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Detailed evidence that fiscal-year reporting is in general more common among small than among large corporations is presented in Part III. It may be summarized (from Table 15) in the following figures showing average total assets (in thousands of dollars) per return in 1949 for the entire corporate system and for each industrial division.

	All Returns	Fiscal-Year Returns	Non-Fiscal-Year Year Returns
All divisions combined	980	359	1,330
Agriculture	284	240	319
Mining	1,144	555	1,419
Construction	198	183	207
Manufacturing	1,122	650	1,440
Public utilities	3,184	264	4,016
Trade	229	256	210
Finance	1,930	375	2,516
Services	152	162	145

For every division except Trade and Services, the average of total assets is lower for fiscal-year than for other returns. The smaller average size of corporations filing on a fiscal-year basis is especially striking for Public utilities and Finance; this is in accord with our finding above that nearly all large companies in these lines file calendar-year returns.

PART I. THE CORPORATE SYSTEM AS A WHOLE

1. *Fiscal-year tabulations available.* The earliest special tabulations from fiscal-year returns of corporations in *Statistics of Income* are in the volume for 1926, which includes also fiscal-year tabulations for 1925. A largely similar set of tables appears in the 1927 issue. These fiscal-year tables for 1925–1927, however, cover only returns which met at least one of the four following tests: net income of $2,000 or over, net deficit of $500,000 or over, gross sales or other items of $5,000,000 or over, and deduction because of net loss for prior year. Hence, a large number of fiscal-year returns showing very small net income or showing small or moderately large deficit were excluded. Evidence for later years (see Part III) indicates that the excluded cases in 1925–1927 were probably numerous and important in the aggregate. Moreover, as some possibility exists that small corporations may frequently be in industries with peculiar patterns of fiscal-year reporting as respects distribution over the months from July to June, these exclusions are quite likely to distort the over-all pattern for all fiscal-year returns. And, of course, the total number of fiscal-year returns, as well as the aggregate for any particular accounting item, is seriously understated because of the exclusions. For these reasons, I have included no analyses of the 1925–1927 fiscal-year tabulations in any section of this report. That some useful inferences might be drawn from such analyses is not denied, but I am convinced that most analytical results for those years would not be comparable with those for later years.

Beginning with 1928, the special tabulations from fiscal-year returns did aim to cover all active fiscal-year returns, provided such returns "were received by the Statistical Section [of the Bureau of Internal Revenue] prior to termination of the tabulation of *Statistics of Income* data." This proviso, which is stated in the text accompanying the tables for many years after 1927, presumably means

that certain fiscal-year returns—probably a small number, and probably confined chiefly to the late months, such as June and possibly May or even April—were not included. I have neglected this deficiency in my analyses on the assumption that it is probably very small. Beginning with 1939, the tabulations also included some information on the inactive fiscal-year returns; but, as the present analyses are concerned only with active returns, this deficiency of coverage in the years 1928–1938 has no bearing upon the results below.

For each year from 1928 to 1950, at least two fiscal-year tabulations are published in *Statistics of Income*, though the form may differ slightly from year to year. One of these distributes the number of fiscal-year returns and the amount of their net income (or deficit) by months in which the fiscal years ended, separately for returns with net income and returns with deficit. The other distributes the number of fiscal-year returns and the amount of their net income (or deficit) among size classes of net income (or deficit), also separately for returns with net income and returns with deficit. For certain years of this period, additional tabulations are included. These supplementary tables are commented upon at more length at those points in following sections where they are analyzed. The data they contain are more detailed as to accounting items included, industrial classes shown, or in other respects than the data of the two basic tables, but no continuously comparable supplementary tables were published for any substantial period of years before 1946. Instead, the supplementary tables in all the earlier years seem to be isolated special compilations, available for only one year, or at most two or three years. From 1946 to 1949 (but not for 1950, however, probably because of the greatly increased importance of fiscal-year reporting) *Statistics of Income* includes two sets of supplementary tables in a standardized form. Each set presents an elaborate breakdown by line of industry, and these data, along with certain other materials, are the basis of analyses reported in Part II. One set of tables relates to balance-sheet returns, and the aggregate figures for all balance-sheet returns without regard to line of industry are analyzed in Section 4 of this Part.[2] The balance-sheet returns are, however, for most purposes of analysis, a highly dependable sample of all returns. While this evidence pertains to all corporation returns, regardless of month to which the balance sheet applies, I know of no clear reason for suspecting that any different conclusion would apply to the balance-sheet returns of fiscal-year corporations as a sample of all returns of such corporations.

2. *Increasing use of fiscal-year reporting: number of returns.* From the first of the two standard tabulations of fiscal-year returns in *Statistics of Income*, the total number of fiscal-year returns tabulated for each year can be obtained. The general tables, which constitute the main body of the compilations reported in *Statistics of Income* combine all types of active returns—those for

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[2] Those corporate income-tax returns accompanied by balance sheets are generally called "balance-sheet re-returns" here. The overwhelming bulk of all returns were accompanied by balance sheets, and the balance-sheet coverage for corporations showing large net incomes or large deficits was very nearly complete. In 1949 about 94 per cent of returns showing net income supplied balance sheets, and about 84 per cent of returns showing no net income. The deficiency in balance sheets was largest for returns showing very small net income or very small deficit: 86 per cent of returns with net income below $1,000 were accompanied by balance sheets, and nearly 78 per cent of those with deficits under $1,000 (figures from *S. of I.*, 1949, p. 8). This situation was not significantly different in years before 1949.

the calendar year, those for fiscal years, and those for part years.[3] Such a compilation for 1950 appears in Table 3 of *Statistics of Income* for 1950, Part 2, and the fiscal-year tabulations appear on pages 21–22. Table 1, below, taken from these tabulations, traces the changes in the fiscal-year share of the total over the years 1928–1950. From a level moderately above 12 per cent in 1928, the fiscal-year share in the total rose steadily except for a very slight dip in 1929 and a moderate dip in 1933, to nearly 34 per cent in 1950. The rise per year was remarkably steady from 1938 to 1945, and exceptionally steep in the years

TABLE 1

SHARE OF ALL RETURNS FILED BY FISCAL YEAR,
IN TERMS OF NUMBER, 1928–1950

Number of Returns

	All (a)	Fiscal-Year (b)	b/a, %
1928	443,611	54,820	12.4
1929	456,021	54,609	12.0
1930	463,036	59,202	12.8
1931	459,704	59,508	12.9
1932	451,884	59,459	13.2
1933	446,842	53,883	12.1
1934	469,804	67,056	14.3
1935	477,113	71.688	15.0
1936	478,857	72,290	15.9
1937	477,838	82,798	17.3
1938	471,032	84,289	17.9
1939	469,617	87,943	18.7
1940	473,042	92,989	19.7
1941	468,546	96,459	20.6
1942	442,665	96,468	21.8
1943	420,521	94,846	22.6
1944	412,467	97,499	23.6
1945	421,125	104,372	24.8
1946	491,152	132,361	26.9
1947	551,807	166,959	30.3
1948	594,243	193,686	32.6
1949	614,842	208,702	33.9
1950	629,314	212,391	33.7

[3] Part-year returns apply to an accounting period shorter than twelve months, when the greater part of the period falls within the specified calendar year. Such returns represent reorganizations, newly organized corporations, liquidations, changes from calendar-year to fiscal-year basis, or vice versa, and presumably also changes from one fiscal year to a fiscal year ending in a different month. Changes in specification of reporting year are subject to approval by the Commissioner of Internal Revenue. The fiscal-year returns included in the 1949 tabulations are those ending in any month from July to November 1949 and January to June 1950; and similarly, for tabulations of other years, fiscal-year returns range from July of the specified year to June of the succeeding year. This arrangement, by which the tabulations for any one year include returns for fiscal years extending to the following June, delays publication of *Statistics of Income.* As amply shown in later sections, however, failure to include such returns would set the center of the average year well before July 1 and greatly impair the usefulness of the tabulations for making comparisons. One reservation on this point should be made: If the included fiscal years extended from June of the given year to May of the following year, one month would be saved in publication time, without any significantly worse location of the center of the average year than at present.

1946–1948. This evidence strongly suggests that although fiscal-year reporting may have been negligible for most purposes of analyzing *Statistics of Income* data in the early years of the twenty-three-year period, it has now become a factor which cannot safely be ignored. As will appear in Sections 3 and 4, however, mere number of returns is not an entirely adequate indication of importance, and certain tests of other measures of importance are reported there.

3. *Increasing use of fiscal-year reporting: amount of net income or deficit.* The only measures of importance, other than number of returns, available for comparisons between fiscal-year returns and all returns for every year from 1928 to 1950 are aggregate amount of net income for returns showing net income, aggregate amount of deficit for returns showing no net income, and aggregate net income for both categories combined.[4] These measures of "importance" are far from satisfactory, chiefly because of wide fluctuations from year to year in the amount of net income (or deficit) reported by corporations having a specified size or a specified volume of gross business, or meeting some other test of importance less susceptible to annual fluctuation than net income or deficit.[5]

Despite these defects in net income (or deficit) as a measure of importance, it probably has more significance than the mere number of corporations, at least for some purposes. As shown in Part III, number of corporations may give misleading indications if fiscal-year reporting is to an important extent more (or less) commonly practiced by large than by small corporations. Therefore, in Table 2, I present certain comparisons based on net income (or deficit) as a measure of importance. The basic data for this purpose are taken from the same *Statistics of Income* tabulations, for each year, as the figures in Table 1, and the percentages are derived in the same manner. While the fiscal-year percentages, both for net income and for deficit, run much higher in recent years than in the early years of the period, the year-to-year variations are much more irregular than those in Table 1. This is not surprising, in view of the above-noted possibility that cyclical variations in corporate earnings may have different impacts upon different lines of industry and that fiscal-year returns may be much more important in certain lines of industry than in others. Nevertheless, despite the irregular course of change over the twenty-three-year period, both the net-income and the deficit percentages give unmistakable evidence of a very large increase in the fiscal-year share of the total between the beginning and the end of the period.

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[4] Strictly, figures are also available for amount of tax on returns showing net income. But, because of many changes in tax rates and other factors determining the amount of tax liability pertinent to a specified net income, figures on amount of tax can afford no dependable annual comparisons of the importance of fiscal-year reporting. For certain other purposes, such as studying the monthly flow of revenues from the corporate income tax and related taxes, the amount of tax on fiscal-year returns may, of course, be highly significant.

[5] Moreover, until we have examined some of the evidence presented in later sections, we cannot be confident that the net income (or deficit) figure for the fiscal year ending in a particular month—for example, January—is not exceptionally large or exceptionally small in comparison with the figure for all returns tabulated for the corresponding calendar year. Many corporations in particular industries, with a profit experience sharply different from the average for all industries, may happen to choose that fiscal year as the accounting period for their reporting. For example, retail stores in the Apparel and accessories group tend very commonly to use a fiscal year ending in January. In these circumstances, our use of the aggregate net income for all fiscal-year corporations reporting for the period ending in January would be misleading.

TABLE 2

SHARE OF ALL NET INCOME FOR RETURNS WITH NET INCOME AND ALL DEFICIT FOR RETURNS WITH NO NET INCOME REPORTED ON FISCAL-YEAR RETURNS, 1928–1950

(dollars in millions)

	Returns Showing Net Income Amount of Net Income			Returns Showing No Net Income Amount of Deficit		
	All (a)	Fiscal-Year (b)	b/a, %	All (c)	Fiscal-Year (d)	d/c, %
1928	$10,618	$1,229	11.6	$2,391	$361	15.1
1929	11,654	1,212	10.4	2,914	419	14.4
1930	6,429	661	10.3	4,878	803	16.5
1931	3,683	411	11.1	6,971	1,075	15.4
1932	2,153	269	12.5	7,797	1,063	13.6
1933	2,986	479	16.0	5,533	508	9.2
1934	4,275	598	14.0	4,181	483	11.6
1935	5,165	787	15.2	3,469	364	10.5
1936	9,478	1,373	14.5	2,152	256	11.9
1937	9,635	1,211	12.6	2,281	322	14.1
1938	6,526	938	14.4	2,853	422	14.8
1939	8,827	1,328	14.0	2,092	304	14.5
1940	11,203	1,823	16.3	2,284	256	11.2
1941	18,111	3,305	18.2	1,779	214	12.0
1942	24,052	5,086	21.1	1,001	180	18.0
1943	28,718	6,172	21.5	899	164	18.3
1944	27,124	5,998	22.1	819	172	21.0
1945	22,165	5,353	24.2	1,026	251	24.4
1946	27,185	7,159	26.3	1,992	488	24.5
1947	33,381	8,412	25.2	1,959	661	33.7
1948	36,273	8,075	22.3	1,848	740	40.0
1949	30,577	6,594	21.6	2,382	891	37.4
1950	44,141	9,781	22.2	1,527	556	36.4

In slightly over half of the twenty-three years the deficit percentage is above the net-income percentage, and in several years the difference between the two is striking. This may mean that in these years corporations with large deficits were more likely to file fiscal-year returns than were those with large net incomes, but, at this stage, no sure inference on this point can be drawn. (See discussion in terms of a classification of corporations, both fiscal-year and all, according to size of net income or deficit, in Part III.)

4. *Increasing use of fiscal-year reporting: total assets.* The most satisfactory general-purpose measure of the importance of corporations is total assets. This measure, whether applied to one corporation or a group of corporations, is not entirely stable, but it is mainly free of those sharp and diverse cyclical variations which detract from the usefulness of net income (or deficit) as a measure of importance, particularly for comparing different groups of corporations. The total-assets measure, however, has shortcomings which may in some instances prove serious, chief among them the peculiar shape of the size distribution of corporations, to which some attention is given in Part III. That shape is marked by a dense clustering of corporations in the lowest size class in terms of total assets, and also by an immense range of size, with a very small number of corporations showing huge total assets. As a result, a handful of corporations,

or even a single corporation, may dominate the aggregate total assets of a particular class of corporations, such as those in a particular industry. The aggregate is not dependably representative of the more numerous and typical corporations in the class, and this type of distortion may vary sharply from class to class, and possibly between fiscal-year and other returns.

The total-assets figure is available only for balance-sheet returns. As already noted in Section 1, one of the sets of supplementary tables of fiscal-year figures in *Statistics of Income* for the years 1946–1949 shows, by industrial classes, data compiled from fiscal-year returns which were accompanied by balance sheets. The data comprise only two items, number of returns and total assets; these are given for each of the eleven fiscal-year periods and for all such periods combined, separately for net-income returns and deficit returns. From these figures for the entire corporate system without regard to industry, we can derive the totals shown in columns b and d of Table 3, for 1946–1949. The corresponding figures for all balance-sheet returns are from Table 4 of *Statistics of Income* for these years. Supplementary tables such as those for 1946–1949 do not appear in *Statistics of Income* for any earlier year, but the issue for 1934 includes a special tabulation of fiscal-year balance-sheet returns according to size of total assets (see Part III for discussion of these size distributions). With these data, the aggregate total assets of fiscal-year balance-sheet returns for 1934 can be estimated.

TABLE 3

BALANCE-SHEET FISCAL-YEAR RETURNS COMPARED TO ALL BALANCE-
SHEET RETURNS, IN TERMS OF NUMBER AND TOTAL
ASSETS, 1934 AND 1946–1949

(dollars in millions)

| | Number of Returns | | | Total Assets | | |
	All (a)	Fiscal-Year (b)	b/a %	All (c)	Fiscal-Year (d)	d/c %
1934[a]	410,626	62,794	15.3	$301,307	26,770	8.9
1946	440,750	126,854	28.8	454,705	51,558	11.3
1947	496,821	160,501	32.3	501,615	61,009	12.2
1948	536,833	186,381	34.7	525,136	67,695	12.9
1949	554,573	199,912	36.0	543,562	71,691	13.2

[a] Total assets of fiscal-year returns, 1934, estimated as explained in Appendix D.

Table 3 traces the fiscal-year share of balance-sheet returns in terms of number and of total assets from 1934 to 1949. The percentages in terms of number for the five years shown run slightly above the percentages for corresponding years in Table 1. This simply means that fiscal-year returns were somewhat more likely to be accompanied by a balance sheet than were other returns. In the fifteen years covered, the percentage in terms of number of returns increased from 15.3 to 36.0—about 135 per cent. The corresponding increase of the percentage in terms of total assets was from 8.9 to 13.2—about 48 per cent. That this increase is much less striking than the increase in terms of number implies that the huge expansion in fiscal-year reporting from 1934 to 1949 had a relatively greater impact upon small than upon large corporations. Specifically, we know that in certain industries—banking, insurance, and public

utilities—which include some of the largest corporations, very few of the large corporations filed on a fiscal-year basis in 1934 or shifted over to that basis in later years. If we exclude the Finance and Public-utilities divisions from the total list of corporations in 1934, the percentages become 17.7 in terms of number and 18.5 in terms of total assets. These correspond to 40.1 and 29.2 for 1949. Accordingly, after these exclusions, the ratio in terms of number rose from 17.7 to 40.1, or 126 per cent, between 1934 and 1939, and the ratio in terms of total assets rose from 18.5 to 29.2, or 58 per cent.

Whether we examine the change from 1934 to 1949 on the all-inclusive basis or on the restricted basis excluding finance and public utilities, the share of fiscal-year returns in the total was much greater in 1949 than in 1934. The increase in terms of number of returns is more striking than in terms of total assets, but even in terms of total assets, and especially on the restricted basis, the increase is very substantial. Nearly 30 per cent—the average in terms of assets for a wide sweep of industries other than public utilities and finance in 1949—is assuredly high enough to support our earlier conclusion that one can no longer regard fiscal-year returns as a negligible element in analyzing and interpreting corporate tabulations in *Statistics of Income.*

5. *Monthly distribution of accounting years: number of returns.* As indicated in Section 1, one of the two standard tables of fiscal-year figures available for every year from 1928 to 1950 is the distribution of fiscal-year returns according to the terminal month. *Statistics of Income* shows also, for each year, the number of part-year returns, as well as the figures for all returns without regard to accounting period. From these data, we can derive a percentage distribution of all returns among the following accounting periods: calendar year, fiscal years, separately for each of the eleven fiscal-year periods ending in the months July–November and January–June, and part years.[6] In 1950, slightly over 60 per cent of the returns were filed for the calendar year, and slightly under 34 per cent were filed for the various fiscal years ending from July 1950 to June 1951. Of the fiscal-year returns, the chief concentrations were for years ending in June, with 5.54 per cent of the over-all total; March, with 4.12 per cent; and September, with 3.62 per cent. The percentage for each of the other fiscal-year months fell somewhere in the range from 2.20 to 2.87; and this reflects a fairly even spread of fiscal-year returns among all the months except June, March, and September. Part-year returns amounted to 6.18 per cent of the over-all total, but we have no means of identifying, from the published tabulations, the lengths or terminal dates of the relevant accounting periods.[7]

Similar computations for each year from 1928 to 1950 appear in Table 4. In

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[6] In certain instances, some departure from this standard scheme of allocation becomes necessary, and this will be pointed out at the time. It should be noted here, however, that part-year returns can be separated only in connection with the entire corporate system. Because of the very limited form in which part-year returns are tabulated in *S. of I.*, allocation is not possible according to size or line of industry, or for balance-sheet returns as a whole and in various subclasses. Therefore, except for over-all analyses for each year in this section and the analyses in Tables 5 and 7, the December figure includes not only the returns for the calendar year but also all part-year returns.

[7] The length of a part year can apparently range from one to eleven months. Part-year returns are tabulated as pertaining to a particular year if "the greater part of the income period" falls in that year (see *S. of I.*, 1949, p. 32). This makes clear to which year a part-year return which overlaps January 1 and includes an odd number of months would be allocated, but it does not clearly cover part-year returns including an even number of months (see also Section 7, and Appendix C).

the last column of this table, the 1928 percentages are repeated, to facilitate comparison with those for 1950. The 1950 and 1928 columns give striking evidence of the great shifts in accounting periods over twenty-three years. The percentage for the calendar-year returns (December figures) is about three-fourths as high in 1950 as in 1928.[8] The percentage for each of the eleven fiscal-year terminal months shows a sharp increase over the twenty-three-year period, though the degree of this increase varies widely among the eleven months. The percentage for January nearly doubled, while that for September was quadrupled. Although the course for each of the twelve months is not completely free from interruption, each month shows a surprisingly steady course. After some irregularities in the first six years, the December percentage declines without any interruption in every year following 1933. Similarly, the percentage for each of the other eleven months shows, except for isolated interruptions, a steady upward course.

In 1933, each of the eleven fiscal-year months shows a decline from 1932.[9] In no other year do we find such a uniform dip. In 1946 nearly all of the five early fiscal-year months (July–November) show declines from 1945, but all of the six late fiscal-year months (January–June) show emphatic increases from 1945. The number of fiscal-year returns increased from 1945 to 1946 for each of the eleven months, but such increases were much smaller for the months before December than for the six months following.[10]

6. *Monthly distribution of accounting years: in terms of selected accounting items.* The preceding section discusses the monthly distribution merely in terms of number of returns; but, for various purposes, greater interest may attach to the distribution, among the various accounting periods, of the compiled aggregate of some particular accounting item, such as net income (or deficit), or total assets, or total receipts. By methods similar to those used to derive the percentages of Table 4, we can allocate the total net income of net-income corporations and the total deficit of deficit corporations among the various accounting periods. Such percentage allocations for 1928 and 1950, as well as the allocations of the net income minus deficit of the net-income and deficit

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[8] The same is approximately true of the part-year percentage, although this has relatively little bearing on changes in the fiscal-year percentages. The part-year percentage is subject to peculiar variations: for example, its exceptionally high values in 1946 and 1947 probably reflect the remarkable increase in new corporate charters following the war. Likewise, the very low levels in 1942–1944 probably reflect the comparative absence of new charters in those years. But we must not forget that part-year returns also frequently arise when corporations are going out of business, and many such disappearances occurred in the war years. Without more elaborate compilations from part-year returns, we can do little better than guess.

[9] I have already noted, in discussing Table 1, that a dip in the number of fiscal-year returns occurred in 1933, and one may wonder whether the tabulations for fiscal-year returns, like those for part-year returns (see Table 4, footnote a), were incomplete for 1933. I have, however, found no note in any later issue of *S. of I.* to indicate such a deficiency.

[10] The great wave of new incorporations following the war resulted in the total number of active returns (regardless of accounting period) rising from 421,125 in 1945 to 491,152 in 1946. Conceivably this outburst of chartering led to the commencement of many corporate businesses in the spring of 1946; these might then appear in the 1946 tabulations as having fiscal years ending in various 1947 months up to June. Moreover, the extensive shift from partnership (or other unincorporated) forms of business to the corporate form in 1946 may have created more corporations with fiscal years ending after than before December (see W. L. Crum, *Age Structure of the Corporate System,* University of California Press, 1953, pp. 114, 122). Whatever the cause, the 1945–1946 increase in number of fiscal-year returns was at a greater rate in the months January to June, and at a smaller rate in most of the months July to November, than the 1945–1946 change in the over-all total from 421,125 to 491,152. This explains the peculiar 1946 percentages in Table 4.

TABLE 4
PERCENTAGE DISTRIBUTION BY FILING PERIOD OF TOTAL NUMBER OF RETURNS, 1928–1950

	1928	1929	1930	1931	1932	1933
July	0.84	0.84	0.82	0.85	0.90	0.80
August	0.82	0.81	0.85	0.88	0.90	0.79
September	0.89	0.90	0.96	0.98	1.04	0.93
October	0.83	0.85	0.92	0.94	0.96	0.87
November	0.82	0.85	0.88	0.90	0.92	0.86
December	80.14	80.24	80.13	80.21	79.84	81.34[a]
January	1.47	1.48	1.46	1.48	1.42	1.37
February	0.87	0.87	0.90	0.90	0.90	0.83
March	1.18	1.21	1.23	1.23	1.21	1.13
April	1.08	1.06	1.12	1.14	1.17	1.05
May	1.16	1.12	1.20	1.21	1.27	1.13
June	2.40	1.98	2.44	2.43	2.49	2.30
Part-year	7.50	7.78	7.08	6.84	7.00	6.60[a]

	1934	1935	1936	1937	1938	1939
July	0.96	1.03	1.07	1.16	1.23	1.28
August	0.98	1.12	1.18	1.27	1.36	1.45
September	1.12	1.21	1.30	1.43	1.53	1.66
October	1.01	1.15	1.25	1.36	1.44	1.56
November	1.08	1.11	1.18	1.24	1.31	1.38
December	79.62	78.51	77.74	76.75	76.40	75.62
January	1.63	1.68	1.73	1.80	1.85	1.87
February	0.99	1.01	1.09	1.16	1.23	1.26
March	1.30	1.36	1.47	1.57	1.67	1.72
April	1.23	1.26	1.35	1.47	1.54	1.62
May	1.32	1.34	1.42	1.46	1.55	1.59
June	2.65	2.75	2.89	2.99	3.18	3.33
Part-year	6.11	6.46	6.33	6.34	5.71	5.65

	1940	1941	1942	1943	1944	1945
July	1.37	1.47	1.61	1.68	1.73	1.81
August	1.50	1.61	1.78	1.86	1.93	2.00
September	1.78	1.93	2.14	2.19	2.30	2.42
October	1.63	1.74	1.92	1.96	2.03	2.11
November	1.45	1.57	1.85	1.85	1.88	1.95
December	74.82	74.09	73.89	73.33	72.19	69.95
January	1.89	1.94	1.99	2.01	2.06	2.12
February	1.31	1.34	1.38	1.42	1.48	1.59
March	1.86	1.93	1.95	2.05	2.18	2.30
April	1.70	1.79	1.80	1.88	1.99	2.08
May	1.67	1.69	1.71	1.81	1.93	2.04
June	3.50	3.58	3.67	3.84	4.11	4.35
Part-year	5.52	5.33	4.32	4.12	4.18	5.27

	1946	1947	1948	1949	1950	1928
July	1.73	2.07	2.31	2.45	2.28	*0.84*
August	1.91	2.26	2.51	2.64	2.52	*0.82*
September	2.44	3.00	3.47	3.71	3.62	*0.89*
October	2.10	2.42	2.62	2.74	2.84	*0.83*
November	1.86	1.93	2.04	2.10	2.20	*0.82*
December	63.54	61.70	60.52	60.19	60.07	*80.14*
January	2.34	2.54	2.64	2.71	2.87	*1.47*
February	1.89	2.11	2.24	2.30	2.46	*0.87*
March	2.89	3.32	3.60	3.80	4.12	*1.18*
April	2.49	2.71	2.83	2.92	2.74	*1.08*
May	2.37	2.49	2.61	2.70	2.56	*1.16*
June	4.92	5.41	5.74	5.87	5.54	*2.40*
Part-year	9.51	8.05	6.88	5.87	6.18	*7.50*

[a] The part-year percentage for 1933 is estimated as the approximate average of such percentages for 1931, 1932, 1934, and 1935. The part-year percentage derived from *S. of I.*, 1933, is 0.40, but on page 34 of the 1934 issue there is a note that this is a serious understatement and corrected figures cannot be supplied. Any error in my estimate causes an equal error in the opposite direction in the December figure, since the latter is obtained by subtracting part-year returns from all non-fiscal-year returns.

categories combined, appear in Table 5.[11] Separate treatment of the two categories—net-income corporations and deficit corporations—is preferable, since the offsetting of negative figures against positive figures can frequently yield misleading impressions of relative importance, because of haphazard variations in a residual obtained by subtraction. This danger is particularly serious in studying fiscal-year returns because in different industries the bulk of such returns tend to have different terminal months. If one of these industries is mainly showing net income and the other mainly deficit, the use of figures combining net-income and deficit categories may conceal significant relationships (see further discussion on this point in Part II).

Table 5 shows that in 1950, for each of the fiscal-year months except January, the net-income percentage is lower than the deficit percentage. Approximately similar relationships hold for 1928. Correspondingly, of course, the 1950 calen-

TABLE 5

PERCENTAGE DISTRIBUTION BY FILING PERIOD OF NET INCOME OR
DEFICIT FOR RETURNS WITH NET INCOME OR NO NET
INCOME AND BOTH CATEGORIES COMBINED, 1928 AND 1950

	Net Income, for Net Income Returns		Deficit, for Returns with with No Net Income		Both Combined	
	1928	1950	1928	1950	1928	1950
July	0.48	1.21	0.98	3.20	0.33	1.14
August	0.96	1.55	0.92	3.02	0.97	1.49
September	0.76	2.19	1.28	4.50	0.60	2.10
October	1.04	2.43	1.36	4.39	0.94	2.36
November	1.48	2.04	1.36	2.57	1.51	2.02
December	86.33	76.62	79.01	56.12	91.07	77.35
January	1.42	3.08	1.45	2.29	1.41	3.11
February	0.94	1.17	0.94	2.42	0.93	1.13
March	0.67	1.97	1.57	3.86	0.41	1.91
April	0.83	1.34	1.29	2.96	0.69	1.28
May	0.68	1.41	1.15	2.16	0.54	1.39
June	2.34	3.78	2.80	5.04	2.21	3.73
Part-year	2.10	1.22	5.88	7.45	−1.63	1.00

dar-year percentage is much higher in terms of net income than in terms of deficit: 76.62 against 56.12. The full implications of this difference cannot be understood without further knowledge of differences in fiscal-year reporting according to line of industry and to size of enterprise, as examined in Parts II and III. We may at this stage merely suggest that in 1928 and 1950 calendar-year returns were more likely to show net income than were returns filed for other accounting periods.

In the net-income returns figures of Table 5, we note that, accompanying a large decline in the calendar-year figure and a small decline in the part-year figure, the figures of each of the fiscal-year months experienced a sharp advance from 1928 to 1950. The same conclusions can be drawn from the figures for the deficit returns, except for the increase in part-year returns. This twenty-three-year increase in fiscal-year reporting has therefore not resulted from an expansion limited to any one accounting period, such as that ending in October, but has appeared in all of the non-calendar twelve-month accounting periods.

[11] For one important purpose, discussed below in Section 7, such a set of figures for both categories combined—obtained by subtracting each deficit from the corresponding net income—is useful.

A similar study of the monthly distribution of the balance-sheet returns, in terms of number of returns and of total assets, is possible for the years 1946–1949. The analysis is carried out on the same lines, except that the relevant figures for part-year returns are not available for balance-sheet returns and therefore cannot be deducted from the non-fiscal-year figures to yield the true calendar-year figures. The results, for 1946 and 1949, are shown in Table 6. Both for number of returns and for total assets the percentage rises from 1946 to 1949 for each of the fiscal-year months (except November, for total assets), whereas it declines for December, which includes both calendar-year and part-year returns.

Looking at 1946 and 1949 separately, we find the total-assets percentages are uniformly lower than the number-of-returns percentages for all fiscal-year

TABLE 6

PERCENTAGE DISTRIBUTION BY FILING PERIOD OF NUMBER OF BALANCE-SHEET RETURNS AND TOTAL ASSETS TABU-LATED FROM BALANCE SHEETS, 1946 AND 1949

	Number of Returns		Total Assets	
	1946	1949	1946	1949
July	1.84	2.60	0.74	0.88
August	2.04	2.80	0.84	1.03
September	2.60	3.96	1.05	1.38
October	2.26	2.91	1.29	1.46
November	2.00	2.24	1.20	1.20
December[a]	71.22	63.95	88.66	86.81
January	2.52	2.90	1.45	1.56
February	2.00	2.42	0.55	0.64
March	3.08	4.03	0.79	1.09
April	2.66	3.09	0.74	0.86
May	2.54	2.86	0.68	0.78
June	5.25	6.23	2.01	2.31

[a] Includes calendar-year and all part-year returns.

months, and the reverse is true for the December percentages. This clearly implies that, on the average, fiscal-year returns have lower total assets than other returns, that fiscal-year reporting is more prevalent among smaller than among larger corporations. (See Part III for further evidence on this point.)

No tables published in *Statistics of Income* for any year before 1946 afford any basis for determining the monthly distribution of fiscal-year returns in terms of such a generally satisfactory measure of importance as total assets. For 1928, 1929, and 1930, however, supplementary tables show aggregate figures for numerous income-account items for the fiscal-year returns filed for each of the fiscal-year months, and for part-year returns. Such fiscal-year aggregates can be compared with corresponding aggregates for the entire list of returns—regardless of accounting period—as customarily presented in the main tables of *Statistics of Income*. One income-account item, net income (or deficit) has already been examined in an earlier section. We now examine another item: total compiled receipts. This is essentially the item showing total gross income of the corporations, although as a matter of fact some elements making up the item, such as dividends or interest received, are not truly "gross" in the same sense as the gross sales or gross receipts from operations. Nevertheless, total

compiled receipts is fairly indicative of the gross volume of business, and it is much less susceptible to wide fluctuations than is net income (or deficit). It is accordingly a better measure of importance than net income (or deficit), but probably not as stable a measure as total assets. Because of differences in the average rate of turnover of assets among lines of industry, and because of the tendency for certain lines to have their fiscal-year returns concentrated in accounting periods ending in particular months, this measure may give a picture of the monthly distribution very different from that afforded by total assets.

Table 7 gives the percentages for the various accounting periods, obtained by methods essentially similar to those used for Table 4.[12] The changes from year to year, for any particular month, are fairly small, and they are sufficiently irregular in amount and direction to afford no apparent generalizations. The

TABLE 7

PERCENTAGE DISTRIBUTION BY FILING PERIOD OF TOTAL
COMPILED RECEIPTS, 1928–1930

	1928	1929	1930
July	0.98	0.87	0.93
August	1.03	1.02	1.00
September	0.94	0.97	0.98
October	3.12	3.25	3.32
November	1.59	1.47	1.45
December	79.20	79.31	80.35
January	2.43	2.61	2.66
February	1.61	1.46	1.61
March	1.20	1.14	1.02
April	1.03	1.04	0.94
May	1.39	1.17	1.07
June	3.01	2.22	2.54
Part-year	2.46	3.48	2.13

sharp cyclical changes in business activity in these years probably affected different lines of business differently, and this may account for some of the differences among the various months in the course of change over the period 1928–1930.

Since no such tables have appeared for fiscal-year returns in any issue of *Statistics of Income* since 1930, no picture can be given of the long-run shifts in the shape of the monthly distribution of total compiled receipts. Moreover, as noted above, these percentages for the years 1928–1930 are not properly comparable with percentages for total assets for the years 1946–1949. Both total compiled receipts and total assets are fairly general measures of importance, but this does not mean that they are interchangeable measures.

7. *Estimate of the average year.* The findings in the foregoing sections are of interest in summarizing certain facts about the importance of fiscal-year reporting in the corporate system as a whole, the changes in the fiscal-year share over the years, and the monthly distribution of the accounting periods. These facts have various important implications, but we are now concerned with a particular implication. What do the monthly shape of fiscal-year returns and the progressive change in that shape imply as to the *average* accounting period represented by the comprehensive tables in *Statistics of Income*, compiled from

[12] Here, as in the case of Table 4, data for part-year returns are available, and the December figure pertains only to calendar-year returns.

all returns regardless of accounting period? As indicated in certain introductory paragraphs of this report, this question may have high practical importance for various users of such tables. The effects on the average accounting year are of two sorts: a dislocation of its center from July 1, the center of the calendar year, and a modification of the indicated intensity of cyclical variations as reflected by the tabulated annual data. The first of these can be measured with fair precision, and is treated in this and certain later sections of the report. The second is much more elusive, and is discussed on a suggestive basis in Appendix B.

To determine the extent to which the center of the average year differs from July 1, we note that the center of a fiscal year ending on July 31 is February 1, five months before July 1. Similarly, the center of each of the ten other fiscal-year periods falls a specified number of months before or after July 1. These departures range from −5, through 0 for the calendar year, to +6, for the twelve different twelve-month accounting periods. If, for a particular year—for example, 1928—we weight each of these departures by its percentage as shown in Table 4, and calculate the weighted average, we have the number of months by which the center of the average year departs from July 1, 1928.[13]

Part-year returns may be filed for any of 132 possible part-year periods ranging in length from one to eleven months and having terminal dates ranging from January 31 of the given calendar year to May 31 of the following year. No detailed breakdown of the part-year returns—according to length of the accounting period or terminal date—has ever been published in *Statistics of Income*. We here assume that if we take all the part-year returns together, the center of the composite group of part-year accounting periods is July 1 and has therefore a departure of 0. As is shown in Appendix C, the basis for this assumption is that the most probable distribution of the part-year periods—as to length and dating—would yield approximately this result. We must remark, however, that this "most probable distribution" is not very probable; wide variations from it can in actuality exist, and such variations might shift the center of the composite away from July 1. The resulting departure might be significant, but a departure as large as one month would be surprising. We can only guess, but it is highly improbable that the departure of the composite center from July 1 would be large enough to alter seriously the end result, the center of the average year for all returns.

When computed in this way, the center of the average accounting period, based on number of returns, for all types of 1928 returns together, fell 0.186 month—or less than six days—later than July 1. This is a negligible departure: the assumption that *Statistics of Income* tables belong to a year centered at July 1 appears to be satisfactory for 1928.

A similar analysis for 1950 yields a weighted average departure of 0.369 month, or about ten days, after July 1. This may not be a negligible departure, but it is certainly not large, and, for most purposes involving comparisons of

[13] The average accounting period of the returns tabulated for any year may differ according to the coverage of the returns: the average for the corporations of a particular line of industry, or of a particular size class, may differ from the average for the entire corporate system. Moreover, as appears from later examples in the text, the average differs according as it is based upon number of returns, amount of net income (or deficit), total assets, or some other measure.

corporate figures with various economic factors, a dating error up to ten days may well be less serious than various other errors which affect such comparisons. We must bear in mind that the present results, based upon number of returns as the weighting element, are tentative; the use of some more appropriate scheme of weighting might indicate a more serious average departure (see Table 8).

TABLE 8

CENTER OF AVERAGE ACCOUNTING PERIOD FOR THE ENTIRE COR-
PORATE SYSTEM, USING VARIOUS WEIGHTING BASES, SELECTED YEARS

Weighting Element	Returns Covered	Tabulating Year	Months by Which Central Date Follows July 1
Number of returns	All	1928	.186
		1950	.369
Net income	With net income	1928	.140
		1950	.207
Deficit	With no net income	1928	.192
		1950	.187
Net income	All	1928	.124
		1950	.209
Total assets	With balance sheets	1946	.093
		1947	.107
		1948	.095
		1949	.096
Total compiled receipts	All	1928	.187
		1929	.130
		1930	.136

In judging the significance of the weighted average departure, the degree of scatter (dispersion among the datings of the accounting periods must be known. The desired measure of scatter among the centers of the accounting periods is the standard deviation. This is calculated by the customary method, and yields, for 1950, 2.19 (months). Under favorable circumstances, this standard deviation may be interpreted as follows: Chances are about two out of three that the center of a particular accounting period will fall within a range of 2.19 months on either side of the center of the average accounting period, which was found above to be about ten days after July 1 in 1950.[14] But such favorable circumstances do not exist in this situation, for we know that a very large number of returns—60.07 per cent of the total—have centers falling precisely at July 1. A more nearly precise statement for the 1950 returns would be: The 60.07 per cent which are calendar-year returns have their centers precisely at July 1; the 33.75 per cent which are fiscal-year returns have their average center 1.094 months after July 1, and have a standard deviation of 3.69 months about that average; and the 6.18 per cent which are part-year returns have their

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[14] Actually, the standard deviation, at 2.19, is seriously understated in this calculation, because we have treated all the part-year returns as though their centers were at July 1. While their *average* is probably approximately at July 1, as shown in Appendix C, the centers of specific part-year periods are scattered from early 1950 to late 1950, and the part-year returns would therefore contribute substantially to any true evaluation of the standard deviation.

average center very close to July 1, and have an unknown standard deviation about their average.

Using the methods by which we arrived at the first figure, 2.19, for the 1950 standard deviation, we find a standard deviation of 1.38 months for 1928. As would be expected, in the earlier year the dispersion about the average center is much smaller than in 1950. If the recent expansion in the use of fiscal-year reporting continues after 1950, we may expect that the dispersion of the centers of the various accounting periods about their average center will continue to increase, and the assumption that the whole system of returns may be treated as having an average accounting period centering at a stated date—no matter how close to or far from July 1—will become increasingly less dependable. The increased dispersion within the system detracts from the usefulness of any average for the whole system.

Thus far the weights used in locating the center of the average accounting period have been percentages in terms of number of returns. We can, of course, carry out similar calculations of the central date for various years by using as weights any of the measures of importance heretofore examined. Table 8 shows the results—including those already found for number of returns—for net income, deficit, difference between net income and deficit, total assets, and total compiled receipts.

These results show considerable differences according to type of weighting system, and between the specified years for any one system. But none of the figures in the final column implies any wide departure of the average center from July 1—the greatest departure is about ten days for 1950 under the number-of-returns weights. For the corporate system as a whole, we find then that the average accounting period has had a center falling only a few days after July 1. Except for the warning that dispersion detracts from the dependability of such an average, we may therefore say that the assumption that the *Statistics of Income* tabulations for the corporate system as a whole pertain to an average year centered at July 1 of the year of tabulation is approximately valid. Even with the recent great expansion in fiscal-year reporting, the validity of this finding has not been seriously impaired. We shall see in Part II that this finding does not necessarily remain valid for certain lines of industry within the entire corporate system, when studied separately.

PART II. DIFFERENCES AMONG LINES OF INDUSTRY

8. *The industrial classification.* Issues of *Statistics of Income* for 1946–1949 include tabulations from fiscal-year returns classified by major industrial groups. These are the same groups, except for occasional changes in the break-down of classes, that are presented in the principal tables in *Statistics of Income* for all returns (and all balance-sheet returns), regardless of dating of the ac-counting periods, 1938 to 1950. The data for fiscal-year returns for 1946 to 1949 appear in two tables, one for all returns whether or not accompanied by balance sheets, and the other for balance-sheet returns. Each table appears in two parts—one for returns with net income, the other for returns with no net in-come. The first table shows, for each industrial class, number of returns and amount of net income (or deficit); the second table shows number of returns and amount of total assets.