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# II EARNING POWER FROM STANDPOINT OF TOTAL 

CAPITAL

Of the various possible measures of earning power, that which expresses income from the standpoint of the entire capital of the business, regardless of the form of capitalization, is doubtless the most significant, particularly when comparisons among individual enterprises and between special groups or fields are desired. It is the rate of return realized on all the capital committed to the undertaking, as opposed to the earning power of the stockholders' equity, that indicates the degree of success attending the activity of the concern as an operating unit.

## DESCRIPTION OF TABLE I

In Table I are shown rates of net earnings, after deduction of expenses and taxes except interest charges, to respective net book values of assets, by main groups of companies and also by subgroups. The income figures are derived by adding 'interest charges', as reported, to 'net balance available for dividends' (see Appendix A, headings $3^{a}$ and 5 under Income-Sheet Statistics). Net book value of assets is determined in each instance by deducting accrued depreciation and other valuation reserves (see Appendix A, heading 3 under Balance-Sheet

Statistics) from the total gross value of assets as reported. The amount of net assets is thus equivalent to the total of capital stock, surplus and surplus reserves, and all liabilities. The resulting rates, in so far as they fall within the range of negative 4 per cent to positive 24 per cent, are distributed or classified in the table by steps of 2 per cent. The undistributed groups shown at each extreme represent those scattering cases, some of which exhibit very extraordinary rates of loss and exceptional rates of income, which were deemed to have little significance as indexes of the range of earning power within the respective fields involved, and which in any event it was not feasible to present in tabular form by steps of 2 per cent. ${ }^{4}$ To some extent, no doubt, the unusual rates are due to peculiarities in methods of valuing assets and other special practices.

The classification of companies followed in Table I is that presented above. In each main division and in each subgroup figures are given for each year and also for the three-year average. The number of companies varies somewhat from year to year. For example, in group C, manufacturing, $34{ }^{1}$ different companies are represented. In ${ }^{1927}$, however, income data were available for only 329 companies, while in both 1928 and 1929 data were available for 340 companies.

## COMPUTATION OF AVERAGE RATES

For each company for each year covered in the original data sheet a ratio of net earnings to net assets was computed as outlined above. An average ratio for each company was then obtained by dividing the sum of the annual rates for the company by the number of years given, usually three. It is these annual rates and three-year average rates that are distributed, by number of companies, in the fourteen groups

[^0]$$
\text { AVERAGE }{ }^{2}
$$



EARNINGS AFTER EXPENSES AND TAXES, BUT BEFORE INTEREST,
(the percentage columns in each case include the first rate and exclude the second) 24\% ${ }^{1}{ }^{1}$




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Table I (cont.)
EARNING RATE ON TOTAL CAPITAL



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EARNING RATE ON TOTAL
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EARNING RATE ON TOTAL CAPITAL
EARNINGS AFTER EXPENSES AND TAXES, BUT BEFO

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${ }^{1}$ Earning rates in the open-end classes are given in Appendix B. ${ }^{2}$ The figures in italics are based on aggregates for the three years.
ranging from negative 4 per cent to positive 24 per cent, and in the two extreme groups. Next a simple average of ratios determined for each company for each year was calculated by main divisions and subgroups of companies, and a simple average of three-year averages of individual companies was similarly determined; the results of these computations are presented in the 'average' column.

It is believed that in general for this study simple averages are more significant than weighted averages. The companies covered vary considerably in size, but whether size as such modifies, to any substantial degree, the significance of the record of any concern in a description of the earning power of the group is doubtful.

## COMPUTATION OF AGGREGATE RATES

Notwithstanding the preference given simple averages, in which each individual company or report has the same weight, it has been deemed desirable for purposes of comparison to compute aggregate or weighted averages of earning rates by main groups of companies and by subgroups for the threeyear period. These ratios, presented as the last item in each group of Table I, are determined by dividing the total net income (as here defined) by the total net assets of each group as a whole, combining all years available. In this calculation, it is evident, more weight is given to a company appearing in each of the three years than to a company of like size appearing in only one or in two years.

High aggregate rates, as compared with average rates, mean, of course, that in general the larger companies have higher earning rates than the smaller. Similarly, low aggregate rates as compared with average rates, indicate a relatively unfavorable showing for the larger companies.

## SPECIAL TECHNICAL PROBLEMS

A few special complications were involved in the preparation of Table I. First, income taxes, which are excluded from net income in computing these ratios, are not an operating expense from a strictly managerial standpoint. They do, however, represent a deduction from the point of view of the private capital invested. Further, exclusion of income taxes does not greatly affect the relative showing of earnings in view of the fact that the tax on corporate incomes during the years covered has been a flat rate on the income otherwise available for stockholders, disregarding the question of exemptions and certain other technicalities not important in this connection. ${ }^{5}$ Second, the inclusion of current liabilities in the capital base might be questioned. To the extent that they bear interest explicitly, and this interest is treated as a part of net income, their inclusion in capital is clearly justified. On the other hand, such liabilities as open book accounts seldom draw interest as such (although implicit interest charges thereon are undoubtedly buried in expense as part of the cost of materials and services), and ideally their amount should be deducted from net assets in calculating earning rates. This adjustment was impossible here, since bank loans and other current interest-bearing obligations were not segregated in the data available. In general the result is a slight lowering of the level of earning rates all along the line, and in addition some minor irregularities are doubtless brought about by the procedure adopted, owing to the variation in the percentage of total net assets represented by the non-interest-

[^1]bearing liabilities. Third, 'non-operating and special income' (Appendix A, heading 4 under Income-Sheet Statistics) is included in income in the computation of the earning rates, although these items originate outside the regular activities of the business. This treatment is required since the assets giving rise to such special earnings are not clearly segregated in the data available and hence must be represented in the capital base employed.

No adjustment has been attempted for any bias resulting from the comparison of net assets at the end of the year with earnings for the year. Since annual earnings are derived from the use of the assets throughout the year the denominator of the fraction representing earning power should logically be some average of assets available during the year. To a considerable extent, dividend disbursements through the course of the year offset the effect of earnings on assets during the year. Careful study has made it clear that any arbitrary adjustment would be inexpedient. The point is serious only in the case of a relatively small number of companies, and the procedure followed does not disturb results appreciably in main or subgroups.

## DIFFERENCES IN EARNING RATES-MAIN GROUPS

Table I indicates that for all companies the three-year average earning rate is about 8.4 per cent; the rate ranges from 8.01 per cent in 1929 , the poorest year, to 8.85 per cent in 1928 , the best of the three years covered. The variation between years, evidently, is not very marked. For the three-year period the simple average and aggregate (weighted-average) rates are almost identical. With respect to the main divisions it is noticeable that manufacturing shows a decidedly higher rate than trading. The aggregate rate for manufacturing is slightly lower than the simple average for the three-year period, indi-
cating a somewhat more favorable showing for the smaller companies in this division; in the trading group the reverse condition obtains. In neither of these groups, however, is the difference between average and aggregate rates very marked. Real estate and finance is a low earning group, particularly when measured by the simple average, while construction and service show high rates. The extraction group shows a relatively high simple average earning power but a low weighted average, indicating a low earning power for the larger companies in the group. It should be remembered that the samples in fields other than manufacturing and trading are very small.

## DIFFERENCES IN EARNING RATES-SUBGROUPS

In the subgroups there is naturally a wide variation from group to group and, in some cases, from year to year. Subgroups in the manufacturing division showing a simple average return of 9 per cent or more for the three-year period include ice cream and other dairy products, meat products, miscellaneous food products, clothing and dry goods, shoes, drugs and chemicals, cement and ceramic products, stoves and other heating apparatus, miscellaneous machinery and equipment, and hardware. It is noticeable that most of these fields produce consumers' goods. Subgroups under manufacturing showing an average return of less than 8 per cent for the three-year period include cotton goods, silks and woolens, tanning, lumber, boxes and barrels, miscellaneous wood products, furniture, pianos, radios, paper, and heavy forgings, bars, billets, sheets, castings, etc.-in large part lines engaged in fabricating producers' goods. Subgroups under trading making a relatively favorable showing include automobile sales and service; gas and oil-wholesale and retail, department stores, cotton and wool merchants, groceries-
wholesale, and fuel, lumber, and building materials-retail. Subgroups under trading showing an average return for the three years of substantially less than 6 per cent are men's and women's clothing-retail, fuel, lumber, and building materials-wholesale, fruit, vegetables, dairy products, grain, etc., and jewelry-wholesale and retail.

The tabulation reveals a considerable degree of consistency between the three-year average and aggregate ratios among the subgroups in the manufacturing and trading classifications. In the manufacturing division only twelve subgroups out of twenty-eight show a higher aggregate than average earning rate, and in several of these groups the difference is slight. In fact, only in shoes, boxes and barrels, and electrical machinery do the data indicate a decidedly better showing for the larger companies represented. Of the manufacturing subgroups in which the simple average rate exceeds the aggregate rate-indicating an advantage for the smaller companies-the most noticeable are ice cream and other dairy products, meat products, fruit and vegetable canning, miscellaneous food products, and carpets, rugs, and other textiles. In the trading classification the aggregate rates for the three-year period are higher than the corresponding simple averages for all but five groups-cotton and wool merchants, fuel, lumber, and building materials-wholesale, fruit, vegetables, dairy products, grain, etc., groceries-wholesale, and paper and leather products-wholesale-showing the advantage to lie with the larger companies, although the difference is striking in only three or four groups.

In the classes outside the manufacturing and trading fields there are several striking differences between average and aggregate rates. For example, the subgroup laundry and dry cleaning under service shows a simple average rate for the three years of 15.68 per cent and an aggregate rate of only 5.02 per cent. On the other hand, the printing, publishing,
lithographing, engraving, etc. subgroup shows an aggregate rate of 20.14 per cent and an average rate of only 7.44 per cent.

Very likely variations in rates between subgroups, and between average and aggregate rates within subgroups, as they appear in Table I, are in many instances due to the nature of the samples and are not characteristic of the field as a whole.

Among many subgroups the average rates as tabulated show considerable fluctuation between years. Examples of this condition under manufacturing are found in milling, and in fruit and vegetable canning. On the other hand, the subgroups ice cream and other dairy products, miscellaneous food products, drugs and chemicals, for example, show marked consistency between years. Examples of groups under trading showing marked fluctuation include cotton and wool merchants, and fruit, vegetables, dairy products, grain, etc. The reader should be cautioned not to take too seriously variations between years in the subgroups. In some cases the data disclosed are no doubt indicative of conditions in the field; in others the peculiar showing of two or three companies may seriously distort the picture. In view of the short period it is not surprising that in general clearcut trends are not apparent.

## DISTRIBUTION OF EARNING RATES

The lack of decided concentration in any particular rate group is noticeable; a considerable percentage of concerns is found in each. However, taking all companies into consideration a central tendency is found in the 2 to 10 per cent range. Thus in the three-year average for all companies, 363 concerns, over half of the total, fall in the four groups ranging from 2 to 10 per cent. Figure 1 shows graphically
the distribution of the three-year average earning rates, as listed in Table I, for all companies.

The trading companies, among the main divisions, show a greater degree of concentration than the manufacturing group. In the case of the three-year average 143 companies, nearly 65 per cent out of a total of 222 , fall in the range 2 to 10 per cent, against only 159 out of $34^{1}$ companies, less than 47 per cent, in the manufacturing division (see Figure 2, by broad groups of earning rates).

Figure 1
COMPARISON OF DISTRIBUTION OF EARNING RATES' OF MANUFACTURING AND TRADING GROUPS


- The distribution of main groups varies somewhat between years. In the trading division, for example, only 113 companies of the total 221 , less than 52 per cent, fall in the 2 to 10 per cent range for 1929 , as compared with 132 companies of the total 211 , or about 63 per cent in 1927 . The variation in the distribution of manufacturing earning rates between years is less marked. As in the case of trading companies as a whole compared with the manufacturing division, the trading subgroups in general show less dispersion than the manufacturing subgroups.


[^0]:    ${ }^{4}$ For their analysis see Appendix B.

[^1]:    ${ }^{5}$ In particular instances, it is true, a change in the treatment of income taxes would have an appreciable effect on relative earning power. For example, a company with large interest charges (which are deductible for income-tax purposes) pays a smaller percentage of its net operating income in taxes than a similar company with relatively small interest charges.

