional investment funds available while at the same time leaving less money for the home owner to pay for other consumer goods.

(11) The shift of the United States from a debtor to a creditor nation. Repayment of loans by foreign countries as well as a decrease in the amount of American indebtedness to foreign countries both increase the funds available for investment.

Among the factors which may be said to have accounted in some measure for a decline in the demand for investment funds, the following have been mentioned by various economists from time to time:

(1) The disappearance of the West as a land to be developed. Of course, large opportunities for investment still exist, but they may not be as urgent or quite as promising as those connected with the development of new territory.

(2) A decrease, until recent years, in the rate of population growth has meant a somewhat slower rate of increase in the demand for new capital to take care of the needs of additional people.

(3) In many major industrial fields the rate of expansion which occurred in the 1920's may not recur, although there is no doubt that the pace of total industrial expansion continues virtually unabated.

(4) Many of the large corporations have had little if any need for external investment funds from the capital market, relying primarily on retained earnings for their capital needs. The extent is indicated in table VIII, chapter IV.

(5) During the 1930's there were new developments which caused business to shy back from using more investment funds, especially currency depreciation abroad, social unrest, and the many war scares.

DIRECT GOVERNMENT INVESTMENT

During both World War I and World War II, the Government financed or built by force or under contract a good deal of war plants making armament and munitions. Except for atomic-energy facilities, most of it has been disposed of. The possibility of Government competition was greatly reduced, if not eliminated.

Even in peacetime there have been many proposals for Government to build extra capacity in one or another industry—steel, power, agricultural fertilizers, and the like. Obviously, unless attention is focused on some one industry, there can be no informative summary made showing the conditions and methods under which Government entry does and those under which it does not manage to get industry off dead center and suceeds or fails in stimulating a maximum of additional private investment. Consequently a good illustration must suffice. Such is excellently afforded by residential construction. Government activity in the field of housing has been undertaken to serve three major social objectives. The first, to further home ownership and to protect home owners from loss of their property in times of depression; the second, to stimulate the production of housing generally in periods of housing shortage; and the third, to provide decent low-cost housing for low-income groups and eliminate the slums in which they are now forced to live.

Residential construction is not only an important component of total national output but it has in the past fluctuated even more than most other types of construction. Reported expenditures dropped in terms of constant 1937 dollars from approximately 4.6 billion dollars a year during 1925–26, or nearly 5 percent of gross national product, to less than 360 millions in 1933, or well under 1 percent. While physical decline may have been appreciably less than that shown by the reported figures, it seems to have been as high as 85 percent. At no time during the 1930's did the reported volume return to one-half the 1925–26 level.

Housing, like other investment goods, has a long life so that construction activity provides in the main for increments in demand, rather than for replacement or current consumption demand. The highly erratic character of changes in net family formation, which has constituted the major source of demand for new housing, and the relatively high costs of housing in relation to consumer incomes means that demand fluctuates widely. Moreover, the amount of housing produced in any one year is a relatively small proportion of the total supply available. Consequently, relatively minor fluctuations in ability or willingness to pay for housing can have major effects on the total volume of new housing demanded. Factors which can cause a shift of 1½ percent in the proportion of all families who are doubled up can cause a greater shift in the demand for new units than is expected to be caused by the average annual net increase in families for the next decade.

The annual net volume of nonfarm family formation dropped from a peak of about 700,000 reached during the 1920's to a level of about 80,000 in the worst year of the depression. Increased doubling up may have sent the net increase in households to close to zero at the worst of the depression. Inasmuch as vacancies considerably exceeded 2,000,000 at the low point, an increase of even 80,000 in the

number of nonfarm families was too small to stimulate any sizable amount of new construction.

Direct efforts to stabilize the residential-construction industry in times of depression fall in two fields: (*a*) Reductions in the price of housing in relation to consumer incomes; and (*b*) direct public subsidy or construction. Efforts to reduce construction costs must be of a long-term character. They are, however, likely to be more effective during periods of recession. Contracyclical devices aimed at reducing the price of housing in relation to incomes over a short period must emphasize purchase terms: the size of the down payments; the rate of interest; the amortization period; financing charges; or they must fall back upon subsidy. Efforts to reduce the volume during boom times could take the direction of increasing the size of the down payment required, increasing the interest rate or financing charges, reducing the amortization period, or reducing or eliminating any subsidy which may be in effect.

Purchase terms

In the effort to increase housing demand during the depression, attention was directed first to reducing financing costs. Studies of home-financing methods used during the 1920's indicated that families who had recently bought houses with the aid of mortgages as distinguished from established home owners were paying interest rates which may have averaged 7 to 8 percent. Interest on the first mortgage was often 6 percent or more, sometimes with commissions in addition, and costs of second mortgages were much higher. By insuring mortgage loans and providing access to ample funds, the Federal Government was able to bring the effective interest rate down to approximately 5 to 5.5 percent. In addition, requirements for down payments were eased and the amortization period was extended; furthermore, real estate taxes have not increased as much as construction costs. The result has been to increase the size of the mortgage which can be carried by a given annual payment or a given annual income, with other expenses proportionately constant, by approximately 25 percent. In some communities, the amount may have been increased by 50 percent. Thus an individual who under the old terms could have carried a $4,000 mortgage can now carry a $5,000 to $6,000 mortgage. In conjunction with decreases in the down payment, this represented a substantial expansion in the potential market for housing, and undoubtedly helped to make possible the rebound in housing construction which occurred during the latter part of the 1930's.

From 1937–40 FHA insured about 35 percent and in 1948 about 32 percent of all new nonfarm residential units reported started in new structures. Its influence, of course, affected the entire mortgage market.

It is of some interest in this connection that residential construction costs in relation to average disposable income per nonfarm family appear to have risen about a third since 1929. The cut in interest rates of about 25 percent, together with the cuts in other capital charges which have occurred since 1929, have been enough only to counterbalance this increase in capital costs. It is apparent, therefore, that reductions in interest rates without pressures to hold down construction costs or sales prices may not result in any long range benefit to the purchasers of houses.

Direct governmental construction or subsidy

The limited opportunity for further easing of purchase terms suggests that in a future recession any large-scale anticyclical action in the housing field may require emphasis on expansion of direct public construction and subsidy.

The longer high levels of consumer incomes and high volumes of housing construction continue, the more limited may be the future field for direct public housing for low-income groups which will not limit the opportunities for the private construction industry. Continuation of the current high volume of construction will result in sizeable vacancies in older properties which will force down prices and rents, thereby easing the housing situation for the lower income groups. Increased attention to urban redevelopment may, therefore, be called for in future anticyclical housing programs.

The reported volume of private new residential construction during 1948 totaled over $7,000,000,000, and a full-employment basis might require about the same amount in 1955 (in terms of 1948 prices). A shift of 15 percent from this level in house-building volume might mean a shift of roughly 150,000 men employed directly at construction sites by the construction industry, and of 200,000 men employed off the site producing goods and services for the industry.

A program of 135,000 units per year of publicly constructed housing may mean an average annual construction volume of over $1,000,000,000 in 1948 prices. This would be about 8 percent of the present level of private construction, 20 percent of the present level of public construction, and six times the level of public residential construction expected during 1949. From a purely technical standpoint, and given an adequate backlog of advance planning and site assembly, the limits to a reasonably rapid and efficient expension of direct public residential construction in times of recession would depend upon the extent of the decline in the private construction industry. The limits set by administrative and political considerations, and by the desirability of limiting Government encroachment on potential private markets, are narrower.

While, to be sure, the budgetary costs of direct public construction will depend over the long-run on the distribution of financing between loans and grants, and on the rentals set in relation to construction costs, it is expected that the direct costs to the Federal Government under the Housing Act just passed will not exceed $300,000,000 per year for 40 years, after the program reaches its peak. The indirect costs through losses in income taxes would raise this figure. Acceleration or deceleration of the rate of activity for anticyclical purposes should not add appreciably to this cost.

Thus, any attempt to utilize residential construction as a field for stabilizing private investment will run into major problems of site assembly and lease or sale under urban redevelopment programs. Many of the limitations are political in character. Acceleration or deceleration for anticyclical reasons would involve a considerable time lag and be in good part ineffective.

MISCELLANEOUS RECOMMENDATIONS

There remains for bare enumeration a series of divergent measures, all urged as necessary to stimulate or stabilize private capital invest-

ment and free competitive enterprise, each devotedly advocated by one or other business groups; none affording a direct and concrete hold on the problem, yet all to varying extent helpful.

(1) Set up a Department of Economic Statistics to collect and interpret comprehensive and up-to-date information on various types of savings and capital formation. This assumes that wise and flexible use would be made.

(2) Vary consumer credit through regulation of minimum down payments and maximum payment periods so that consumers will borrow not at times of business boom, but during periods of low prices and slack demand. Yet how can one expect consumers to borrow and businesses to sell on credit except when the customers have jobs?

(3) Guarantee to the lower third of the population a national minimum of food supply, of training for suitable occupations, of low-cost housing, of educational opportunities. A higher standard of living would require an expansion of capital plant and provide further outlets for the Nation's savings. But how guarantee unless productivity is increased? Otherwise funds will have to be taxed from the very sources—namely profits and higher bracket incomes—which make investments.

(4) Extend social security, in particular, unemployment insurance benefits to provide a floor to consumer demand.

(5) Cut government expenditures. But if transfer payments in aid of mass incomes and mass markets are cut, business anticipations of such may lead to lower, rather than more investment. In short, the timing may be important.

(6) Stimulate foreign investment, such foreign investment to be carried on with a long-range point of view so that provisions could be made for interest payments and service charges without upsetting the balance of world trade and commerce.

(7) Plan public works on a cyclical basis so that during prosperous periods none but an irreducible residue of necessary works will be carried on. During depression, finance cyclical public-works projects by deficits. In boom times pay off governmental debt.

(8) Stimulate research and development of new processes and materials.

(9) Bring about greater participation of insurance companies and other financial intermediaries in making equity funds available to business.

(10) Increase public investment in works of the type which multiply the opportunities for profitable private investment in new geographic or technical areas (research, transportation, atomic products).

(11) Maintain a free and competitive market, insofar as feasible. Set up the necessary governmental machinery to encourage a flow of capital into small and intermediate-size businesses, promote the development of such enterprises and give them equal access to capital, raw materials, patents, and know-how needed under the same conditions as their giant competitors. Establish equality between independent businessmen and their big integrated competitors. This means equality in transportation rates, wholesale deliveries, and fair competition between independent

retailers and factory-owned or subsidized retail outlets. Enact and vigorously enforce necessary legislation to prohibit predatory trade practices and price discrimination. Prevent the merger of giant businesses into ever greater size and dominance. Pass legislation to provide stiffer penalties to discourage deliberate violation of the antitrust laws. Provide adequate funds to the Department of Justice and the Federal Trade Commission to police and enforce existing laws.

CONCLUSION

The list of proposals enumerated in this chapter could be readily extended. Many of the proposals are so vague as scarcely to go beyond the exhalation of a pious wish. Several might, if properly enforced, serve to increase the amount of private capital investment, at least at such times as private investors were in general disposed to make investments anyhow but needed a little additional inducement or the modification of some real or fancied obstruction.

None of them, however, provide a mechanism, more or less foolproof, whereby the flow of private capital investment can be kept at a steady or high level. Yet politically that is what government has to have. For it is not in the nature of democratic government pushed in various directions by foreign necessities and domestic pressure groups to be a unified and integrated organization making steady progress toward a determined-upon policy or goal. Its policies, continuously subjected to checks and balances, are more likely to be tentative, to be repeatedly improvised, to be compromises of past and present practices and interests that are carried through to a varying extent with vacillating zeal and divided responsibility. Furthermore, the problem in hand, that of bringing about target levels of private capital investment or attempting to modify booms and busts, is one of the most complicated and difficult of all economic enigmas. As in the case of nervous break-downs in medicine, a plethora of explanations is offered but reliable knowledge concerning causes and methods of control, if any, of general business break-downs is distressingly meager. One can hardly feel optimistic about the chances of continuously securing answers that solve from the admixture of politics, pressures, bureaucracy, and sprawling giantism that characterizes modern governments.

APPENDIX A

ITEM 1

TOPICS AND QUESTIONS UPON WHICH INFORMATION MIGHT WELL BE SOUGHT

A. Businessmen and business executives

I. What kind of pay-off periods do you require on new equipment investment?

(*a*) Do the rates of depreciation, which you and your accountants feel proper, differ from those allowed for tax purposes?

(*b*) In other words, do you take the same rates of depreciation for book and for income tax purposes?

(*c*) Do you make it a practice to review and revise depreciation rates during life of the equipment to give recognition to altered market or replacement conditions?

II. How are replacement expenditures planned?

(*a*) Who initiates the plans and upon what facts or forecast?

(*b*) How far in advance are replacement plans initiated?

(*c*) What data on repairs, lost time, etc., of the old machine and what knowledge of the efficiency of the replacement model are available?

(*d*) What accounting distribution is made of any remaining book value of the existing equipment?

(*e*) Has the Bureau of Internal Revenue ever taken exceptions to the deductibility of remaining book value?

(*f*) What factors affect the timing of decisions to replace, for example, age of the old machine, labor-saving, or efficiency aspects of new machines?

III. How are new opportunities for profitable investment discovered and ripened into investment commitments?

(*a*) Do you have a research and development division? Are they responsible for thinking up new ideas for profitable investment? Do they screen them? All of them?

(*b*) Do you rely on market studies for knowledge of consumers' demand and changes in it?

(*c*) To what extent is reliance placed on professional outside analysts, sampling studies?

(*d*) What are the respective roles of the sales department, the cost-accounting department, in the conferences where expansion programs are considered?

(*e*) Who ultimately makes the decision to invest? Do you ever expand plant capacity at times when existing capacity is less than fully utilized?

IV. To what extent must the possibility that others are simultaneously contemplating investment be considered in arriving at your decisions?

(*a*) Does your firm find it necessary to keep ahead of the investment plans of others?

(*b*) If you are sure that competitors are expanding plant capacity, do you in order to hold your market try to reach the market with the output of expanded facilities at substantially the same time or earlier if possible?

(*c*) Are investment opportunities, once recognized, ever passed over? Why?

V. How long a time elapses between the time a decision to invest is made and the time when products from the facilities are available for meeting market demands?

(*a*) How much time is used up between the date the decision to invest is made and the date the commitment is made or contracts signed?

(*b*) How serious are the possiblities of change in demand during the period while the facilities are being brought into production?

(*c*) Do you require firm contracts for the output of facilities before undertaking their construction?

VI. In what way does the availability or unavailability of funds enter into programing once an investment opportunity has been recognized?

(*a*) In how many years do you figure you ought to get your money back before you put up new plant or equipment? Is that number the same at all times?

(*b*) If you have a profitable opportunity to invest, how important is the interest rate? The length of time for which you can get the money?

(*c*) How does the rate of return being made on existing investments affect the required return on new investment?

(*d*) Are contracts for new plant and equipment ever let before funds are available or underwritten?

VII. When are decisions made and investment plans undertaken in relation to the peaks of production demand?

(*a*) In the past have you ever made investment and expansion plans and expenditures at the top of a boom?

(*b*) Are there any automatic checks upon business judgment which will deter expansion in the face of currently peak sales and profits?

VIII. What is the minimum investment required to start a new enterprise in your industry?

(*a*) In your opinion, what would be the principal obstacles such an enterprise would have to face?

(*b*) Do you ever help finance the purchase of your product or your raw materials? In your industry is there any significant amount of either upstream or downstream financing of nonaffiliated companies?

(*c*) Have terms or requirements of commercial credit changed significantly since, say, the 1920's? Are they varied from time to time depending upon volume of orders on hand?

IX. Does your company have any plans in respect to either foreign sales or foreign investment?

(*a*) Do you know or believe there are opportunities for profitable investment in your industry in foreign countries? If not, why not?

(*b*) Do you know or believe that there are attractive foreign markets for American products of your industry? If not, why not?

X. What can be done by organized efforts of business or by Government to minimize the variability of gross investment expenditures?

(*a*) Having in mind for the moment the problem of variability rather than the amount of investment, are there any governmental programs which you feel contribute specifically to such variability? Are there any programs which might be adopted to minimize the instability of private investment?

(*b*) Do you feel that it is necessary and proper that Government expenditures be employed to complement business investment expenditures when the latter show declines?

(*c*) At what point in the planning of investment expenditures does the question of relative return after taxes enter the discussion?

(*d*) Are there governmental policies which deter you from making much larger investments than you do now? What are they? If removed concretely what kind of new plant and how much would you then build?

B. Executives and representatives of insurance companies

I. Portfolio management in general—

(*a*) If existing restriction on qualified investments were eliminated entirely, how would you alter the proportions or holdings of your present portfolio?

(*b*) In appraising the possibilities of a new investment item, do you have a minimum amount below which you feel it is impractical or too costly to go? How was this amount arrived at, that is, what considerations determine the figure?

(*c*) In appraising the possibilities of a new investment item, do you have a maximum above which you feel it is inexpedient or too lacking in diversification for acquisition? How was this amount arrived at, that is, what considerations determine the figure?

II. Fixed interest debt obligations are a traditional media for insurance company investment—

(*a*) As a regular investor in evidences of debt, what evidences do you see suggesting a shortage of equity capital?

(*b*) For various types of debt securities what ratio of underlying equity do you feel is necessary?

(*c*) Has there been any change in recent years in the attitude of either business or financial institutions in an acceptable debt/equity ratio?

(*d*) It is sometimes said that there has been a relative scarcity of corporate bond issues in recent years. (1) Would you agree? (2) How does this fit in with an asserted shortage of equity capital? (3) Is the scarcity the result of a shift in the situation of corporate borrowers and hence in the absolute amounts available or is it the result of larger funds seeking this type of fixed investments?

III. Private placements—

(*a*) Are so-called private placements initiated typically by (1) the borrower, (2) an intermediary, (3) the prospective creditor?

What provisions are made for watching, supervising, or controlling the debtor's use of funds and the subsequent management of the business in the interest of debt service and ultimate repayment?

(*b*) Are bonds acquired through direct placement subject to different valuation procedures than those acquired in the market?

IV. Investment in common stocks:

(*a*) Does your company now hold the maximum amount of common stock permitted under statutory limitations? If not, why not?

(*b*) How are common stock holdings valued in making up the balance sheet and computing reserve?

(*c*) Was the decision to enter the common stock field dictated primarily by: (1) A search for suitable use of funds? (2) Their relative attractiveness on an earning basis? (3) The desire or need for diversification?

(*d*) What is the company's policy in respect to the voting of common stock held for investment purposes? How are such investments otherwise supervised?

V. Direct investments—particularly in residential or commercial real estate:

(*a*) Does your company now hold the maximum amount of direct real-estate investment permitted under statutory limitations?

(*b*) How are direct investments in real estate valued in making up the balance sheet and computing reserve?

(*c*) Was the decision to enter the direct-investment field dictated by (1) a search for suitable use of funds; (2) relative attractiveness on an earning basis; (3) desire or need for diversification?

VI. Sale and lease-back investment:

(*a*) Why was this relatively new form of investment developed?

(*b*) Describe the form of lease employed, especially in respect to default provisions.

(*c*) How do these differ in degree or effect from default provisions such as are ordinarily inserted in debenture agreements?

(*d*) Do you regard these sale and lease-back investments as business equities or debt?

VII. Governmental policies:

(*a*) What can be done by organized efforts of business, financial institutions, or Government to obtain the optimum rate of investment and to minimize the variability of gross private investment expenditures?

(*b*) Does your company have any program for timing direct investments or the purchase of other securities, or is the time controlled solely by the flow of funds?

(*c*) Having in mind for the moment the problem of variability rather than the amount of investment, are there any Government programs which you feel contribute specifically to such variability? Are there any programs which might be adopted to minimize the instability of private investment?

(*d*) Do you feel that it is necessary and proper that Government expenditures be employed to complement business investment expenditures in order to maintain an optimum rate of investment when business investment shows a tendency to decline?

C. Investment bankers

I. Traditionally the functions performed by investment bankers included (1) "origination," (2) underwriting, (3) distribution of securities, (4) continuing financial counsel to capital users:

(*a*) What, if any, changes have there been in the past decade in the nature or emphasis given to each class of such services?

(*b*) Has the growth of institutional investors employing technique of private placement, sale and lease-back, etc., altered the role of investment bankers?

II. In connection with "origination" or the buying of securities—

(*a*) What do you consider to be a minimum issue for public distribution? For private distribution?

(*b*) What implication does this have for the financing of small business?

(*c*) How does the need or opportunity for a financial transaction or security flotation come to your attention?

(*d*) What procedures or programs are there for discovering new business in the sense of locating and promoting the issuance and sale of permanent securities?

III. In connection with underwriting—

(*a*) Does the procedure of private placement eliminate all necessity for underwriting in the accepted sense of the word?

(*b*) Why has not the relative stability which has characterized security markets in recent years been ideal in eliminating many of the risks of underwriting?

IV. In respect to distribution of securities—

(*a*) Would the market for common stocks be aided, in your opinion, by the distribution in dividends of a larger proportion of corporate earnings?

(*b*) To what extent does the availability and marketing of tax-free state, municipal, or guaranteed issues affect the marketing of corporate securities?

V. In respect to continuing financial counsel—

(*a*) What considerations determine the minimum price at which common stock will be offered?

(*b*) Is it to your knowledge customary in private placement for the purchaser to require representation on the board of directors of the borrowing or capital using corporation?

(*c*) In the absence of such representation, what methods for supervision are employed, or must the financing be denied completely?

VI. In respect to foreign trade—

(*a*) Do you know or believe there are opportunities for profitable investment in foreign countries? If not, why not?

(*b*) Do you know or believe that there are attractive untapped foreign markets for American products? If not, why not?

(*c*) What suggestions do you have to stimulate the imports essential and incident to the maintenance of the United States' role as a creditor nation?

VII. What can be done by organized efforts of business, financial institutions, or Government to obtain the optimum rate of investment expenditures?

(*a*) Accepting for purposes of discussion the position that Government must continue to raise substantially the present

amount in the form of taxes, what form of taxes do you regard as least disturbing to incentives and stability?

(*b*) Are there any Government programs which you feel contribute to variability of private investment?

(*c*) Do you feel that it is necessary and proper that Government expenditures be employed to complement business investment expenditures in order to maintain an optimum rate of investment when business investment shows a tendency to decline?

(*d*) Suppose all deterrents to investment, for which you regard governmental policy responsible, were removed would your company change its investment program radically? If so, how? Do you know of other investment programs that would be altered or encouraged thereby? If so, what?

ITEM 2

A NEW INDUSTRIAL PHOSPHATES PLANT?

(Excerpts from a confidential investment report submitted to the Joint Committee on the Economic Report)

To determine the possibility of establishing a phosphates plant in this area (the west coast), one must analyze what markets there are on the west coast, the size of the markets, what phosphates to produce, whether it is possible to break into the market, and if so, whether it is possible to produce on a competitive basis. It is necessary to determine whether to enter the fertilizer or industrial field. Industrial phosphates are derived from elemental phosphorus, while most fertilizers are derived from the process of sulfuric acid on phosphate rock.

In this area, the greatest demand for phosphates comes from the soap and cleaning compound industry, the growing detergent industry, food canning and baking industry, and the petroleum industry. Hence the making of industrial phosphates seems more likely to provide a more live investment opportunity than the production of phosphate fertilizer.

The process of producing phosphates is in essence relatively simple. A minimum of skilled labor is required. The process is accomplished by means of automatic flow. There has been little refinement or development of production methods. Little, if any, trouble will be encountered with respect to patents or licensing problems.

The present estimated reserves of phosphate rock in the United States are in excess of 13,000,000,000 tons. This phosphate rock is located in two widely separated sections of the United States, one on the east coast and one in the Western States.

The phosphate deposits on the east coast are located in Florida and Tennessee. The rock differs from that found in the Western States in that it occurs on the surface of the earth and is mined by means of steam shovels, drag lines, and bulldozers. It is in this area that all of the present producers of elemental phosphorus are found. This latter situation may be explained by the presence of adequate sources of power for refining purposes as well as relatively cheap raw material supplies. The majority of the plants in operation obtain their power

from TVA and have their plants located close to the source of phosphate rock itself.

The phosphate rock deposits of the Western States are found in the States of Wyoming, Utah, Idaho, and Montana. These deposits are found underground and must be mined by the usual mining methods. For this reason the cost of the rock is somewhat higher. However, the rock itself is of a somewhat higher quality than that found on the east coast. This region contains over 60 percent of the available United States reserves and is becoming more important as the eastern source shows signs of becoming worked out within a period of 30 or 40 years.

The present price of phosphate rock runs around $5 a ton and the freight rate is slightly in excess of this amount. It takes in excess of 8 tons of rock to produce 1 ton of elemental phosphorus.

The Western States at present have no producer of elemental phosphorus, though one may be in operation soon. This situation is due primarily to the fact that the area in which the deposits occur lacks adequate power facilities and is hindered by a high freight rate structure. At the present time it is cheaper to ship elemental phosphorus from the east coast than it would be to ship it from such a region as Idaho. For the present it will be necessary to secure elemental phosphorus from the east coast, even by western producers.

Little difficulty is expected in obtaining the other necessary ingredients. For the most part they are chemicals which are in adequate supply and may be obtained through the usual chemical-supply houses. Such items as soda ash, sodium carbonate, and sulfuric acid can be purchased in bulk quantities on a price basis which will permit economical production.

Procurement costs of major items involved in trisodium phosphates

Elemental phosphorus	cents per pound	[1] $0. 14
Sodium carbonate	100 pounds	1. 50
Sodium hydroxide	do	3. 45

Processing costs of trisodium phosphate

45 percent phosphoric acid	$28. 78
Sodium carbonate	9. 00
Sodium hydroxide	8. 27
Direct labor (semiskilled)	10. 80
Electricity (1 cent per kilowatt-hour)	. 80
Water	1. 00
Total processing cost	58. 65
20 percent burden and overhead cost	11. 73
Total cost	70. 38

[1] Plus 2.6 cents per pound freight.

The above cost figures result in a price of $3.51 per 100 pounds of trisodium phosphate. The current selling price is $6.90 leaving a margin of $3.39 per 100 pounds. These cost figures are subject to fluctuations in price of the components involved. It can be expected, however, that the selling price of the end product will fluctuate correspondingly.

The processing of phosphates does not require a great deal of water, and since industrial water is readily available in the entire area with

only insignificant differences in rates, this factor is of little importance. Electric power is available throughout the area at the standard cost of approximately 1 cent per kilowatt-hour for the demand requirements of the plant. Labor rates are fairly uniform throughout the area, and are also of only minor consequence since only a small amount of semiskilled labor is required for this continuous process.

At present, one company enjoys 36 percent of the phosphates market for the West. The rest of the market is divided among the other major producers. Prices have varied little for any of the major phosphate compounds in the last few years. If an independent tries to cut prices or upset the market the Big Six who produce elemental phosphorus are in a good position to freeze out those who have no source of elemental phosphorus. The only hope for independents is the phosphorus of the TVA plants. Remembering that an efficient plant should be able to handle 5,000,000 pounds of phosphorus per year and that that would produce enough phosphates to absorb 20 percent of the western market, it would seem that the only way a third producer could enter the field would be on a basis of rugged competition. This would probably mean that a new business might so upset the industry that it would have to have its own phosphorus supply to stay in business. In short, competition with other producers will be stiff, not because markets are scarce, but because raw materials are scarce and the industry sees no need to permit more competition.

Most of the basic phosphate compounds have little competition to fear from other materials. The phosphate compounds have been made and marketed successfully for many years, even though efficient production methods were unknown. Now that elemental phosphorus can be cheaply produced, the position of phosphates has been further strengthened. In fact, phosphoric acid is fast becoming as common in industrial use as sulfuric acid. The trend is more toward phosphates replacing other less valuable materials. Possibly the only field where some competition from other materials is met is in the manufacture of detergents. Phosphates are not absolutely essential, acting as an activator and filler. For domestic use phosphates are unrivaled, but the high shipping costs make foreign marketing somewhat dubious.

ALLOCATION OF MAJOR PHOSPHATE COMPOUNDS AMONG MAJOR USES ESTIMATE OF PRESENT WESTERN PHOSPHATE MARKET

Sodium phosphate compounds: Water softening, industrial cleaning, detergents, oil well drilling muds, petroleum refining

[Percentage of these industries allocable to Western States: 13 percent (conservative average)]

Compound	1948 production	Percentage allocable to West	Western market estimate
	Short tons		*Short tons*
Tribasic	81,000	13	11,000
Dibasic	87,000	11	10,000
Tetrabasic	66,000	12	8,000
Metabasic	37,000	12	4,500
Monobasic	11,400	13	1,500
Tripoly	15,000	16	2,500
Total	297,400		35,500

Calcium phosphate compounds: Baking powders, pharmaceuticals, dentifrices, acidulants in food canning

[Percentage of these industries allocable to Western States: 10 percent (conservative average)]

Compound	1948 production	Percentage allocable to West	Western market estimate
	Short tons		*Short tons*
Monobasic	36,000	10	3,600
Dibasic	39,000	10	3,900
Total	75,000		7,500

Miscellaneous phosphate compounds: Fireproofing lumber, plasticizers, yeast foods, free-flowing agents for salt, metal processing, deodorants, sulfa drugs and penicillin, crop sprays

[Percentage of these industries allocable to Western States: Probably 10 percent or less, general average difficult to estimate, but high price of most of these compounds makes it feasible to ship to all national markets]

	Total 1948 production	Percentage for West	Western market
	Short tons		*Short tons*
All miscellaneous compounds	75,000	10	7,500

	National		Western	
	Amount	Worth	Amount	Worth
	Short tons		*Short tons*	
Total phosphate market, 1948	447,000	$50,000,000	50,500	$5,600,000

Phosphoric acid: Wide variety of uses with consumption varying closely with general level of industrialization; uses vary all the way from soft drink manufacture to treatment of iron and steel products

[Percentage allocable to Western States: 12–13 percent of food grade phosphoric acid]

	Total 1948 production		Western market	
	Amount	Worth	Amount	Worth
	Short tons		*Short tons*	
Elemental phosphorus (50 percent P_2O_5)	600,000	$54,000,000	75,000	$6,750,000

NOTE.—Phosphoric acid figures include phosphoric acid used in producing phosphates compounds as well as acid available for market.

INVESTMENT

The initial capital requirements for the establishment of a plant large enough to produce $2,000,000 worth of phosphates will be $3,500,000. Broken down by components, the total investment requirements are as follows:

Plant and equipment		$2,000,000
Land		25,000
Working capital requirements:		
Inventory	$1,000,000	
Accounts receivable (30 days)	175,000	
Plant costs (30 days)	100,000	
Selling costs (30 days)	50,000	
Research	150,000	
		1,475,000
Total		3,500,000

SUMMARY

The proposed phosphates plant could hope to serve the western United States efficiently with high shipping costs of finished phosphates stopping the company from competing in eastern markets. Such a plant should be designed, and marketing plans laid, for distributing enough phosphoric acid and phosphates to use 5,000,000 pounds of phosphorus per year. This amount of phosphorus would produce 8,200 tons of phosphates having a market value of $1,150,000 per year and 9,100 tons of phosphoric acid to be marketed having a value of $820,000. Thus, a total estimated annual sales volume of $2,000,000 minimum seems necessary to operate in the industry. This will necessitate taking over approximately 20 percent of the present western market. Facing the fact that some 35 percent of this market is already held by one producer and that a second more powerful producer is about to enter the field, the outlook is not bright. The biggest single factor against entering the field is that supplies of elemental phosphorus are scarce and closely held by the major producers. There is reason to doubt that they would sell enough phosphorus to a new firm to allow it to take over 20 percent of the western market or 2 percent of the national total. The biggest hopes are (1) that the TVA producers might supply the phosphorus, being Government controlled and operated, and (2) that enough capital might be raised (an additional $10,000,000) to operate the company's own phosphorus plant in Idaho.

The industry's future is bright, with lack of power the chief factor holding back even greater advancement than has been enjoyed in the past few years. But it will probably take a major chemical company to crack the tight circle now in control.

Recommendation: No.

APPENDIX B

SECURITIES AND EXCHANGE COMMISSION REGULATIONS GOVERNING THE RAISING OF SMALL AMOUNTS OF CAPITAL

With certain exceptions, new security issues offered for sale in interstate commerce or by use of the mails are required by the Securities Act of 1933 to be registered with the Securities and Exchange Commission. The act gives the Commission authority to exempt from the registration requirements any class of securities issued in an amount not exceeding $300,000, subject to such conditions as the Commission may prescribe.

In accordance with this section, the Commission has issued rules and regulations which enable an issuer to sell securities without registration in an amount not exceeding $300,000. These rules merely require the filing of a brief letter of notification with the Commission at least 5 days prior to the offering, together with copies of any selling literature to be used in connection with the offering. The form of the letter of notification (Form S–3b–1) is reproduced herewith as exhibit A. Regulations, as amended to August 31, 1949, issued by the Commission known as Regulation A governing exemptions are given as exhibit B herewith.[1]

This exemption was intended by the Congress to enable small businesses to raise new capital and to permit large businesses to raise small amounts of capital from time to time without undergoing full registration. As originally enacted, the statute placed a limitation of $100,000 on the exemption, but by amendment in 1945 the limit was raised to $300,000.

The following table supplied by the Securities and Exchange Commission summarizes the number of filings and the dollar amount during each fiscal year since adoption of the present regulation.

Period	Number of filings	Dollar Amount
From Dec. 9, 1940 to June 30, 1941	923	$26, 203, 252. 00
Fiscal year ended—		
June 30, 1942	558	26, 399, 630. 00
June 30, 1943	353	17, 986, 987. 00
June 30, 1944	427	21, 933, 994. 00
June 30, 1945	580	38, 949, 393. 00
June 30, 1946	1, 453	181, 754, 535. 00
June 30, 1947	1, 516	210, 941, 113. 64
June 30, 1948	1, 617	209, 727, 139. 74
June 30, 1949	1, 396	187, 157, 661. 08

A further break-down of the Regulation A filings for the fiscal year ended June 30, 1949, showing on whose behalf the sale is to be made and whether an underwriter was proposed, is given in table I.

The foregoing figures, of course, do not show the amounts of the capital actually raised through these filings, but only the amounts proposed to be offered to the public.

[1] "In addition to Regulation A which provides the general exemption for small issues, other regulations cover special exemptions for certain types of securities. Regulation A–R provides a $25,000 exemption of notes and bonds secured by first liens on family dwellings. Regulation A–M is an exemption for assessable shares of stock of mining corporations. Regulation B is an exemption for fractional undivided interests in oil or gas rights. Regulation B–T is an exemption for interests in an oil royalty trust or similar type of trust or unincorporated association."

TABLE I.—*Securities and Exchange Commission: Small issues exempt from registration under Regulation A, Year Ended June 30, 1949*

	Offering in behalf of—			Underwriting arrangements			Total
	Issuer	Stockholder	Both issuer and stockholder	Commercial underwriter	Noncommercial underwriter [1]	No underwriter	
Filings covering offers of $100,000 or less	581	142	3	213	108	405	726
Filings covering offers of more than $100,000 but not more than $200,000	274	--------	2	62	38	176	276
Filings covering offers of more than $200,000 but not more than $300,000	383	--------	4	121	49	217	387
Total	1,238	142	9	396	195	798	1,389

[1] The term noncommercial underwriter is used for officers and directors of the issuer or other persons acting as underwriters who are not regularly engaged in the business.

EXHIBIT A

(As amended)

SECURITIES AND EXCHANGE COMMISSION

Washington 25, D. C.

FORM S–3b–1

FOR LETTERS OF NOTIFICATION UNDER REGULATION A [1]

The following information is given with respect to an offering of securities to be made pursuant to regulation A of the General Rules and Regulations under the Securities Act of 1933:

1. Give the full name and complete mailing address of each of the following:

(*a*) The issuer of the securities to be offered.

(*b*) The directors and officers of the issuer.

(*c*) The person or persons by, on behalf of, or for the benefit of whom the offering is to be made.

(*d*) The principal underwriters of the securities to be offered.[2]

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2. Give separately the title and amount of securities proposed to be offered (*a*) by, on behalf of, or for the benefit of the issuer and (*b*) by, on behalf of, or for the benefit of other persons.[3]

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3. As to securities to be offered for cash, give the information required by the following table, furnishing it as an estimate if necessary: [4]

	Total	*Per unit*
(*a*) Price to public	--------	--------
(*b*) Underwriting discounts and commissions	--------	--------

4. If any of the securities are to be offered otherwise than for cash, state the nature, amount, and value of the consideration to be received for the securities

[1] The use of this form is optional; the information required by rule 222 of regulation A to be included in the letter of notification may be submitted in any other form suitable to the person filing the letter of notification. The original and two copies of the letter of notification shall be filed.

[2] The term "principal underwriter" means an underwriter who is a party to the underwriting agreement with the issuer or with the person or persons by, on behalf of, or for the benefit of whom the securities are to be offered, if other than the issuer. Persons engaged in the distribution of the securities may be underwriters even though not regarded as such under local usage of the term. Whenever there is doubt as to whether or not a person is a principal underwriter, the circumstances should be fully described.

[3] If the securities are evidences of indebtedness, state the principal amount; if other securities, state the number of shares or other units.

[4] If the securities are to be offered "at the market," the information required by this item shall be given on the basis of the market price as established by bona fide sales made within a reasonable time prior to the date of filing the letter of notification.

and the basis upon which the offering is to be made per unit of securities offered. State the nature and amount of any commissions or solicitation expenses to be paid in connection with the offering.[5]

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5. State the aggregate amount at which all securities of the issuer have been offered to the public within one year by the person or persons filing the letter of notification.

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6. Give the approximate date of the proposed public offering.

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7. List the jurisdictions (States, Territories, the District of Columbia or foreign countries) in which it is proposed to sell the securities.[6]

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8. If the securities are to be offered by, on behalf of, or for the benefit of the issuer, state the purposes for which the net proceeds from the securities are to be used.

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9. State whether or not any written communication, advertisement, or radio broadcast of the type required by rule 223 to be filed with the Commission is to be used in connection with the proposed offering.

Signatures.[7]—This letter of notification has been signed in the city of _____, State of _____, on the _____ day of _____, 19____.

_____
(Issuer)

By _____
(Name and title)

EXHIBIT B

REGULATION A*

GENERAL EXEMPTION

Rule 220. Securities Exempted

(a) Except as provided in Rule 221 and in paragraph (d) of this rule, all securities offered in accordance with the terms and conditions of Regulation A, by, on behalf of, or for the benefit of an issuer shall be exempt from registration provided the aggregate offering price of the following shall not exceed $300,000:

(1) The securities of the issuer proposed to be presently offered by, on behalf of, or for the benefit of the issuer pursuant to Regulation A,

(2) All securities of the issuer currently being offered by, on behalf of, or for the benefit of the issuer under Regulation A,

(3) All securities of the issuer previously sold by, on behalf of, or for the benefit of the issuer pursuant to an offering under Regulation A commenced within one year prior to the commencement of the proposed offering, and

(4) All securities of the issuer neither registered nor exempt from registration nor issued in an exempt transaction which were sold by, on behalf of, or for the benefit of the issuer within one year prior to the commencement of the proposed offering.

(b) Except as provided in Rule 221 and in paragraph (d) of this rule, all securities offered in accordance with the terms and conditions of Regulation A, by, on behalf of, or for the benefit of any person or persons controlling, controlled by, or under common control with an issuer shall be exempt from registration if the aggregate offering price of the following shall not exceed $100,000:

(1) The securities of the issuer proposed to be presently offered by, on behalf of, or for the benefit of such person or persons pursuant to Regulation A,

(2) All securities of the issuer currently being offered by, on behalf of, or for the benefit of such person or persons under Regulation A,

(3) All securities of the issuer previously sold by, on behalf of, or for the benefit of such person or persons pursuant to an offering under Regulation

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[5] Include a brief statement of the method used or to be used in determining the value of the consideration to be received for the securities.

[6] If all or any part of the offering is to be made by use of the facilities of a securities exchange, a statement to that effect, giving the name of the exchange, will suffice as to the securities to be so offered.

[7] If none of the securities are to be offered by, on behalf of, or for the benefit of the issuer, the letter of notification may be signed by the person or persons by, on behalf of, or for the benefit of whom the securities are to be offered.

*As of August 31, 1949.

A commenced within one year prior to the commencement of the proposed offering, and

(4) All securities of the issuer neither registered nor exempt from registration nor issued in an exempt transaction which were sold by, on behalf of, or for the benefit of such person or persons within one year prior to the commencement of the proposed offering.

Provided, however, that the aggregate offering price of securities offered by, on behalf of, or for the benefit of the estate of a deceased person may exceed $100,000, but shall not exceed $300,000, if such securities are to be offered for the purpose of paying taxes or other expenses of the estate and if registration of such securities would not have been required if the offering had been made by such person prior to his death.

(c) Notwithstanding the provisions of paragraphs (a) and (b), (1) securities offered to a single holder of the majority of the outstanding voting stock of the issuer in connection with a pro rata offering to stockholders, need not be included in determining the amount of securities which may be offered pursuant to this regulation; and (2) securities exchanged for outstanding securities, claims or property in connection with a bona fide recapitalization or reorganization need not be included in computing the amount of securities which may be offered pursuant to this regulation otherwise than in such an exchange.

(d) Notwithstanding the provisions of paragraphs (a) and (b), the aggregate offering price of the securities enumerated in both such paragraphs shall not exceed $300,000 in any period of 12 months.

(e) An offering may be made pursuant to Regulation A even though it is contemplated that after the termination of the offering an offering of additional securities will be made.

(f) The aggregate offering price of assessable securities shall include the aggregate amount of all assessments legally leviable thereon at the time of the offering thereof or at any time thereafter.

(g) Where securities are offered "at the market," the aggregate offering price thereof shall be computed upon the basis of the market price as established by bona fide sales made on the first day of the offering.

(h) Where securities are offered in exchange for outstanding securities, claims, or property, the aggregate offering price thereof shall be computed upon the basis of the market value of the securities, claims, or property to be received in exchange as established by bona fide sales made within a reasonable time; if there have been no such sales the aggregate offering price shall be computed upon the basis of the fair value, as determined by some accepted standard, of the securities, claims, or property to be received in exchange.

Rule 221. Securities Excluded From Exemption

No exemption under this regulation shall be available for—

(a) Securities of investment trusts or investment companies which are subject to the Investment Company Act of 1940;

(b) Voting trust certificates;

(c) Fractional undivided interests in oil or gas rights as defined in Rule 300, or similar interests in other mineral rights;

(d) Certificates of interest as defined in Rule 360;

(e) Any securities issued by an individual who is a resident of a foreign country, a corporation incorporated in a foreign country, or any other person organized under the laws of, or having its principal place of business in, a foreign country; provided, that this regulation shall apply to the guarantee by a foreign government of securities of a political subdivision of such foreign government offered in exchange for other securities of such political subdivision;

(f) Any securities of an issuer so long as a registration statement of the issuer or of any person controlling, controlled by, or under common control with, the issuer is the subject of pending proceedings under Section 8 (b) or 8 (d) of the Act or of an order entered under either of these sections;

(g) Any securities of an issuer if the issuer, any promoter of the issuer presently connected with the issuer in any capacity, or any person controlling, controlled by, or under common control with the issuer (1) has been convicted within five years preceding the filing of the letter of notification of any felony or misdemeanor involving the sale of any security or (2) is subject to an order, judgment, or decree of any court of competent jurisdiction, entered within three years preceding the date of filing the letter of notification, enjoining it or him from engaging in or continuing any conduct or practice in connection with the sale of any security;

((h) is deleted by amendment.)

(i) Securities as to which a registration statement has been in effect in connection with the offering made under this regulation, before (1) the expiration of one

year from the date of the last sale made pursuant to the registration statement by the issuer or other person on behalf of or for the benefit of whom the securities were registered or by any underwriter and (2) the effective date of an amendment to the registration statement removing from a registered status all the securities remaining unsold by the issuer or other person on behalf of or for the benefit of whom they were registered or by any underwriter.

Rule 222. Letter of Notification

(a) No securities shall be offered under this regulation until five (5) days (Sundays and holidays excluded) after a letter of notification with respect thereto has been filed, as provided in paragraphs (b) and (c), by the issuer or by the person or persons by, on behalf of, or for the benefit of whom the offering is to be made, if other than the issuer. Every letter of notification shall contain the following information:

(1) The full names and complete mailing addresses of (A) the issuer; (B) all directors and officers of the issuer; (C) the person or persons by, on behalf of, or for the benefit of whom the offering is to be made; and (D) each principal underwriter.

(2) (A) The title of the securities proposed to be offered; (B) the principal amount of evidence of indebtedness or the number of shares or other units proposed to be offered; (C) the price per unit at which they are to be offered to the public; (D) the aggregate amount at which they are to be offered to the public; and (E) the aggregate amount at which all securities of the issuer have been offered to the public within one year by the person or persons filing the letter of notification. Where securities are to be offered "at the market" the information required by (C) and (D) shall be given upon the basis of the market price as established by bona fide sales made within a reasonable time prior to the date of filing the letter of notification.

(3) The approximate date of the proposed public offering.

(4) A list of the jurisdictions (States, Territories, the District of Columbia, or foreign countries) in which it is proposed to sell the securities. No securities shall be offered in any jurisdiction not mentioned in the original letter of notification until a supplementary letter stating the name of that jurisdiction has been filed. However, a statement that all or part of the offering is to be made by use of the facilities of a securities exchange (naming the exchange) shall suffice as to the securities to be so offered.

(5) If the securities are to be offered by, on behalf of, or for the benefit of the issuer, the purposes for which the net proceeds from the securities are to be used.

(b) An original and two copies of each letter of notification shall be filed, at least five (5) days (Sundays and holidays excluded) prior to any public offering of securities under the regulation, with the regional office of the Commission for the region in which the issuer's principal place of business is located. Form S–3b–1 may be used in supplying the information required to be set forth in the letter of notification.

(c) Any change in the matters stated in the letter of notification shall be set forth in a supplementary letter of notification, except that no supplementary letter of notification need be filed with respect to a change in the offering price of securities which are being offered at the market.

Rule 223. Written Communications, Advertisements, and Radio Broadcasts

(a) Three copies of every written communication, advertisement, or radio broadcast prepared or authorized by the issuer, any person controlling, controlled by, or under common control with, the issuer, or any principlal underwriter of the securities to be offered, which is proposed to be used at the commencement of the public offering under this regulation or intended to be sent or delivered thereafter to more than ten persons shall be filed, at least five (5) days (Sundays and holidays excluded) prior to any use thereof, with the office of the Commission with which the letter of notification is filed: *Provided*, That there need not be filed copies of any communication which does no more than identify the securities, state the price thereof, and state by whom orders will be executed.

(NOTE.—The material filed pursuant to this rule is required to be filed solely for the information of the Commission to aid it in the enforcement of Section 17 of the Act, and not for the purpose of enabling the Commission to cite any deficiency in the information contained therein. The failure of the Commission at any t me to take action upon any information filed pursuant to this rule does not indicate that the Commission considers the information accurate, complete or not misleading.)

(b) Every written communication, advertisement, or radio broadcast, a copy of which is required to be filed with the Commission pursuant to this rule, shall contain a statement in substantially the following form:

"Because these securities are believed to be exempt from registration, they have not been registered with the securities and exchange commission; but such exemption, if available, does not indicate that the securities have been either approved or disapproved by the commission or that the commission has considered the accuracy or completeness of the statements in this communication."

In written communications and advertisements the statement shall be set forth on the first page in type as large as that used generally in the body thereof.

(c) No written communication, advertisement, or radio broadcast, a copy of which is required to be filed with the Commission pursuant to this rule, shall be used unless it contains the following information:

(1) The name of the person or persons by, on behalf of, or for the benefit of whom the securities are being offered.

(2) The number of shares or other units being offered and the amount of underwriting discounts or commissions per unit or, if none, the per unit amount of expenses incurred or to be incurred in connection with the distribution of the securities (estimate if necessary).

(3) The aggregate amount of underwriting discounts and commissions or, if none, the aggregate amount of expenses incurred or to be incurred in connection with the distribution of the securities (estimate if necessary).

(4) If the securities are being offered by, on behalf of, or for the benefit of the issuer, the purposes for which the net proceeds from the securities are to be used.

Rule 224. Prohibition of Certain Representations

No written or oral communication used in connection with any offering under this regulation shall contain any language stating or implying that the Commission has in any way passed upon the merits of, or given approval to, the securities or the terms of the offering, or has determined that the securities are exempt from registration, or has made any finding that the statements in any such communication are accurate or complete.

APPENDIX C

MISCELLANEOUS STATISTICS RELATED TO INVESTMENT

TABLE I.—*Net United States direct-investment capital movements, by area and industry, 1945–47*

[In millions of dollars; increase (+) or decrease (−) in investments abroad]

	Total	Canada	American Republics	ERP countries	ERP dependencies	Other Europe	Other countries
Total, all industries:							
1945	+100.0	+39.0	+140.4	−6.8	−16.2	−87.0	+30.6
1946	+139.8	+14.6	+55.7	+14.7	+4.4	+1.0	+49.4
1947	+666.4	+28.8	+407.7	+43.1	+26.9	+1.7	+158.2
Manufacturing:							
1945	+67.5	+42.2	+21.2	+3.8	----------	+.7	−.4
1946	+16.5	−11.1	+16.3	+4.8	+.6	+.7	+5.2
1947	+72.9	−.5	+50.8	+9.6	+.3	+1.9	+10.8
Distribution:							
1945	−12.7	----------	+3.8	−12.5	+.1	+.2	−4.3
1946	+24.2	−.2	+8.1	+4.2	+.6	+.1	+11.5
1947	+43.0	−4.8	+31.4	+6.4	+1.7	----------	+8.3
Agriculture and fishing:							
1945	+43.1	+.3	+46.7	+1.2	(1)	----------	−5.1
1946	+6.8	+.6	+6.3	----------	−.9	----------	+.8
1947	−9.4	+.3	−11.2	----------	+.8	----------	+.7
Mining and smelting:							
1945	−3.0	+2.5	−6.7	----------	+1.0	----------	+.2
1946	−12.9	(1)	−12.2	----------	−.5	----------	−.1
1947	+18.4	−.7	+18.2	+.2	−2.0	−1.5	+4.2
Petroleum:							
1945	+87.8	−3.9	+71.1	−2.7	−17.3	+.1	+40.5
1946	+158.2	+12.1	+104.3	+6.6	+4.5	−.1	+30.7
1947	+454.6	+26.9	+260.8	+18.7	+25.1	+1.3	+122.0
Public utilities:							
1945	−96.1	−5.9	+1.7	+.1	----------	−88.1	−3.9
1946	−84.1	−5.5	−79.7	----------	(1)	+.1	+.9
1947	−9.7	−26.1	+17.9	+.1	----------	----------	−1.6
Miscellaneous:							
1945	+13.4	+3.8	+2.6	+3.3	(1)	+.1	+3.6
1946	+31.1	+18.7	+12.6	−.9	+.1	+.2	+.4
1947	+96.6	+33.7	+39.8	+8.1	+1.0	----------	+13.8

[1] Less than $50,000.

Source: U. S. Department of Commerce.

TABLE II.—*Expenditures on new plant and equipment by United States business;*[1] *1941–49* [2]

[Millions of dollars]

	1941	1942	1943	1944	1945	1946	1947	1948	1948				1949		
									January–March	April–June	July–September	October–December	January–March	April–June [3]	July–September [3]
Manufacturing	3,400	2,760	2,250	2,390	3,210	5,910	7,460	8,340	1,800	2,140	2,090	2,320	1,850	1,960	1,840
Mining	680	410	360	500	440	560	690	800	180	200	200	220	190	200	190
Railroad	560	540	460	580	550	570	910	1,320	270	310	320	410	360	410	310
Other transportation	340	260	190	280	320	660	800	700	180	190	170	170	130	140	170
Electric and gas utilities	710	680	540	490	630	1,040	1,900	2,680	500	640	690	850	680	810	830
Commercial and miscellaneous [4]	2,490	1,470	730	970	1,480	3,300	4,430	5,390	1,240	1,340	1,360	1,440	1,260	1,300	1,280
Total	8,190	6,110	4,530	5,210	6,630	12,040	16,180	19,230	4,170	4,820	4,830	5,410	4,460	4,820	4,630

[1] Excludes agriculture; figures represent estimates of actual expenditures except where indicated to be anticipated expenditures.

[2] Figures for 1941–44 are Federal Reserve Board estimates based on Securities and Exchange Commission and other data. These figures do not agree precisely with the totals included in the gross national product estimates of the Department of Commerce. The main difference lies in the inclusion in Commerce figures of certain outlays charged to current account.

[3] Estimates based on anticipated capital expenditures of business.

[4] Includes trade, service, finance, and communication.

NOTE.—Figures are rounded and will not necesarily add to totals.

Source: Securities and Exchange Commission.

TABLE III.—*Selected types of long-term savings of individuals*

[In millions of dollars]

Dec. 31	Savings and loan associations [1]	Life insurance companies [2]	Mutual savings banks [3]	Commercial banks [4]	Postal savings [5]	United States savings bonds [6]	Total	Net increase during year
1920	$1,741	$5,488	$4,806	$10,546	$166	$761	$23,508	
1921	1,965	5,893	5,541	11,079	148	652	25,278	$1,770
1922	2,210	6,360	5,985	12,289	135	730	27,709	2,431
1923	2,626	6,981	6,484	13,656	135	373	30,255	2,546
1924	3,153	7,706	6,912	15,044	137	411	33,363	3,108
1925	3,811	8,592	7,349	16,314	138	376	36,580	3,217
1926	4,378	9,594	7,799	17,237	143	356	39,507	2,927
1927	5,027	10,648	8,352	18,674	153	245	43,099	3,592
1928	5,762	11,782	8,731	19,295	158	95	45,823	2,724
1929	6,237	12,801	8,797	19,165	169	----------	47,169	1,346
1930	6,296	13,690	9,384	18,647	250	----------	48,267	1,098
1931	5,916	14,293	9,939	15,955	613	----------	46,716	−1,551
1932	5,326	14,319	9,890	12,101	915	----------	42,551	−4,165
1933	4,750	14,613	9,506	10,979	1,229	----------	41,077	−1,474
1934	4,458	15,687	9,670	11,992	1,232	----------	43,039	1,962
1935	4,254	17,203	9,829	12,899	1,229	153	45,567	2,528
1936	4,131	18,736	10,013	13,709	1,291	475	48,355	2,788
1937	4,015	20,181	10,126	14,410	1,303	964	50,999	2,644
1938	4,005	21,512	10,235	14,427	1,286	1,442	52,907	1,908
1939	4,060	23,024	10,481	14,865	1,315	1,900	55,645	2,738
1940	4,272	24,663	10,618	15,403	1,342	2,700	58,998	3,353
1941	4,652	26,592	10,490	15,523	1,392	5,200	63,849	4,851
1942	4,910	28,734	10,621	16,056	1,459	13,300	75,080	11,231
1943	5,494	31,365	11,707	19,001	1,837	24,600	94,004	18,924
1944	6,305	34,212	13,332	23,871	2,406	36,100	116,226	22,222
1945	7,365	37,509	15,332	29,929	3,013	42,800	135,948	19,722
1946	8,548	40,713	16,813	33,447	3,379	43,800	146,700	10,752
1947	9,753	43,820	17,744	34,694	3,523	45,700	155,234	8,534
1948 [7]	11,000	47,500	18,390	35,300	3,430	47,500	163,120	7,886

[1] Estimated private investments in savings and loan associations, including deposits and investment securities. Does not include shares pledged against mortgage loans. Source: Home Loan Bank Board.

[2] Estimated accumulations in United States life insurance companies include reserves plus dividends left to accumulate, minus premium notes and policy loans. Source: Institute of Life Insurance.

[3] Deposits. Prior to 1938 data based on savings deposits in mutual savings banks as reported by the Comptroller of the Currency. All figures include a small percentage of Christmas savings and other special accounts in addition to regular deposits. Source: National Association of Mutual Savings Banks and Federal Deposit Insurance Corporation.

[4] Time deposits of individuals, partnerships and corporations. From 1920 to 1935, based on Comptroller of the Currency figures as of June 30 for all national, State commercial and stock savings banks and trust companies. Interpolations as of December 31 prepared by Operating Analysis Division. From 1936 to 1946, December 31 figures as reported by the Comptroller of the Currency and Federal Deposit Insurance Corporation. Source: Comptroller of the Currency, Federal Deposit Insurance Corporation and Home Loan Bank Board.

[5] Due depositors: Outstanding principal and accrued interest on certificates of deposit, outstanding savings stamps and unclaimed deposits. Source: Post Office Department.

[6] Current redemption value of savings held by individuals at year-end—from 1920 to 1928, War savings securities; 1935 to date includes United States savings bonds, series A–G. Source: U. S. Treasury Department.

[7] Preliminary estimates.

Source: Federal Savings and Loan Insurance Corporation.

TABLE IV.—*New non-Federal security issues, by major issuers and purposes, 1919–48*

[In billions of dollars]

Year	Domestic, new capital				Domestic, refunding				Foreign, total	All issues, total
	Total	State and municipal	Corporate		Total	State and municipal	Corporate			
			Bonds	Stocks			Bonds	Stocks		
1919	2.9	0.7	0.8	1.4	0.4	(1)	0.3	0.1	0.8	4.1
1920	3.2	.7	1.5	1.0	.2	(1)	.2	(1)	.6	4.0
1921	2.9	1.2	1.4	.3	.6	(1)	.6	(1)	.7	4.2
1922	3.3	1.1	1.6	.6	.8	(1)	.7	(1)	.9	5.0
1923	3.7	1.0	2.0	.7	.6	(1)	.5	.1	.5	4.8
1924	4.4	1.4	2.2	.8	.5	(1)	.5	(1)	1.2	6.1
1925	5.1	1.4	2.5	1.2	.6	(1)	.5	.1	1.3	7.0
1926	5.1	1.3	2.7	1.1	.8	(1)	.7	.1	1.3	7.2
1927	6.2	1.5	3.2	1.5	1.9	(1)	1.6	.3	1.5	9.6
1928	6.7	1.4	2.4	2.9	1.6	(1)	1.1	.5	1.5	9.8
1929	9.4	1.4	2.1	5.9	1.3	(1)	.5	.8	.7	11.4
1930	5.9	1.4	3.0	1.5	.5	(1)	.5	(1)	1.1	7.5
1931	2.7	1.2	1.2	.3	.9	(1)	.8	(1)	.3	3.9
1932	1.1	.8	.3	(1)	.4	.1	.3	(1)	.1	1.6
1933	.6	.5	(1)	.1	.3	(1)	.2	(1)	.1	1.0
1934	.9	.8	.1	(1)	.4	.1	.3	(1)	(1)	1.3
1935	1.3	.9	.3	.1	2.2	.4	1.8	.1	.1	3.6
1936	1.9	.7	.8	.4	3.8	.4	3.2	.2	.1	5.8
1937	1.9	.7	.8	.4	1.4	.2	.9	.3	.2	3.5
1938	1.9	1.0	.8	.1	1.3	.1	1.2	(1)	.1	3.3
1939	1.3	.9	.3	.1	1.9	.2	1.6	.1	(1)	3.3
1940	1.5	.8	.6	.1	2.5	.5	1.8	.2	(1)	4.0
1941	1.6	.5	.9	.2	1.9	.4	1.4	.1	(1)	3.5
1942	.9	.3	.5	.1	.6	.2	.4	(1)	(1)	1.5
1943	.6	.2	.3	.1	.9	.3	.6	.1	.1	1.6
1944	.8	.2	.4	.2	2.9	.4	2.2	.3	(1)	3.7
1945	1.8	.5	.6	.7	5.3	.3	4.3	.7	.1	7.1
1946	4.6	1.0	2.1	1.5	3.0	.2	2.4	.6	.1	7.7
1947	7.0	2.2	3.6	1.2	1.5	(1)	1.2	.3	.2	[2] 8.7
1948	8.5	2.6	[3] 5.0	.9	.4	.1	.3	(1)	(1)	8.9

[1] Less than $50,000,000.

[2] Includes $244,000,000 of issues of the International Bank for Reconstruction and Development which are not shown separately.

[3] Includes the Shell Caribbean Petroleum Co. issue of $250,000,000, classified as "foreign" by the Chronicle.

Sources: Board of Governors, Federal Reserve System, 1919–39, Banking and Monetary Statistics, table No. 137, p. 487; 1940–48, Federal Reserve Bulletin, May 1949, p. 550.

TABLE V.—*Estimated ownership of U. S. Government securities by bank and nonbank investors*

[Par value [1] in billions of dollars]

	Total Federal securities outstanding	Held by banks			Held by nonbank investors						
		Total	Commercial banks and trust companies	Federal Reserve banks	Total	Individuals	Insurance companies	Mutual savings banks	Other corporations and associations [2]	State and local governments	U. S. Government investment accounts
1939—December	47.6	18.4	15.9	2.5	29.3	10.4	6.3	3.1	2.6	0.4	6.5
1940—June	48.5	18.6	16.1	2.5	29.9	10.3	6.5	3.1	2.5	.4	7.1
December	50.9	19.5	17.3	2.2	31.5	10.9	6.9	3.2	2.4	.5	7.6
1941—June	55.3	21.8	19.7	2.2	33.5	11.5	7.1	3.4	2.4	.6	8.5
December	64.3	23.7	21.4	2.3	40.6	14.1	8.2	3.7	4.4	.7	9.5
1942—June	77.0	28.7	26.0	2.6	48.3	18.4	9.2	3.9	5.4	.9	10.6
December	112.5	47.3	41.1	6.2	65.2	24.5	11.3	4.5	11.6	1.0	12.2
1943—June	140.8	59.4	52.2	7.2	81.4	31.7	13.1	5.3	15.5	1.5	14.3
December	170.1	71.5	59.9	11.5	98.7	38.4	15.1	6.1	20.0	2.1	16.9
1944—June	202.6	83.3	68.4	14.9	119.3	46.5	17.3	7.3	25.9	3.2	19.1
December	232.1	96.5	77.7	18.8	135.6	53.5	19.6	8.3	28.1	4.3	21.7
1945—June	259.1	106.0	84.2	21.8	153.1	59.8	22.7	9.6	30.9	5.3	24.9
December	278.7	115.0	90.8	24.3	163.6	64.8	24.4	10.7	30.2	6.5	27.0
1946—February (peak)	279.8	116.7	93.8	22.9	163.1	64.6	24.8	11.1	27.9	6.7	28.0
June	269.9	108.2	84.4	23.8	161.7	64.1	25.3	11.5	25.3	6.5	29.1
December	259.5	97.9	74.5	23.3	161.6	64.9	25.3	11.8	22.4	6.3	30.9
1947—June	258.4	91.9	70.0	21.9	166.5	67.1	25.0	12.1	22.3	7.1	32.8
December	257.0	91.3	68.7	22.6	165.7	66.6	24.3	12.0	21.2	7.3	34.4
1948—June	252.4	85.9	64.6	21.4	166.4	67.0	23.2	12.0	20.7	7.8	35.7
December	252.9	85.8	62.5	23.3	167.1	67.6	21.5	11.5	21.4	7.9	37.3
1949—May (preliminary)	251.9	82.5	62.8	19.7	169.4	68.7	21.0	11.6	22.4	8.1	37.5

[1] United States savings bonds series A-D, E, and F are included at current redemption rates.
[2] Includes savings and loan associations, dealers and brokers, and investments of foreign balances and international accounts in this country.

Source: U. S. Treasury Department Bulletin.

TABLE VI.—*Distribution of assets, United States life-insurance companies: Dec. 31, 1900–48*

[In billions of dollars]

Year	U. S. Government securities	Securities of business and industry					Mortgages	Real estate	Policy loans	State, local, and foreign government bonds	Miscellaneous assets	Total assets
		Total	Railroad bonds	Public utility bonds	Industrial and other bonds	Stocks						
1900	(1)						0.5	0.2	0.09			1.7
1910	(1)		(2)			0.1	1.2	.2	.5			3.9
1920	0.8					.07	2.4	.2	.9			7.3
1921	.8	1.9	1.7	0.2	0.04	.07	2.8	.2	1.1	0.7	0.4	7.9
1922	.9	2.1	1.8	.2	.06	.06	3.1	.2	1.1	.7	.5	8.7
1923	.8	2.3	1.9	.3	.07	.06	3.7	.2	1.2	.7	.5	9.5
1924	.7	2.7	2.1	.5	.09	.06	4.2	.2	1.3	.6	.6	10.4
1925	.7	3.1	2.2	.7	.1	.08	4.8	.3	1.4	.7	.6	11.5
1926	.5	3.5	2.4	.9	.1	.09	5.6	.3	1.6	.7	.8	12.9
1927	.5	4.0	2.5	1.2	.2	.1	6.2	.4	1.8	.7	.9	14.4
1928	.4	4.6	2.7	1.4	.2	.2	6.8	.4	2.0	.8	1.0	16.0
1929	.3	4.9	2.8	1.4	.3	.4	7.3	.5	2.4	1.0	1.1	17.5
1930	.3	5.3	2.9	1.6	.4	.5	7.6	.5	2.8	1.1	1.1	18.9
1931	.4	5.6	2.9	1.7	.4	.5	7.7	.7	3.4	1.3	1.2	20.2
1932	.5	5.5	2.9	1.7	.4	.5	7.3	.9	3.8	1.3	1.4	20.8
1933	.9	5.3	2.8	1.7	.4	.4	6.7	1.3	3.8	1.4	1.6	20.9
1934	1.9	5.4	2.7	1.8	.4	.4	5.9	1.7	3.7	1.6	1.7	21.8
1935	2.9	5.8	2.6	2.1	.6	.5	5.3	2.0	3.5	1.8	1.9	23.2
1936	3.9	6.5	2.7	2.5	.7	.6	5.1	2.1	3.4	1.9	1.9	24.9
1937	4.7	7.0	2.8	2.8	1.0	.5	5.2	2.2	3.4	2.0	1.7	26.2
1938	5.0	7.8	2.7	3.3	1.3	.5	5.4	2.2	3.4	2.1	1.8	27.8
1939	5.4	8.5	2.8	3.8	1.4	.5	5.7	2.1	3.2	2.3	2.0	29.2
1940	5.9	9.2	2.8	4.3	1.5	.6	6.0	2.1	3.1	2.5	2.2	30.8
1941	6.7	10.2	2.9	4.9	1.8	.6	6.4	1.9	2.9	2.6	2.0	32.7
1942	9.2	10.3	2.8	5.2	1.8	.6	6.7	1.7	2.7	2.5	1.9	34.9
1943	12.4	10.5	2.8	5.2	1.9	.6	6.7	1.4	2.4	2.4	2.0	37.8
1944	16.4	10.7	2.8	5.3	1.9	.7	6.7	1.1	2.1	2.2	1.9	41.1
1945	20.6	11.1	3.0	5.2	1.9	1.0	6.6	.9	2.0	1.9	1.7	44.8
1946	21.7	13.1	3.0	5.6	3.3	1.2	7.2	.7	1.9	1.9	1.8	48.2
1947	20.0	16.2	2.9	6.9	5.0	1.4	8.7	.9	1.9	1.9	2.1	51.7
1948	16.8	20.3	3.0	8.7	7.2	1.4	10.9	1.1	2.1	2.3	2.1	55.6

[1] Less than $10,000,000.
[2] In 1905 holdings of railroad bonds of just over $1,000,000,000 represented one-third of the total assets.

Source: Life Insurance Fact Book, division of statistics and research, Institute of Life Insurance, New York, N. Y.

TABLE VII.—*United States life insurance companies: Percentage distribution of assets, as of Dec. 31, 1921–48*

[Percent]

Year	U. S. Government securities	Foreign government, State, provincial, and local bonds	Securities of business and industry	Mortgages	Real estate	Policy loans	Miscellaneous assets	Total
1921	10.6	8.5	24.5	35.2	2.3	13.3	5.6	100.0
1922	10.5	7.7	24.7	36.1	2.3	13.2	5.5	100.0
1923	8.8	7.1	24.7	38.7	2.6	12.7	5.4	100.0
1924	6.9	6.1	26.4	40.2	2.3	12.7	5.4	100.0
1925	5.6	5.8	26.9	41.6	2.3	12.5	5.3	100.0
1926	3.9	5.2	27.1	43.0	2.3	12.4	6.1	100.0
1927	3.3	5.1	27.6	43.0	2.4	12.4	6.2	100.0
1928	2.6	5.3	28.5	42.4	2.5	12.5	6.2	100.0
1929	2.0	5.9	28.0	41.7	2.7	13.6	6.1	100.0
1930	1.8	6.0	28.3	40.1	2.9	14.9	6.0	100.0
1931	1.9	6.4	27.6	38.0	3.4	16.7	6.0	100.0
1932	2.2	6.5	26.4	35.3	4.5	18.3	6.8	100.0
1933	4.2	6.6	25.4	32.0	6.1	18.0	7.7	100.0
1934	8.6	7.3	24.8	26.8	7.7	16.7	8.1	100.0
1935	12.6	7.6	25.0	23.0	8.6	15.2	8.0	100.0
1936	15.8	7.6	26.2	20.6	8.6	13.7	7.5	100.0
1937	17.7	7.7	26.8	19.9	8.3	13.0	6.6	100.0
1938	17.9	7.7	28.2	19.6	7.8	12.2	6.6	100.0
1939	18.4	8.0	28.9	19.4	7.3	11.1	6.9	100.0
1940	19.0	8.1	29.8	19.3	6.7	10.0	7.1	100.0
1941	20.5	8.1	31.0	19.6	5.7	8.9	6.2	100.0
1942	26.4	7.0	29.5	19.2	4.7	7.7	5.5	100.0
1943	32.9	6.3	27.8	17.7	3.6	6.3	5.4	100.0
1944	39.9	5.2	26.1	16.3	2.6	5.2	4.7	100.0
1945	45.9	4.3	24.8	14.8	1.9	4.4	3.9	100.0
1946	44.9	3.9	27.2	14.8	1.5	3.9	3.8	100.0
1947	38.7	3.8	31.2	16.8	1.7	3.7	4.1	100.0
1948	30.2	4.2	36.6	19.5	1.9	3.7	3.9	100.0

Sources: Spectator Year Book and Institute of Life Insurance.

TABLE VIII.—*United States life insurance companies: Insurance in force, assets and policy reserves with percentage relationships, as of Dec. 31, 1900–1948*

Year	Insurance in force	Assets	Policy reserves	Portion of assets held as offset to—		Portion of insurance in force covered by—	
				Policy reserves	Owners' equity and other liabilities	Policy reserves	Total assets
	Billions	*Billions*	*Billions*	*Percent*	*Percent*	*Percent*	*Percent*
1900	$8.6	$1.7	$1.4	82.4	17.6	16.3	19.8
1910	16.4	3.9	3.2	82.1	17.9	19.5	23.8
1920	42.3	7.3	6.3	86.3	13.7	14.9	17.3
1921	46.0	7.9	6.9	87.3	12.7	15.0	17.2
1922	50.3	8.6	7.4	86.0	14.0	14.7	17.1
1923	56.8	9.5	8.1	85.3	14.7	14.3	16.7
1924	63.8	10.4	8.9	85.6	14.4	13.9	16.3
1925	71.7	11.5	9.9	86.1	13.9	13.8	16.0
1926	79.6	12.9	11.1	86.0	14.0	13.9	16.2
1927	87.0	14.4	12.3	85.4	14.6	14.1	16.6
1928	95.2	16.0	13.6	85.0	15.0	14.3	16.8
1929	103.1	17.5	14.9	85.1	14.9	14.5	17.0
1930	107.9	18.9	16.2	85.7	14.3	15.0	17.5
1931	108.9	20.2	17.4	86.1	13.9	16.0	18.5
1932	103.1	20.8	17.8	85.6	14.4	17.3	20.2
1933	98.0	20.9	18.1	86.6	13.4	18.5	21.3
1934	98.5	21.8	19.0	87.2	12.8	19.3	22.1
1935	100.7	23.2	20.4	87.9	12.1	20.3	23.0
1936	104.7	24.9	21.8	87.6	12.4	20.8	23.8
1937	109.6	26.2	23.2	88.5	11.5	21.2	23.9
1938	111.0	27.8	24.5	88.1	11.9	22.1	25.0
1939	114.0	29.2	25.8	88.4	11.6	22.6	25.6
1940	117.8	30.8	27.2	88.3	11.7	23.1	26.1
1941	124.7	32.7	28.9	88.4	11.6	23.2	26.2
1942	130.3	34.9	30.8	88.3	11.7	23.6	26.8
1943	140.3	37.8	33.0	87.3	12.7	23.5	26.9
1944	149.1	41.0	35.6	86.8	13.2	23.9	27.5
1945	155.7	44.8	38.7	86.4	13.6	24.9	28.8
1946	174.6	48.2	41.7	86.5	13.5	23.9	27.6
1947	191.3	51.7	44.9	87.0	13.0	23.5	27.1
1948	207.1	55.6	48.2	86.7	13.3	23.3	26.8

Source: Life Insurance Fact Book, Institute of Life Insurance.

TABLE IX.—*United States life insurance companies: Premium income and investment income with percentage relationship, years ended Dec. 31, 1911–48*

Year	Income			Ratio investment income to—	
	Premium	Investment and other	Total	Premium income	Total income
	Billions	*Billions*	*Billions*	*Percent*	*Percent*
1911	$0.6	$0.2	$0.8	33.3	25.0
1920	1.4	.4	1.8	28.6	22.2
1921	1.5	.5	3.0	33.3	25.0
1922	1.7	.4	2.1	23.5	19.0
1923	1.9	.5	2.4	26.3	20.8
1924	2.1	.6	2.7	28.6	22.2
1925	2.4	.6	3.0	25.0	20.0
1926	2.6	.7	3.3	26.9	21.2
1927	2.9	.8	3.7	27.6	21.6
1928	3.1	1.0	4.1	32.2	24.4
1929	3.3	1.0	4.3	30.3	23.3
1930	3.5	1.1	4.6	31.4	23.9
1931	3.7	1.1	4.8	29.7	22.9
1932	3.5	1.1	4.6	31.4	23.9
1933	3.3	1.3	4.6	39.4	28.3
1934	3.5	1.3	4.8	37.1	27.1
1935	3.7	1.4	5.1	37.9	27.5
1936	3.7	1.5	5.2	40.5	28.8
1937	3.8	1.5	5.3	39.5	28.3
1938	3.8	1.6	5.4	42.1	29.6
1939	3.8	1.6	5.4	42.1	29.6
1940	3.9	1.8	5.7	46.2	31.6
1941	4.1	1.8	5.9	43.9	30.5
1942	4.2	1.8	6.0	42.9	30.0
1943	4.4	2.0	6.4	45.4	31.3
1944	4.9	2.1	7.0	42.8	30.0
1945	5.2	2.5	7.7	48.1	32.5
1946	5.7	2.4	8.1	42.1	29.6
1947	6.7	2.3	9.0	34.3	25.6
1948	7.2	2.4	9.6	33.3	25.0

Source: Life Insurance Fact Book: Institute of Life Insurance.

TABLE X.—*United States life-insurance companies: Life-insurance-income dollar, years ended Dec. 31, 1942–48*

	1942	1943	1944	1945	1946	1947	1948
Income:	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*	*Cents*
Premiums	75.6	75.7	76.6	76.9	77.8	79.3	80.0
Investment earnings	22.3	21.9	20.8	20.5	19.5	18.3	18.8
Other income	2.1	2.4	2.6	2.6	2.7	2.4	1.2
	100.0	100.0	100.0	100.0	100.0	100.0	100.0
How used:							
Additions to policy reserves and other funds:							
Benefit payments	44.8	41.8	40.4	40.5	39.4	39.9	41.6
Net additions to policy reserves	31.8	37.2	39.6	41.2	38.8	35.2	34.8
Additions to special reserves and surplus funds	7.5	4.7	4.0	2.2	3.8	5.8	4.6
	84.1	83.7	84.0	83.9	82.0	80.9	81.0
Operating expenses:							
Agency	8.5	8.5	8.7	8.9	10.0	10.4	10.2
Home-office salaries	2.6	2.5	2.4	2.3	2.7	3.0	3.0
Other	2.8	2.6	2.5	2.5	3.0	3.5	3.7
	13.9	13.6	13.6	13.7	15.7	16.9	16.9
Taxes	1.7	2.0	2.0	2.0	1.8	1.8	1.6
Dividends to stockholders	.3	.7	.4	.4	.5	.4	.5
	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Sources: Institute of Life Insurance and Spectator Yearbook. Before 1947, accident and health business of life companies was not included.

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