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For presentation to its contributing members, the National Bureau has purchased copies of the Senate report from which the estimates published in the last *Bulletin*, National Income, 1929-1932, were taken. Dr. Simon Kuznets, of the National Bureau staff, was in charge of this study of national income which was carried on by the Department of Commerce in cooperation with the National Bureau of Economic Research. The books will be bound and sent to contributing members within a fortnight.

German Business Cycles, 1924-1933

CARL T. SCHMIDT

Research Associate, National Bureau of Economic Research, 1931-1932

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NON-PROFIT MEMBERSHIP CORPORATION FOR IMPARTIAL STUDIES IN ECONOMIC AND SOCIAL SCIENCE

Recent Corporate Profits in the United States

SOLOMON FABRICANT

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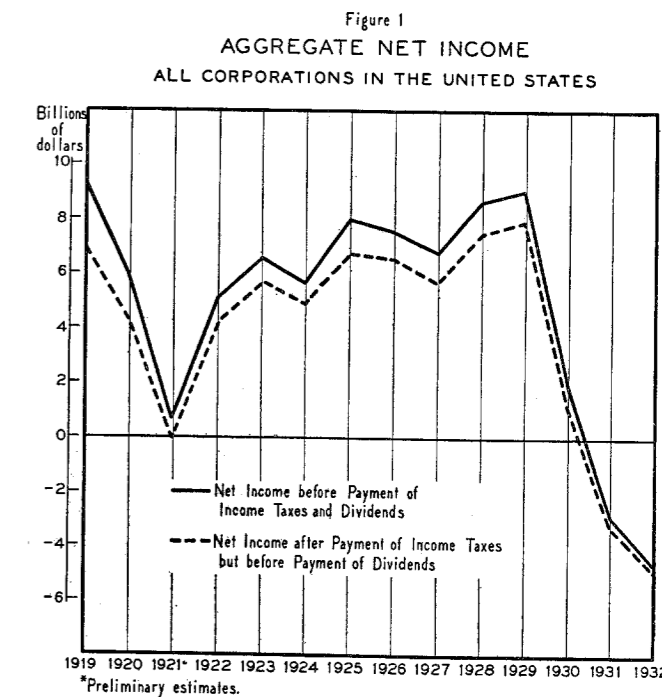
THE low point in profits during the depression, according to the published statements of large corporations, was reached in the first quarter of 1933. With the rise in the volume of business, and in the level of prices, deficits decreased and net incomes increased in the succeeding quarters of the year (with a temporary halt in the last quarter), and there are indications of a continuance of these movements in more recent months.

But since current figures are of necessity confined to the reports of the larger companies, they do not indicate accurately the profits or losses of all corporations in the United States. At best, they indicate the direction of movement in the current state of fortune or misfortune of American corporations. The amount of fall or rise can be accurately ascertained only from the compilations of income tax reports made by the United States Bureau of Internal Revenue; but these are published in final form almost two years after the year to which they refer. This part of the story of the depression, therefore, cannot be told in any complete form at this time. However, final figures are now available for the period through 1931, and estimates may be made for 1932 from preliminary reports recently published by the income tax division.

The data compiled by the Bureau of Internal Revenue not only provide the facts as to profits; they also give a composite picture of operations not generally made available even by the large corporations that publish financial statements. The details regarding receipts and deductions, included in the aggregate income account of all corporations, help to throw light upon the methods underlying the computations of profits. The nature of the accounting estimates of profits, and the approximative character of the reported figures on corporate earnings, may be made clearer by a study of these materials. The present *Bulletin* is based upon these comprehensive Federal data.¹

PROFITS OF ALL CORPORATIONS IN THE UNITED STATES

The course of aggregate profits of American corporations for the period 1919-32 is shown in Table 1 and presented graphically in Figure 1. The figures are those reported, for income tax purposes, to the Treasury Department. Income and profits taxes are also given for the same period, together with net profits after deducting these payments.



¹ Preliminary figures for 1932 were given by Professor R. C. Epstein in *Industrial Profits in Prosperity and Depression, 1919-1932, Bulletin 44* of this series. These figures, which were confined to ratios of net earnings to capitalization, related to a sample of 71 large industrial corporations, not to all corporations in the United States.

Table 1
AGGREGATE NET INCOME OF ALL CORPORATIONS IN
THE UNITED STATES, 1919-1932
(Excluding tax-exempt corporations and life insurance companies)
(In millions of dollars)

Year	Aggregate net income before payment of income taxes and dividends ¹	Income- and profits-taxes paid ²	Aggregate net income after payment of income taxes but before payment of dividends
1919	9,320	2,410	6,910
1920	5,920	1,640	4,280
1921	640	710	-70
1922	5,070	770	4,300
1923	6,640	920	5,720
1924	5,740	870	4,870
1925	7,990	1,160	6,830
1926	7,840	1,210	6,630
1927	6,840	1,110	5,730
1928	8,670	1,170	7,500
1929	9,130	1,180	7,950
1930	1,960	700	1,260
1931	-2,850	390	-3,240
1932*	-4,600	330	-4,930

* Preliminary estimates.

¹ Statutory net income plus tax-exempt interest, adjusted to secure comparability (see Ebersole, Burr and Peterson, *Review of Economic Statistics*, November 1929, p. 180). Life insurance companies, which do not report their entire net income, have been excluded.

² Corrected for shortage in tabulation (see *Review of Economic Statistics*, November 1929, p. 180).

The duplication in profits due to intercorporate payments is avoided by the exclusion of dividends received from other corporations. However, there remains some duplication of losses due to the failure of companies whose capital stock is held by other corporations. In this case a loss may be reported both by a corporation being liquidated

and by a company holding its stock, though the reports would not necessarily be made in the same year. There is some additional understatement of the true amount of profits because of a tendency, for the smaller companies at least, to distribute a portion of net income in the form of salaries or other compensation to stockholders (chiefly officers) to avoid taxes and for other reasons. We should note further that the figures in Table 1 do not include the earnings of tax-exempt corporations, such as cooperative, charitable, educational, and labor organizations, and Federal land banks, which are not required to report their net incomes. Life insurance companies are subject to tax only upon part of their income, and for this reason they have been excluded.

All the depressions which have afflicted American business since the World War are reflected clearly in the fluctuations of profits. The crash in 1920 and the deep trough of 1921, the slight depressions of 1924 and 1927, and the great collapse in 1930-32 are all graphically depicted.²

The huge aggregate deficit sustained in 1931 and 1932 does not mean, of course, that all corporations suffered a loss. This deficit is the figure obtained by combining the net incomes of corporations reporting such net incomes with the losses of 'no-income' corporations. (The details for 1927-32 are shown in Table 2.) Lack of taxable net income, be it noted, is not necessarily equivalent to absence

² The trend in the rate of profit, however, is not accurately shown here, since changes in invested capital are not taken into account. There are available no reliable figures indicating the movement in the net worth of all corporations in the United States for this entire period.

Table 2
NET INCOMES OF 'INCOME' CORPORATIONS AND DEFICITS OF 'NO-INCOME'
CORPORATIONS, 1927-1932¹
All Corporations in the United States
(Excluding tax-exempt corporations and life insurance companies)

Year	'Income' Corporations		'No-Income' Corporations		All Corporations	
	Number of returns in thousands	Net income ² in millions of dollars	Number of returns in thousands	Net deficit ² in millions of dollars	Number of returns in thousands ³	Aggregate net income or deficit ² in millions of dollars
1927	259	9,220	166	-2,380	425	6,840
1928	268	10,950	175	-2,280	443	8,670
1929	269	11,930	187	-2,800	456	9,130
1930	221	6,640	242	-4,680	463	1,960
1931	176	3,760	284	-6,610	460	-2,850
1932*	81	2,400	366	-7,000	447	-4,600

* Preliminary estimates.

¹ Consolidated returns are taken to represent one company. Changes that occurred in the relative number of consolidated reports probably affect but slightly the distribution of companies between the two groups shown.

² Statutory net income plus tax-exempt interest, or statutory deficit minus tax-exempt interest.

³ Excluding inactive corporations.

Table 3
RATE OF RETURN ON BOOK VALUE OF STOCK EQUITY, 1927-1932
All Corporations in the United States
(Excluding tax-exempt corporations and life insurance companies)

Industrial group	Ratio of Net Profits after Tax to Book Value of Stock Equity, ¹ in Percentage Form						Ratio of Net Profits after Tax, plus Compensation of Officers, ² to Book Value of Stock Equity, ¹ in Percentage Form			
	1927	1928	1929	1930	1931	1932*	1928	1929	1930	1931
<i>Industrial group</i>										
Agriculture and related industries	1.3	2.2	1.4	-2.8	-5.2	-5.9	3.7	3.1	-1.1	-3.9
Mining and quarrying ³	0.7	1.8	2.7	-0.0	-2.7	-2.2	2.5	3.2	0.6	-2.1
Manufacturing	6.2	7.6	8.3	2.6	-1.0	-2.5	9.7	10.5	4.7	0.8
Construction	9.9	7.4	7.4	5.4	-1.0	-7.3	19.1	18.5	15.6	8.6
Public utilities and transportation	4.8	5.1	5.8	3.6	2.0	0.6	5.4	6.1	3.8	2.2
Trade	5.5	6.4	4.9	-0.5	-4.5	-6.7	12.8	11.7	6.1	1.8
Service	4.0	4.1	3.8	1.8	-2.3	-10.8	10.2	8.2	6.3	2.5
Finance and real estate	5.6	6.4	5.3	1.6	-1.8	-2.8	8.3	6.8	3.0	-0.4
Grand total ⁴	5.3	6.2	6.2	2.2	-0.8	-2.3	8.2	8.1	4.0	0.9
<i>Manufacturing subgroup</i>										
Foods, beverages and tobacco	6.7	7.9	7.7	6.3	3.9	2.0	9.8	9.5	8.3	5.8
Textiles and products	5.4	3.5	2.9	-5.8	-6.4	-7.2	7.2	6.9	-1.7	-2.4
Leather products	7.4	4.8	3.9	-3.2	-4.9	-8.0	8.6	7.8	0.7	-1.1
Rubber products	5.1	0.3	2.5	-4.4	-2.4	-5.9	1.5	3.7	-3.4	-1.3
Lumber products	1.0	2.4	2.4	-4.5	-8.3	-9.8	5.2	5.2	-1.9	-5.9
Paper, pulp and products	6.7	7.1	6.4	2.9	-0.5	-3.8	9.5	8.5	4.9	1.3
Printing and publishing	9.7	11.9	11.5	7.6	2.2	-1.0	18.3	18.0	13.6	7.4
Chemicals and allied products	5.4	9.1	9.9	5.0	1.1	1.2	10.0	10.7	5.8	1.7
Stone, clay and glass products	6.2	6.5	6.2	1.8	-2.0	-5.1	8.8	8.7	3.9	0.1
Metal and its products	7.1	8.8	10.9	3.3	-2.1	-3.9	10.5	12.7	4.9	-0.6
Manufacturing not elsewhere classified	6.1	7.5	5.7	-0.7	-4.4	-6.3	11.6	9.5	3.0	-0.5
Total manufacturing	6.2	7.6	8.3	2.6	-1.0	-2.5	9.7	10.5	4.7	0.8

* Preliminary estimates.

¹ The balance-sheet figures published in *Statistics of Income* have, on the basis of estimates, been raised to include corresponding items of corporations not making balance-sheet reports. Book values are as of the end of the year, except for 1932, for which 1931 values have been used.

² Data for 1927 and 1932 are not available.

³ See text, footnote 7.

⁴ Includes a small group of corporations not reporting the nature of their business.

of profits. Many corporations never have any book profits and yet continue to operate indefinitely.³

PROFITS BY INDUSTRIAL DIVISIONS

Differences in the effects of the depression upon the profits of industrial groups may be revealed if some common basis of measuring profits be employed. The amount of invested capital is a desirable basis for this comparison.

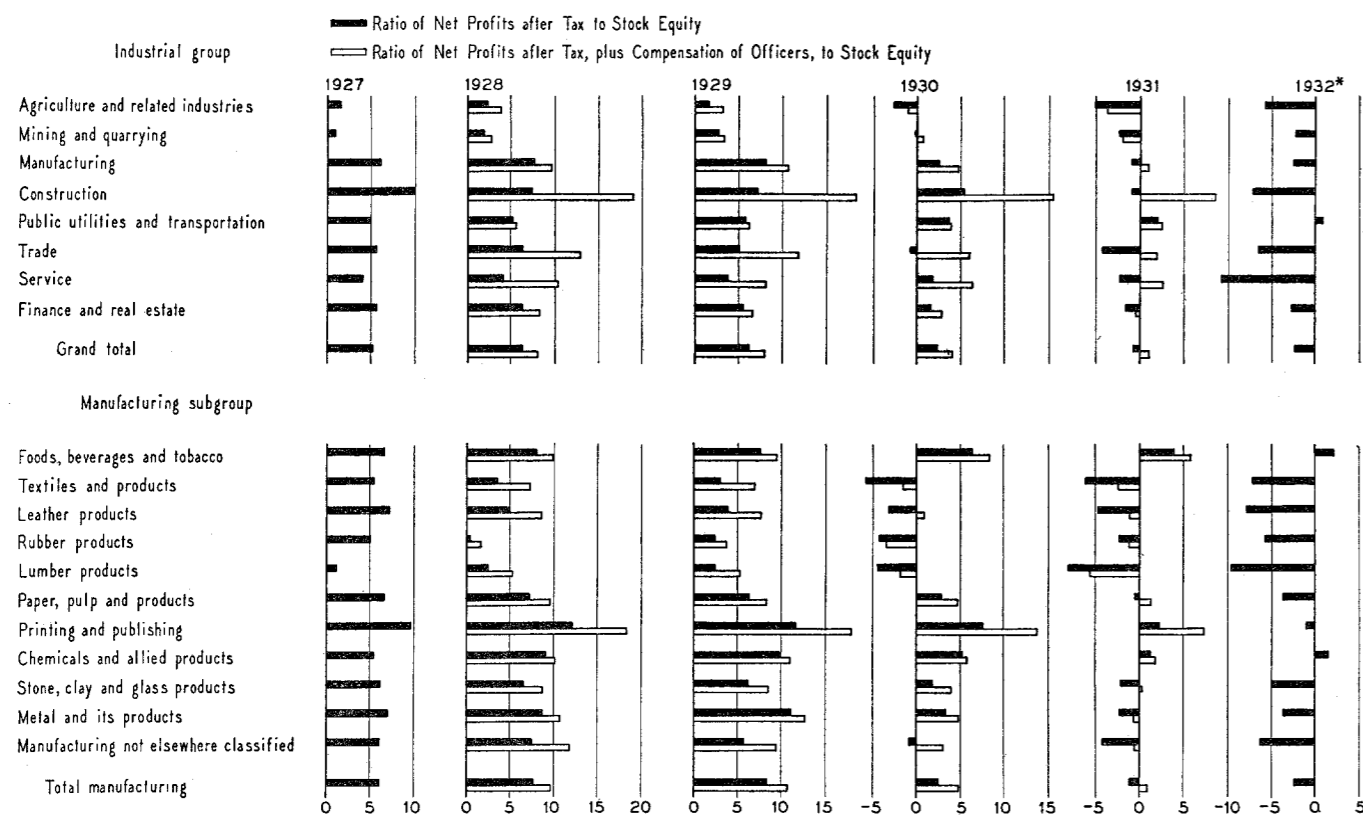
³ That corporations persistently remain in the 'no-income' group is suggested by the low ratio of prior-year losses deducted in computing income taxes to aggregate deficits reported in preceding years (after allowance is made for companies that have been dissolved), even in years of growing prosperity. These no-income corporations would include those in which officers' compensation absorbs the entire profit, subsidiary companies that transfer their products to parent companies at cost or even at a loss, corporations established to avoid taxes, and mining companies that benefit from the peculiar depletion provisions of the tax laws (see footnote 7).

(It should be noted that the materials available give book values of capital rather than invested capital. It is doubtful, however, if the differences involved⁴ are sufficiently great to vitiate broad comparisons among industries.) The total of preferred and common capital stock outstanding, together with surplus less deficits, has been taken to indicate the amount of invested capital; net profits after tax (but including dividends received) have been used as a measure of earnings. Since we are here interested in the profits accruing to stockholders, rather than in the

⁴ Differences, from one company to another, in policies relating to depreciation, obsolescence, revaluation of assets in response to changes in price levels, and capitalization of earning power, affect the comparisons made below. The variations in the ratios given, however, are probably too great to be accounted for solely by these differences in valuation procedure.

In considering the movements from one year to another allowance must be made for some probably general write-ups of assets in 1928-29 and write-downs in 1931-32.

Figure 2
RATE OF RETURN ON BOOK VALUE OF STOCK EQUITY
ALL CORPORATIONS IN THE UNITED STATES



earnings of all the capital invested in corporate activities, long-term and other obligations have been omitted from our measure of capital, and only profits available for dividends have been taken to represent earnings. Dividing earnings, so measured, by capital invested, as indicated by the balance sheets submitted, we obtain the earnings rates presented in the first half of Table 3 and illustrated graphically in Figure 2.⁵ The figures for some of the industrial

⁵ The duplication due to intercorporate holdings has been eliminated to a considerable extent through the filing of consolidated returns. The data published do not indicate clearly the remaining investments in other corporations, or, with the exception of dividends received, the income from such investments. However, since the duplication occurs both in the numerator and in the denominator of the earnings ratio, it has but little effect upon the comparisons among industries.

If we attempt to take account of the fact that dividends received by corporations on stocks held may be more or less than the earnings of the companies whose securities are being held, we have the figures for all corporations shown in the last column below. The estimate assumes investments to be only in stocks of large corporations: consolidated corporations for the period 1928-30, and companies with assets exceeding 10 million dollars for the year 1931. (Data are available for neither group for the entire period, and are unavailable for both groups for 1927 and 1932.) The ratios obtained after excluding dividends

groups may not be quite representative since consolidated returns are classified according to the principal business of the group of corporations covered by each of these reports. This consideration probably applies chiefly to mining and quarrying.

There is considerable variation from industry to industry in the importance of salaries, bonuses and other payments to officers (who, in the smaller companies, are usually the chief stockholders). This, of course, results from the differences in average size of corporation from one industry to another. In the textile manufactures group, for example, average total net assets per balance sheet filed in 1929 was \$480,000. On the other hand, among the public utilities the corresponding figure was almost ten times as great, amounting to

received, but before including earnings accrued on stocks owned, are also given.

Net profits after tax, as a ratio of stock equity
(in percentage form)

	Including dividends received	Excluding dividends received	Including total earnings accrued on stocks owned
1928	6.2	5.0	6.9
1929	6.2	4.7	7.0
1930	2.2	0.8	1.5
1931	-0.8	-2.0	-2.0

\$4,500,000. Since compensation received by officers includes, to some extent, a distribution of profits, the varying incidence of the depression upon income accruing to stockholders in different industries cannot be traced in reported net incomes alone. It is necessary to compare rates of return after allowance has been made for differences in the importance of this item. In the second half of Table 3 net profits after tax have been combined with compensation of officers, and the percentage relation of the sum to the total equity of stockholders given. These figures also are charted in Figure 2. It is apparent that the relative positions of certain industrial groups are altered when account is taken of officers' compensation. The true industrial differences in earnings can be seen only by a consideration of the entire table and chart. The correct earnings ratio, for a given year, lies between the two figures for each industry, and probably closer to the first (in which officers' compensation is not included).⁶

These rates of return, it must be remembered, are weighted averages. They do not refer to the return earned, on the average, by individual companies within the groups shown. They represent the return earned per dollar of invested capital (the latter being measured by the book value of stock equity).

Even before 1930 the rates of profits of certain industrial groups were low. Corporations engaged in manufacturing textiles, rubber products and lumber products, and in mining⁷ and agriculture were, on the whole, relatively depressed in the prosperous years 1928 and 1929. When the collapse occurred they were among the first to report deficits. Only the rates of return of a few groups, among them chemicals, metals and public utilities, rose

⁶ We may be sure that just as the simple comparison based upon profits understates the true profitability (notably in the case of small companies) so the comparison based upon profits and compensation of officers overstates the true profitability; for a large part of the total officers' compensation clearly represents labor cost proper. This consideration applies especially to the rate of return as it is commonly conceived of in business and financial circles.

In a deeper sense, however, profits cannot be separated from the wages of management; economists have generally found the line between profits and the wages of management and enterprise indistinct. In studying profitability by industry or size of company, therefore, it is necessary to base comparisons upon the sum of these two quantities. In lieu of a perhaps more exact measure of size in this comparison (such as 'value added' or gross income less cost of raw materials) net worth has been used. The resulting ratio, that of the sum of net profits after tax and compensation of officers to total stock equity, is an approximation to an index of profitability in the economic sense. In this sense it is not necessarily an upper limit. Since in this case the ratio represents an index rather than a direct measure, the absolute size of the ratio for a given group of companies is of less significance than its relative size.

appreciably with the cyclical upturn from 1927 to 1929. Profits in construction were already declining, owing to the decrease in volume of building; the profits of corporations engaged in leather manufactures were also falling. Not until 1931, however, did the number of groups reporting deficits exceed the number reporting profits. By 1932 only three industrial groups, foods and tobacco, public utilities, and chemicals, were enjoying the distinction of an aggregate net profit (after tax). However, printing and publishing corporations reported only slight deficits, in the aggregate. If the group 'foods, beverages, and tobacco' is broken down into 'foods and beverages' and 'tobacco', as is possible for 1931 and 1932, the first subgroup no longer shows a net profit for 1932. Corporations engaged in manufacturing tobacco products continued, however, at a profitable rate.

When account is taken of compensation of officers, the differences shown are somewhat modified. Some groups that appeared especially depressed are those in which payments to officers have bulked large, relatively to net worth. This is true of textiles, trade and service. In printing and publishing, and construction, the already high rates of return (on book value of capital) are raised to even higher levels. Of course, in all these industries payments to officers represent only in part distributions of profits. To a large extent they are actual costs. But because in many corporations they are made at least partially in lieu of dividends, it is necessary to consider them in comparing the rate of return of one industry with that of another.

PROFITS BY SIZE OF CORPORATION

Since published income accounts and balance sheets are almost entirely those of large corporations, figures obtained from them cannot be taken to represent the current fortunes of all companies. However, any possible differences are of interest. A comparison of the earnings rates derived from the Treasury Department statistics with those based upon currently published figures should indicate how large corporations have fared during the depression, relatively to all companies. Table 4 contains the figures for 1929-32. (Data for large corporations, now available for 1933, are also presented in the table.) We are interested in the relative position of large companies as a group; therefore we need not concern ourselves with the fact that the industrial compositions of the two series here compared differ.

⁷ The incomes reported for tax purposes by mining corporations are not necessarily entirely correct measures of profits for our purposes, since allowable deductions for depletion may exceed cost of the property being depleted (see Article 221, Regulations 77, Bureau of Internal Revenue). This qualification also applies, but with less weight, to the net incomes of other corporations deducting depletion charges, especially those in the petroleum industry, which are included in the chemical manufacturing group.

Table 4

RATE OF RETURN ON BOOK VALUE OF STOCK EQUITY, 1929-1932

Large Corporations Contrasted with All Corporations					
Ratio of net profits after tax to book value of preferred and common stock and net surplus, in percentage form					
Group	1929	1930	1931	1932	1933
All industries					
All corporations ¹	6.2	2.2	-0.8	-2.3*	
Large corporations ²					
1,620 corporations	11.3	6.0	2.6		
1,810 corporations			2.4	0.2	
1,925 corporations				0.3	2.1
All industries except public utilities and finance					
All corporations ¹	6.7	1.8	-1.9	-3.9*	
Large corporations ²					
1,302 corporations	13.5	6.7	2.5		
1,410 corporations			2.5	-0.4	
1,475 corporations				-0.4	2.6

* Preliminary estimates.

¹ See Table 3.

² Figures published by the National City Bank in its monthly bulletins. While every effort is made by the National City Bank to include the smaller companies, the sample naturally covers more completely the larger concerns and therefore may, for the present purpose, be considered a sample of large corporations.

The differences shown, which are large, may be due in part to differences in accounting practice. If compensation of officers be added to the income of all corporations in measuring the rate of return, the differences still persist, although they are not so wide.

For the one year 1931 a new compilation recently released by the Treasury Department⁸ makes it possible to compute rates of return for corporations grouped according to size. The figures appear in Table 5. (They are derived

⁸ *Statistics of Income for 1931* (1934), pp. 154-5.

from aggregates and may therefore be interpreted only as weighted averages for the several groups.)

The situation revealed is striking. In the depression year 1931 the only group of companies earning an aggregate profit was that composed of corporations with assets of over 50 million dollars. These companies (not including subsidiaries) numbered only 632 out of the 381,000 reporting balance sheets. Together with subsidiaries they owned 155 billions of assets out of a total of 296 billion reported.⁹ The progression in the rate of return from the small- to the large-size groups is impressive. Yet it is doubtful if companies with assets averaging under \$50,000 lost as much as the indicated 20 per cent, even in 1931. If we combine officers' compensation with profits, those concerns owning between \$500,000 and \$10,000,000 in assets appear to have the lowest returns. Still, not all of officers' compensation consists of profits. If we assume even as much as one-half to be profits (a figure undoubtedly larger

⁹ For the first time an accurate distribution of American corporations by size is available. Because of its interest, it is reproduced here. (The figures relate to 1931.)

Size group (total net assets in thousands of dollars)	Number of corporations (as percentage of total)	Total net assets (as percentage of total)
Under 50	47.9	1.2
50 — 100	16.0	1.5
100 — 250	16.6	3.4
250 — 500	8.1	3.7
500 — 1,000	5.1	4.6
1,000 — 5,000	4.8	12.8
5,000 — 10,000	0.7	6.0
10,000 — 50,000	0.6	14.6
50,000 and over	0.2	52.2
Total	100.0	100.0

The above figures relate only to corporations reporting balance sheets (83 per cent of the total). Most of the companies not reporting are small.

Table 5

EARNINGS OF CORPORATIONS IN THE UNITED STATES,¹ 1931

Classified by Size

Size (total net assets in thousands of dollars)	Number of reporting corporations	Aggregate net profits after tax		Aggregate net profits after tax plus compensation of officers		Aggregate net profits after tax, plus compensation of officers, relative to total stock equity	
		(in millions of dollars)	(in percentage form)	(in millions of dollars)	(in percentage form)	(in percentage form)	(in percentage form)
Under 50	182,447	-415	520	105	-21.7	5.5	
50 — 100	61,144	-218	312	94	-9.1	3.9	
100 — 250	63,428	-353	433	80	-6.5	1.5	
250 — 500	31,052	-268	296	28	-4.6	0.5	
500 — 1,000	19,335	-271	235	-36	-3.9	-0.5	
1,000 — 5,000	18,345	-591	353	-238	-3.0	-1.2	
5,000 — 10,000	2,588	-166	99	-67	-1.8	-0.7	
10,000 — 50,000	2,117	-104	161	57	-0.5	0.3	
50,000 and over	632	1,507	163	1,670	+2.2	2.4	

¹ Excluding corporations not reporting balance sheets.

than the correct fraction), the relative positions of the different groups (as indicated by net profits only, relative to equity) remain substantially unchanged.

These results require further verification. If the ratio to total assets of the sum of net profits after tax and interest paid is taken as the measure of earnings, the ranks of the various groups are also unchanged. This is true, in addition, if the figures in Table 5 are adjusted for the accrual of earnings on stocks owned (as in footnote 5). It is doubtful whether the fact that some large (parent) companies might have been profiting at the expense of their small subsidiary companies is sufficient to explain the differences noted. However, there may be a greater concentration of relatively inactive corporations with low rates of return among those of small size; but completely inactive companies are omitted. The large end-classes (under 50 thousand dollars of assets per corporation, and 50 million and over) tend to obscure the relationship.

The difficulty of measuring profitability (a difficulty inherent in the common notion of profits) appears here in especially acute form. The distinction between net profits reported as such and net profits included in other items (of which compensation of officers is one) is vague. In addition, capital is not necessarily the best means of reducing profits to a common base, since profits accrue also to functions other than the ownership of assets. An alternative base, gross income less cost of raw materials, is not available.

The largest corporations in most of the industrial groups reported a net profit for 1931. The exceptions were in

agriculture, mining, and in the manufacturing of textile, forest, paper and rubber products. But space does not admit of the presentation, by industrial groups, of figures similar to those in the sixth column of Table 5. The differences in rates of return according to size, noted above in the case of all industries, are visible also within each industry. Further, the representativeness of the average rates of return of individual industries shown in Table 3 finds considerable support in a comparison of similar size-groups.

THE AGGREGATE INCOME ACCOUNT OF ALL CORPORATIONS

The change in profits during the last cycle is correctly viewed only in the income account as a whole. Net income, after all, is but an estimate, the difference between the gross income of a given period and the costs charged to that period. The nature of the profit estimate cannot be understood without a consideration of the individual elements included and the methods of their computation. For the period 1927-31 there is available a fairly consistent and detailed set of data, giving corporate receipts and some of the important items of deduction. Combined figures for all corporations are presented in Table 6; these are given both in dollars and as percentages of 1929.

'Miscellaneous receipts' are primarily those of corporations in industries not selling physical commodities. These include public utilities, railroads, financial companies, service companies, and others. A fraction of this item represents gross profits on those sales of goods not reported, es-

Table 6
AGGREGATE INCOME ACCOUNT, 1927-1932All Corporations in the United States
(Excluding tax-exempt corporations and life insurance companies)

	In millions of dollars						As percentages of 1929					
	1927	1928	1929	1930	1931	1932*	1927	1928	1929	1930	1931	1932*
Receipts												
Gross sales reported.....	106,860	112,440	118,100	97,940	75,500		90.5	95.2	100.0	82.9	63.9	
Less: Cost of goods sold.....	83,490	87,260	91,080	76,190	58,770		91.7	95.8	100.0	83.7	64.5	
Gross profits on gross sales reported	23,370	25,180	27,020	21,750	16,730		86.5	93.2	100.0	80.5	61.9	
Miscellaneous receipts, and gross profits other than on gross sales reported	35,630	38,200	39,670	35,150	29,640		89.8	96.3	100.0	88.6	74.7	
Total ¹	59,000	63,380	66,690	56,900	46,370	33,300	88.5	95.0	100.0	85.3	69.5	50.0
Deductions												
Compensation of officers.....	3,060 ²	3,200	3,340	3,140	2,700		91.7 ²	95.9	100.0	94.1	80.8	
Interest paid	4,370	4,570	4,920	4,850	4,480		88.9	93.0	100.0	98.7	91.1	
Domestic taxes	2,010	2,200	2,210	2,280	2,220		90.6	99.2	100.0	103.2	100.1	
Income taxes	1,110	1,170	1,180	700	390		94.3	99.1	100.0	59.2	32.9	
Bad debts	810	800	940	980	1,180		86.4	85.4	100.0	103.9	125.6	
Depreciation	3,340	3,590	3,860	3,980	3,990		86.5	93.0	100.0	103.0	103.3	
Depletion	500	520	560	460	270		89.9	92.1	100.0	82.8	47.9	
Losses on sale of capital assets.....				940	1,700							
Other deductions	38,070	39,830	41,730	38,310	32,680		91.2	95.4	100.0	94.0	82.4	
Total	53,270	55,880	58,740	55,640	49,610		90.7	95.1	100.0	94.7	84.5	
Net income	5,730	7,500	7,950	1,260	-3,240	-4,900	72.0	94.4	100.0	15.9	-40.8	-61.6

* Preliminary estimates.

¹ Excluding dividends received.² Estimated (see Nerlove, *A Decade of Corporate Incomes*).

pecially sales by commission merchants, brokers, and some construction corporations. 'Other deductions' consist of all those important business expenses not included in the cost of goods sold or separately listed, such as costs of distribution and selling, office and administrative expense, and other general expenses.

The rise in total gross profits on sales and miscellaneous receipts was about 13 per cent from 1927 to 1929. From 1929 to 1931 the fall was drastic, amounting to 30 per cent. (Judging from preliminary returns the decline to 1932 was about 50 per cent.) Deductions, on the other hand, rose somewhat less in the period 1927-29; they also fell less in 1929-31. Profits, the volatile difference between gross receipts and deductions, jumped 39 per cent to 1929, and by 1931 had vanished. In 1931 aggregate losses amounted to 40 per cent of 1929 profits; in 1932, to 60 per cent of 1929 aggregate net earnings. But the items of deduction should be examined more closely to appreciate the significance of these figures.

The difficulties of accounting in a modern industrial society arise from at least two facts. First, price changes occur and must, somehow, be considered in business computations. They result in profits or losses on inventories, and in variation in the cost of replacement of equipment. Second, costs incurred in one period are accompanied by benefits that extend beyond that period. This makes it necessary to distribute the costs among the different accounting intervals over which these benefits extend. The difficulty of allocating depreciation is well recognized, since variations in the percentage of productive capacity used are plainly visible. Yet unused capacity exists in the case of other charges (such as those for rent, interest and taxes) even if in less obvious form. In considering the figures in Table 6 a recognition of these difficulties is essential.

These difficulties and the far-reaching consequences of various methods of coping with them may only be mentioned here. The income account in Table 6 represents the result of one method of accounting. But there are many theories of the apportionment of expenses, each giving rise to a different accounting technique, a different income account and a different estimate of net profits. The following analysis indicates how alternative methods of treatment might affect the figures; it is intended solely to throw some light upon the nature of the published figures of net profits, including those presented above. While it is impossible adequately to discuss here the underlying theories it is important to remind the reader that the significance of all the profits figures appearing in this *Bulletin* and elsewhere is definitely dependent upon such theories. The following discussion is designed to emphasize this fact. It finds its justification in the importance and interest inherent in the

determination of profits in what has come to be called a 'profits-economy'.

Cost of goods sold, as reported for income tax purposes, includes wage costs and material costs (and some items of overhead). Although these costs did not exactly parallel gross sales during the period covered by Table 6, the gross margin (gross profit on sales) changed but slightly. From 22 per cent of sales in 1927 it increased to 23 per cent at the peak of 1929, and fell back to 22 per cent in 1931. (We must remember that this gross margin, which refers to a heterogeneous mixture of goods, may obscure wide industrial differences.) From 1927 to 1929 there was little change in wholesale prices. But after 1929 the price level began to decline rapidly, though not equally in all its parts, with resulting losses on stocks of goods held by corporations.¹⁰ If cost of goods sold had been charged at replacement values, for example, rather than at original cost of production as in Table 6, gross income from sales would have been greater. The difference (the loss ascribed to price declines) would then be charged to profit and loss, with a resulting changed statement of operations. 'Operations', in any real sense, include the essential task of carrying stocks of goods. But it is worth while to distinguish among the different types of productive activity and related costs—in this case the physical task of production and the costs attendant thereon, and the task of carrying goods in process and the conjunctural profits or losses arising from it.

The opposite result would take place in a period of rising prices. Part of the gross profit on sales would then include profits due to increasing values of goods held. Operations for the year 1933 would therefore yield a smaller profit (or a greater loss) when calculated in this manner than would be indicated by the income tax reports.

Payments of interest and property taxes represent, to a great extent, costs of property only partially used in the depression years following 1929. While total receipts (less cost of goods sold) declined over 30 per cent from

¹⁰ It is well known that selling prices do not fluctuate exactly as do prime costs, the major part of costs of goods sold. There is a tendency for changes in selling prices to lag behind corresponding changes in these costs. This would result in an increase in the gross margin per unit of product during a period of falling prices. (A further factor is the difference in the rapidity of decline of prices and costs.) On the other hand, production and distribution take time. Stocks of goods—raw materials, materials in process of fabrication, finished products—must be carried even though prices may be falling. In this case the gross margin tends to decline. Since the period of production and distribution is usually longer than the period of lag of prices after costs of goods sold, the net result of these two tendencies (when prices are falling) is a decline in the gross profit per unit of goods sold.

1929 to 1931, interest charges fell less than ten per cent, and domestic taxes actually rose to a slight degree.

The physical volume of production and trade declined about 18 per cent from 1929 to 1930, and 32 per cent from 1929 to 1931.¹¹ If we assume 1929 operations to have been at 'normal' capacity, this index of the physical volume of business suggests corresponding percentages of unused capacity of about 18 and 32 in 1930 and 1931, and corresponding percentages of interest and tax payments made on this idle capacity. Of course a considerable fraction of interest payments arises from short-term loans. But the constant element in these charges is due to liabilities, in the form of mortgages, bonds and notes, incurred in connection with property that was idle in 1930 and 1931. It would be possible to employ an accounting system in which charges for idle property were not levied against goods currently produced and sold, and services currently rendered. Such an accounting system would, of course, differ appreciably from that exemplified in current reports and in Table 6. Accepted procedure, in effect, involves including in the costs of goods currently produced a charge arising from capacity needed only in the period of peak demand, such as in 1929. The sums thus included represent charges against earnings in any case, of course, whether spread over a long period or charged to one or two years. However, the separate consideration of the elements that are involved in current calculations of profits is useful.

In the case of depreciation both types of difficulty are found. For in estimating depreciation charges, changes in the replacement costs of depreciating assets must be considered, as well as idle capacity. The degree of change in replacement costs is suggested by an index representative of changes in the prices of capital equipment. Such an index, computed by the National Bureau of Economic Research, was (on 1929 as a base) 93 for 1930, and for 1931, 86. The total of depreciation charges, which increased during the two years of depression covered by the data in Table 6, includes charges representing unused capacity and the neglect of price changes, as well as the customary deductions chargeable to operations under any system of accounting. The fact that aggregate depreciation and obsolescence charges for the entire period might possibly have been too low from a long-time viewpoint does not affect the significance of the cyclical distinction made here.

Losses on sale of capital assets (after deducting corresponding profits) are not, of course, considered a proper charge to current operations. To the extent that these

¹¹ Persons and Foster, *Review of Economic Statistics*, August 15, 1933, p. 155.

losses arise from inadequate provision for depreciation and obsolescence, they represent costs incurred in earlier periods. If they are due to declines in replacement costs, they are results of price movements which may be distinguished from losses on operations.¹²

'Other deductions' undoubtedly include several items that could be analyzed in a similar manner. But lack of information precludes such a treatment. Bad debts and depletion, as computed, usually are properly treated as current charges. The rise in the former and the decline in the latter from 1929 to 1931 are noteworthy.

It would be possible, thus, to transform the income account appearing in Table 6 by separating deductions chargeable to operations, deductions chargeable to unused capacity, and deductions arising from price changes. Such a modified income account would prove illuminating; it would make clearer the nature of profits as estimated for income tax and other purposes. But any well-substantiated revision and discussion of the aggregate income account would involve a separate project of research, and an amount of space not here available.

Enough has been said, however, to throw some light on the meaning of the last row of figures in Table 6. Not only the absolute magnitudes but even the signs of the net incomes of business concerns derived from current operations may be affected by the methods of computation. This fact is of interest because of its bearing on the description of past business operations and on our estimates of economic welfare. (One of these important estimates is that of the national income.) This matter is of interest, too, because of the degree to which the present and future activities of business men are influenced by their accounting records. The everyday buying, producing and selling operations of business men in a period of depression are affected not only by such factors as the fear of spoiling the market or the supposed inelasticity of demand for their products, but also by the manner in which costs are computed. A change in this technique may have a profound effect upon the behavior of business men. Eventually, of course, if a condition of excess capacity persists and prices remain at low levels, the writing-down of assets will be effected through bankruptcy or some other mode of reorganization. In effect, then, there is ultimate recognition of the need for taking account of unused capacity and changes in price levels, in the computation of costs. But it may be possible to achieve the same results, and more promptly, through an open and deliberate recogni-

¹² Losses on securities suffered by regular dealers in stocks and bonds are due, of course, to operations, and form an exception in the above discussion.

Table 7
TOTAL ANNUAL CORPORATE SAVINGS IN THE
UNITED STATES, 1919-1932
(Excluding tax-exempt corporations and life insurance companies)
(In millions of dollars)

Year	Aggregate net income before payment of dividends but after payment of income taxes ¹	Net cash dividends paid ²	Corporate savings (undistributed net income) ³
1919	6,910	2,600	4,310
1920	4,280	2,900	1,380
1921	-70	2,600	-2,670
1922	4,300	2,640	1,660
1923	5,720	3,310	2,410
1924	4,870	3,430	1,440
1925	6,830	4,020	2,810
1926	6,630	4,450	2,180
1927	5,730	4,780	950
1928	7,500	5,170	2,330
1929	7,950	5,780	2,170
1930	1,260	5,660	-4,400
1931	-3,240	4,200	-7,440
1932*	-4,930	2,500	-7,430

* Preliminary estimates.

¹ See Table 1.

² Data for 1919-21 are estimated by Ebersole, et al., (*Review of Economic Statistics*, November 1929, p. 185). The 1932 figure has been estimated from data collected by the Standard Statistics Company.

³ Column (2) minus column (3).

tion of the facts. This recognition may be facilitated by a keener awareness of the nature of accounting estimates.¹³

DIVIDEND POLICY AND CORPORATE SAVINGS

In spite of the drastic fall in profits, dividends continued to be paid at a high rate, at least until 1932. (This, of course, was due in part to the natural lag in the disbursement of profits to stockholders.) As a result, the annual savings of corporations, the profits left in the business after the payment of dividends, were sharply reduced in amount and finally became negative. The accumulations during the fat years preceding the decline in prices and production in 1929 were drawn upon during the lean period of the depression. The figures in Table 7 reveal the extent of corporate savings and their fluctuations during the last decade.¹⁴

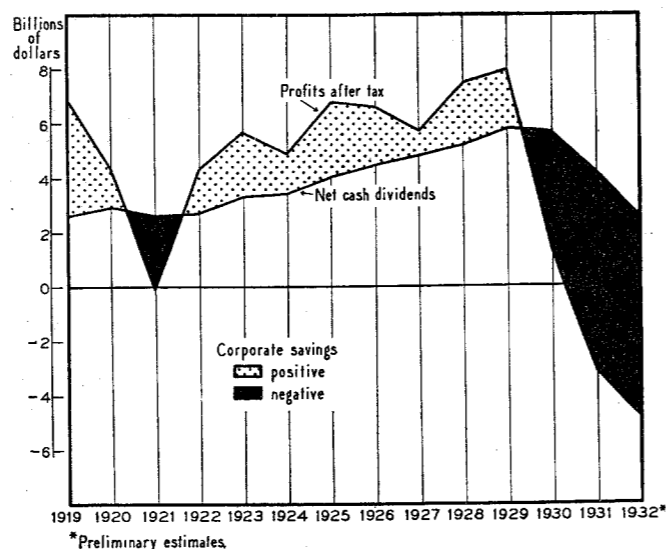
¹³ The figures here analyzed are those reported to the Treasury Department for income tax purposes. They are not necessarily those used in computations of costs. Undoubtedly the necessity of considering idle capacity and price changes in computing costs has gradually become recognized, especially in 1932. See, for example, an address by J. M. B. Hoxsey, *Writing Down Assets and Writing Off Losses*, delivered in February 1933 before the Massachusetts Society of Certified Public Accountants.

Much has been done by accountants in furthering this recognition. See, for instance, various publications of the National Association of Cost Accountants and its local chapters.

The relative steadiness of dividend payments is striking. The decline in profits in 1920 and 1921 was hardly felt, while the depressions of 1924 and 1927 made but slight visible impressions on these disbursements to stockholders. Only in 1931 and 1932 did the fall in dividends become great.

During the post-War period a substantial portion of earnings (after taxes) was retained in the form of corporate savings. For the eight years, 1922-29, these savings amounted to 32 per cent of net income after the deduction of income taxes. But the crash changed the situation completely, and by the end of 1932 the accumulations of more than a decade had been drawn upon to sustain at least partially the income of stockholders. During only three years, 1930, 1931 and 1932, the profits saved in the preceding ten years were disbursed.¹⁵ Fortunate indeed were those with such a reserve upon which to draw.¹⁶

Figure 3
ANNUAL CORPORATE SAVINGS
IN THE UNITED STATES



* Preliminary estimates.

SUMMARY

The course of corporate profits in recent years was, obviously, unfavorable. But closer inspection reveals it as but a part of the entire cycle of prosperity and depression. The losses of 1931 and 1932 cannot be considered separately from the profits of 1928 and 1929 (and, if they exist, those of 1933). Costs incurred in years of prosperity were charged to years of depression, accentuating the trough. The whole picture, while not of a rosy hue, is not quite as dark as a casual inspection of accounting

¹⁴ These figures differ from those published in *Bulletin 49* of this series, *National Income, 1929-1932*, because the savings shown here are of corporations only. Moreover, the net income in Table 7 does not exclude gains or losses on the sale of capital assets.

records would indicate. The more moderate fall in dividend payments reflects the impact of the depression upon stockholders and business concerns more correctly than does the movement of profits alone. Corporate savings formed the buffer which absorbed the cyclical bias in the calculation of profits.

But the effects of the psychological stimulus exerted by these estimates of profits, both in 1929 and in 1932, were not absorbed by any buffer. There is need, therefore, for a more adequate awareness of the nature of accounting estimates. The emphasis which thoughtful accountants are placing today upon a careful interpretation of accounts is well deserved.

¹⁵ It is apparent that large parts of the dividends and interest paid in those three years were paid out of capital or out of corporate savings of prior years. It does not seem correct to describe such payments as 'income paid out', and the use of this term may have given rise to misconceptions. The paragraph at the foot of page 5 of *Bulletin 49* ending with the statement: "It is obvious that payments to property holders formed a relatively increasing cost to the economic system as a whole," does not seem to me to state the case quite accurately. What the property owners collectively received was largely, if not mainly, the result of their previous thrift—not a part of the current income flow for the depression years.

A conclusion substantially different from that presented in *Bulletin 49* is reached if the amount of income received by labor is compared with the total income produced for the years 1929-32. The figures taken from Tables 1 and 2 in *Bulletin 49* are as follows:

	1929	1930	1931	1932
Total income produced.....	83,037	70,484	54,652	38,349
Received by labor.....	52,867	48,688	41,027	31,595
Per cent of amount received by labor to total income produced	63.7	69.1	75.1	82.4

(Footnote by George O. May, Director of the National Bureau of Economic Research.)

¹⁶ These figures refer to the aggregate of all corporations. If the large corporations in which dividends constitute the chief means of distributing earnings were considered separately the reduction of surplus would not be so marked.

Solomon Fabricant is associated with Frederick C. Mills in the National Bureau's studies of production and prices. He has also collaborated in other studies at the National Bureau in the field of corporate profits.

The subject of profits is of exceptional interest at the present time. Readers of this BULLETIN will be glad to learn that the National Bureau expects to publish two volumes on the subject this year: a study of industrial profits by Ralph C. Epstein, who is now in Washington assisting in the work of the Committee on Government Statistics, and one by W. L. Paton, of the University of Michigan. The two studies differ in that Dr. Epstein's is based on a large sample secured through the cooperation of the Department of Commerce, and Dr. Paton's on a small sample, one drawn from auditor's reports.

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THE BULLETIN

The issue of our first *Bulletin* on profits, referred to in Mr. Fabricant's article, was exhausted almost immediately after publication. A few copies of *Bulletin 48*, *Aspects of Recent Price Movements*, and of *Number 49*, *National Income, 1929-1932*, are still available.

The next *Bulletin*, to be published in May, will feature an article on recent changes in the volume of production. To ensure receipt of copies of this and subsequent *Bulletins* your subscription (\$1 for five issues) should be sent to the National Bureau at once. Please note the change of address to 1819 Broadway.

NEW PUBLICATIONS

The Annual Report of the Director of Research, Wesley C. Mitchell, was published immediately after its acceptance at the annual meeting of the Board of Directors of the National Bureau. Copies are available upon request.

Contributing members of the National Bureau have already received their copies of *German Business Cycles, 1924-1933*, by Carl T. Schmidt. The volume is now available to the public and copies may be obtained by writ-