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Income and finance of quoted companies, 1960-62

This article continues a series of studies in *Economic Trends* of the income and finance of public companies whose shares are quoted on a United Kingdom stock exchange and which are engaged mainly in the United Kingdom in manufacturing, distribution, and certain other services. The previous article in the series appeared in *Economic Trends* of April 1962 and presented an analysis of the development of company finance over the twelve years from 1949 to 1960. Since that article appeared, some changes have been made in the methods used in the analysis(1): in particular, a new method has been adopted to eliminate the effects of changes in the number of companies from year to year which arise because new companies obtain quotations or existing companies amalgamate or go into liquidation; and the smaller companies—those with net assets of less than £0·5 million and income of less than £50,000 in 1960—are no longer included in the analysis.

This article presents, against the economic background of the period, the results of the analysis of company accounts under the new method for the three years 1960-1962. In particular it discusses the changes which have occurred in company income and its appropriation and in the pattern of the sources and uses of company funds; it also examines the trend in company liquidity and in earnings on capital over the period. Secondly, the article deals in some detail with three technical aspects of statistics of company finance; the problem of making comparisons from year to year from the figures, bearing in mind the constantly changing population of companies whose shares are quoted on stock exchanges; it examines some economic aspects of the provisions made in company accounts for the depreciation of fixed assets; and, in connection with assessing the trend in the earnings of capital, the article reviews various problems of definition which arise, including the treatment of depreciation.

The problem of year-to-year comparability

If the accounts of all companies with a stock exchange quotation in one year are aggregated and compared with the aggregated accounts of all companies with a quotation in another year, differences between the two sets of figures will reflect broadly three sets of influences: the change in company affairs due to economic circumstances, the acquisition by the quoted companies of non-quoted companies, and changes due to the addition of companies which are newly granted stock exchange quotations. The Board of Trade analysis is in the main concerned with economic aspects of company behaviour and seeks as far as possible to eliminate the effects on the statistics of institutional factors such as the granting of quotations by stock exchanges to new companies. (The acquisition of a non-quoted company by a quoted company may also be regarded as in part at least an institutional rather than an economic change; but generally the effect on the figures of such acquisitions cannot be eliminated because many of the companies acquired are private companies exempt under the provisions of the Companies Act 1948 from publishing accounts, and their names are frequently not known.)

Until 1960, the effect on the statistics of institutional factors like the granting of new quotations was eliminated as far as possible by presenting, each year, the analysis of accounts of comparable sets of companies over a period of two years. That is, the figures included only companies which had stock exchange quotations throughout the two-year period and, for example, companies which were granted quotations during the later of the two years were excluded from both years' figures. But while this method makes comparison possible over a period of two years, for a longer term study it is necessary to link together changes between each pair of years, and this presents a problem of some complexity. It was therefore decided that, from 1960 onwards, the analysis would be confined to the same population of companies each year—those which had a stock exchange quotation in 1960. Some of the companies with quotations in 1960 go out of existence of course: a few of them are liquidated, and others amalgamate with or are acquired by other quoted companies. The liquidations are normally a reflection of economic circumstances and the resulting fall in activity of the quoted company sector is reflected in the figures; acquisitions etc., between quoted companies do not affect the figures because the acquired company was included directly in the figures before it lost its independence, while, after the amalgamation, its activity is reflected in the accounts of the acquiring company. In 1960, the accounts of 2,241 companies were analysed; by 1961, the number had fallen to 2,173, as a result of amalgamations between companies in the population. In 1962 a further fall of 50 in the number of companies occurred.

In the tables which accompany this article, the figures for 1960 and 1961 include all companies in the field—that is, all companies in manufacturing and distribution which in 1960 had a stock exchange quotation and had assets of £0·5 million or income of £50,000 or more. But the figures for 1962 are incomplete, since 1962 accounts of about 100 companies had not been received by the end of September 1963

(1) The analysis under the new method is made quarter by quarter throughout the year as company accounts are received by Statistics Division of the Board of Trade—see, for instance, *Board of Trade Journal*, 1st November 1963

in time for inclusion in the analysis. For purposes of comparison with 1962 therefore the tables also give 1961 figures which exclude the accounts of those 100 companies.

The figures described as relating to '1962' are derived from companies' accounts for accounting years ending between 6th April 1962 and 5th April 1963. The accounting years of companies end on different dates throughout the year, but 36 per cent. of companies presented accounts to December 1962, and a further 23 per cent. had accounting years ending in March 1963. The 'average' accounting date, if each company is given equal weight in the calculation, is in December 1962, and hence the aggregated accounts provide some measure of average experience during the calendar year 1962, although in fact the period covered by some accounts ranges as far back as April 1961, and as far forward as March 1963 by others.

Economic Background 1960-1962

The early months of 1960 saw the continuation of the previous year's rapid expansion of output and demand in the United Kingdom but the Government introduced a series of restraining measures in the first six months of the year and these were followed by some slowing down of the growth in personal consumption and exports also fell, although fixed investment continued to rise and investment in stocks was exceptionally high. Some easing of the measures towards the end of 1960, included two reductions in bank rate. Fixed investment continued to rise and there was a rapid increase in personal consumption, although stockbuilding was turning downwards. By the middle of 1961 there was extensive pressure of home demand, with rising costs and prices and a continued deficit in the balance of payments, accompanied by a heavy withdrawal from sterling. To meet this situation a series of measures was introduced to restore confidence in sterling and to bring the rise in incomes more into line with the growth of national production. There followed a fall in personal spending and in fixed investment while stock building declined further. As international confidence in sterling recovered restrictions were progressively eased—the bank rate for instance was reduced in six stages from the 7 per cent. to which it had been raised in July 1961 to 4 per cent. in January 1963. The easier conditions, coincided with an expansion of world trade in the first half of 1962, and there was an upward movement in exports and personal consumption. Although consumers' expenditure continued to increase throughout the year, exports levelled off in the second half of 1962 and fixed investment and stockbuilding were slack throughout the whole year. Broadly therefore the first 18 months of the three years 1960-62 was a period of expansion and the second half a period when the effects of the restrictive measures taken in mid-1961 were holding the economy in check, although the rein had been considerably loosened by mid-1962.

The trend of company finance during the three years followed roughly the same lines. The national income statistics show that the gross trading profits earned by all companies in the first quarter of 1960 (in contrast with profits earned during a year and reported in companies' annual accounts) were at a record level but they declined, on a seasonally adjusted basis, quarter by quarter for two years and, although they began to recover from the first quarter of 1962 onwards, in the last quarter of the year they were still 5 per cent. below the level of the first quarter of 1960. In 1961 as a whole they were 5 per cent. lower than in 1960 and they remained at the same level in 1962.

The profitable period 1959/60 enabled companies to increase their savings but the increase was less than the increase in capital expenditure and expenditure on stocks, and non-financial companies' net acquisition of financial assets *plus* their net investment abroad fell from £305 million in 1959 to £108 million in 1960. In 1961 lower company profits, accompanied by more generous dividend distributions and higher tax liabilities (incurred for the more prosperous preceding years as well as reflecting an increased rate of profits tax), resulted in a fall in company savings at a time when capital investment programmes were running at an exceptionally high level. In consequence, the non-financial companies showed a net disinvestment of £211 millions in financial assets in 1961—the only year in which the national income accounts show them as net borrowers on capital account. In 1962, non-financial companies' savings were roughly equal to their expenditure on fixed assets and stocks.

Experience of quoted companies

The trading profits of the quoted companies whose income and finance are analysed in this article amounted to £2,344 million in 1961; this includes trading profits earned abroad, since the analysis is based on the consolidated accounts of groups of companies which in many cases include the profit and loss account of overseas subsidiaries. The trading profits earned in the United Kingdom by all non-financial companies amounted to £3,737 million in 1961. Overseas earnings on direct investment abroad by United Kingdom companies (including some financial companies) showed only a small decrease between 1960 and 1961—from £258 million to £251 million—and rose by 10 per cent. in 1962 to £275 million (see *Board of Trade Journal*, 15th November 1963). The better profit experience of overseas operations compared with those in the United Kingdom in 1961 and 1962 probably explains in part at least the smaller fall in quoted companies' profits between 1960 and 1961—2 per cent. against the 4 per cent. fall in trading profits at home of all non-financial companies.

The fall in trading profits was accompanied by changes in the pattern of appropriation of income. Table A shows the percentage distribution of gross income in each of the three years from 1960 to 1962;

in this table, income tax deducted by companies from payments of dividends, is treated as falling on the recipients of the dividends. Dividend distributions continued to increase and in 1962 were approaching one-third of total income; in each year from 1952 to 1958, they were fairly consistently around one-quarter of income. A number of factors encouraged companies to adopt a more generous dividend distribution policy. The differential rate of profits tax on distributed profits—which in 1956 and 1957 for example had been at 30 per cent. against 3 per cent. on undistributed profits—was replaced, for accounting periods from April 1958 onwards, by a flat rate profits tax; then too, some companies have seen a more generous distribution policy as a defence against the possibility of take-over bids, and a further factor could be that companies may have felt able in recent years to rely less on retained profits for expansion, since access to capital may now be easier than in the mid-1950's when, for instance, the approval of the Capital Issues Committee was generally required for an approach to the market and when bank lending was at a lower level than in the 1960's. Interest payments on long-term loans increased very sharply between 1960 and 1962, from £69 million to £87 million. The increase reflects a considerable amount of new loan capital issued, £105 million in 1961 and £291 million in 1962, which raised the proportion of issued capital and reserves accounted for by loan capital from 10½ per cent. at the end of 1960 to over 12 per cent. two years later. The new loans were raised during a period of high interest rates and the average rate offered to attract them was probably between 6 and 7 per cent., substantially higher than the rate of return on existing loan capital.

While dividend and interest distributions increased, tax appropriations fell between 1960 and 1962. Profits tax was raised from 12½ per cent. to 15 per cent. on profits earned after 31 March 1961, but the effect of this increase was greatly outweighed by the fall in income; moreover, in Table A, dividends are gross of income tax and on this basis the increase in dividend payments between 1960 and 1962 itself explains over 1 percentage point of the fall from 23·4 per cent. in 1960 to 20·7 per cent. in 1962 in the proportion of gross income paid as taxation by the companies themselves.

The fall in tax appropriations was rather less than the rise in dividend and interest distributions, and hence the proportion of gross income (i.e. total income before providing for depreciation) retained by companies, either as depreciation and other provisions or as reserves, fell slightly between 1960 and 1962, from 43·8 to 43·0 per cent. Throughout the period since 1949 when the analysis was introduced, total company retentions have varied rather widely as a proportion of gross income: the proportion was lowest in 1952 at 36·6 per cent. and highest in 1959 at 46·1 per cent. But within the total, provisions (of which over 95 per cent. are provisions for depreciation of fixed assets)

Appropriation of company income

TABLE A £ million (percentage of total in italics)

	1960	1961	1962(1)
Depreciation and other provisions...	538 *21·2*	594 *24·0*	625 *26·0*
Taxation (including prior year adjustments)(2)	594 *23·4*	546 *22·0*	498 *20·7*
Interest on long-term loans	69 *2·7*	76 *3·1*	87 *3·6*
Dividends (gross of tax)(2)	732 *28·9*	754 *30·4*	758 *31·5*
Share due to minority interests ...	29 *1·1*	26 *1·0*	27 *1·1*
Retained in reserves	574 *22·6*	482 *19·5*	410 *17·0*
Gross income(3)	2,537 *100*	2,478 *100*	2,405 *100*

(1) Figures for 1962 exclude about 100 companies whose accounts had not been received in time for inclusion in the analysis.
(2) Income tax deducted by companies from payments of dividends is treated as falling not on companies but on recipients of dividends. Hence dividends are gross before deduction of tax.
(3) Trading profits, investment and other income *plus* prior year adjustments, other than tax.

have been increasing steadily year by year by around 12 per cent. a year, more or less unaffected by the quite sharp changes which have occurred in total income. In consequence the proportion of income retained as reserves has shown a falling trend over the period, although within the trend there have been some quite sharp variations from year to year. The percentage of income retained in reserves last year, at 17·0 per cent., was the lowest recorded; as recently as four years ago, in 1959, the percentage of income retained in reserves was half as high again, 24·3 per cent.

The depreciation of fixed assets

Capital goods like plant and machinery are not 'used up' in a manufacturing process in the way that, say, raw materials are. Capital goods are usually productive over a long period, and indeed they may show no great loss of efficiency (as measured by the ratio of, say, input of man-hours of labour and tons of raw material to the quantity of output) over their life. A loss of efficiency, in this sense, arises for instance with the incidence of costs of maintenance and repair when the plant has been in operation for some years. During the early years of a plant's life, maintenance costs will be very low; later, taking one year with another, they may be relatively stable or they may gradually increase as the plant grows older. Plant is often replaced not because it is worn out or inefficient but because it is less efficient than new plant: the costs of production by the new plant (including the appropriate capital cost) are less than the costs of production by the old plant (allowing for its value for sale as scrap). Thus the amount of capital goods 'used up' in a unit of time (say a year) or in making a unit of output cannot be allocated directly until the capital goods have come to the end of their life. The normal

accounting processes of 'providing for depreciation' annually imply some estimate of the future life of the plant as well as some convention about how the cost of the plant shall be allocated over its estimated future life. Annual provisions for depreciation are, in fact, an accounting device to smooth 'lumpiness' of capital expenditure on the one hand, and over the years to maintain intact the capital employed by the undertaking on the other. It is an over-simplification to treat annual depreciation provisions either as a measure of the capital used up in the productive process or as allowing for the fall in the market value of plant during the year.

Both the assumed life of plant and the accounting conventions on which annual depreciation provisions are based vary widely. For instance, the 'lives' for different types of plant on which capital allowances for taxation purposes are based may differ from those on which a company bases its depreciation policy—the company may assume a shorter life for its plant and think it prudent to make an annual depreciation provision considerably higher than the one Inland Revenue has allowed for tax purposes. The accounting conventions may vary greatly: one company may adopt a 'straight line' method of depreciation and if an item of plant has an estimated life of ten years, it will set aside from its gross income 10 per cent. of the cost of the plant every year as a depreciation provision. Some companies feel that it is more prudent to provide for a higher proportion of the cost in the early years of the plant's life, and a lower proportion in its later years. This can be done in various ways: for instance the annual depreciation provision may be a percentage —say double the percentage arrived at by the 'straight line' method—of the written down value of the plant.

Nearly all companies whose methods of depreciation are based on the original cost of the plant—that is, excluding those companies which revalue their assets from time to time, say to current replacement cost—aim to provide annual depreciation provisions which when added together will come to the original cost of the plant. In their published accounts, the allocation of each years' profit includes the setting aside of the depreciation provision which then becomes part of the resources available for the company's use. The provision may, for instance, be reflected in the balance sheet as increased liquid resources, or it may be used to finance the building of a new factory, when its counterpart will be an increase in fixed assets. The value at which fixed assets appear in the books is reduced by the amount of the provision; hence if no changes occurred in the company's capital structure—if there were no issue or repayment of capital to shareholders, and if the balance of profit after depreciation and tax were distributed and none of it were retained in reserves—the book value of the company's net assets (fixed assets after depreciation *plus* net current assets) would remain constant over time, and would be equal to the capital originally invested.

But if the productive capacity of plant continues at its original level (or falls only slightly) until it is scrapped, each year's depreciation provision constitutes an addition to the resources actually available to the company and, as such, will earn a return. An example from the present figures may illustrate the point. The average return (gross of depreciation but net of tax) on gross assets of quoted companies in 1962 was about 9 per cent., while the depreciation provision was just over £600 million, and the total of the depreciation which had been provided for on existing assets over the years amounted to over £4,100 million. If the quoted companies maintain their provisions for depreciation at the 1962 level over the next few years, and the accumulating amount set aside is retained and earns a return of 9 per cent. a year, which is in turn reinvested, after 8 years the accumulated provisions plus their earnings since 1962 would exceed the gross value of fixed assets at the end of 1962. In other words, on the assumptions mentioned above present depreciation policies are sufficient to provide for the replacement of existing capital by the end of 1970.

Such a calculation can, of course, give only a rough indication of the orders of magnitude involved. To assume a yield on depreciation provisions of 9 per cent., equal to the average return on capital, is probably unrealistic. First, the average rate of return on capital has been falling in recent years and may fall still further; if instead of the rate of return of 9 per cent. (compounded) which has been assumed in the above calculation, a rate of 6 per cent. is assumed, it would have taken until 1972 for the accumulating provisions and their earnings to reach the gross value of fixed assets at the end of 1962. Secondly, as explained above, some loss of efficiency in plant, reflected in increased maintenance costs, must be expected as the age of the plant increases; and because of the rise in prices which has occurred since existing capital was originally installed, the book value (gross of depreciation) of fixed assets in 1962 understates their replacement costs. If allowance were made for these factors, clearly more than 8 years would be needed for depreciation provisions to accumulate to a sum equal to the value of existing assets; on the other hand, the calculation takes no account of the earnings which must have accrued in the past to the accumulated depreciation at the end of 1962, and the average life of fixed assets is undoubtedly considerably greater than 8 years. The calculation, in fact, provides some support for the view that the accounting practice of making depreciation provisions which are based on historical cost of plant (but which do not take account of earnings which will accrue to the provisions during the lifetime of the plant) does in fact allow to some extent for rising price levels in its aim of maintaining capital intact.

Uses of company funds

Table B shows the main uses of capital funds of companies during the three years 1960 to 1962. These estimates of the uses to which companies' funds are

Uses of company funds

TABLE B — £ million

	1960	1961	1962(1)
Expenditure on tangible fixed assets	1,070	1,312	1,238
Increase in value of stocks	615	300	77
Increase in trade and other credit granted	409	236	164
Expenditure on acquiring subsidiaries	328	374	270
Expenditure on trade investments...	76	81	147
Other expenditure and adjustments(2)	− 69	− 56	− 23
Total	2,430	2,246	1,873

(1) Figures for 1962 exclude about 100 companies whose accounts had not been received in time for inclusion in the analysis.
(2) Expenditure on goodwill and other intangibles *plus* expenditure out of provisions *plus* other expenditure on capital account *plus* a consolidation adjustment (−£140 million in 1960, −£127 million in 1961 and −£104 million in 1962) in respect of unidentified assets and liabilities of subsidiaries acquired during the year *plus* residual and other adjustments.

Sources of company finance

TABLE C — £ million

	1960	1961	1962(1)
Issues of capital:			
Cash receipts:			
Ordinary shares	236	284	90
Preference shares	14	1	14
Debentures	26	99	275
Shares issued in exchange(2):			
Ordinary shares	178	207	165
Preference shares	13	15	14
Debentures	1	6	16
Company retentions:			
Depreciation and other provisions	538	594	625
Additions to future tax reserves...	58	− 59	− 18
Retained in reserves	574	482	410
Other sources of funds:			
Bank credit	149	175	69
Trade and other credit received ...	341	198	129
Fall in liquid resources(3)	103	111	71
Other sources of funds(4) ...	198	134	13
Total sources of funds (including fall in liquid resources)	2,430	2,246	1,873

(1) Figures for 1962 exclude about 100 companies whose accounts had not been received in time for inclusion in the analysis.
(2) Value, as recorded in acquiring company's accounts, of shares issued in exchange for acquisition of controlling interest in subsidiary companies.
(3) Marketable securities *plus* tax reserve certificates *plus* cash.
(4) Additions to accruals (tax, dividends and interest) *plus* increase in liability to minority shareholders *plus* surplus on disposal of fixed assets *plus* other receipts on capital account.

put, as well as the estimates in Table C of the sources of companies' funds, are subject to some margin of error. Table B includes, as a use of funds, the expenditure on acquiring subsidiaries and, as far as possible, the figures of expenditure on particular classes of assets—tangible fixed assets or stocks for instance—exclude the increase in the parent company's assets arising from such acquisitions, but in many cases it is not possible to estimate exactly what part of the increase in assets (and in liabilities) of the acquiring company is due to the acquisition. These unidentified assets and liabilities acquired with subsidiary companies are brought to account in Table B in a 'consolidation adjustment'—see footnote (2) to the table. Subject to this point, it seems clear that the quoted companies' experience between 1960 and 1962 was closely in line with that of the economy as a whole as described earlier in this article. The buoyancy of expenditure on fixed assets during the earlier part of the period is seen in the rise in 1961 of 23 per cent. in capital expenditure above the 1960 level, which was itself easily the highest level previously recorded in these studies. But in response to the measures taken in mid-1961, expenditure on fixed assets moved downwards in 1962, while already in 1961 stockbuilding was receding from the high level of the previous year and in 1962 reached the low level of around £80 million; the fall in stock-building was accompanied by a slowing down in the rate of growth of new trade credit granted. Expenditure on acquiring subsidiary companies, or on acquiring an interest in associated companies by way of trade investments, continued at a high level.

Sources of company finance

Table C shows how the fall in the level of company activity between 1960 and 1962 was reflected in an easing of pressure on company funds. Again, as explained above, the figures are subject to a margin of error because of the unidentified assets and liabilities of subsidiary companies which were acquired during the period. The total value of new issues of loan and share capital increased by 31 per cent. between 1960 and 1961, and the bulk of the increase was accounted for by issues for cash, particularly by way of long-term loan capital. The change from participating to debenture capital went further in 1962; issues for cash by way of long-term loans amounted to £275 million, against only £90 million by way of equity capital. As explained above, company retentions from the profit and loss account showed some fall, but the increase in cash from new issues, coupled with the lower level of company activity, reduced the pressure for 'outside' finance, and the increases in bank overdrafts and in trade credit received in 1962 were barely half the increase in 1960 and 1961. There was a similar slowing down in the rate at which companies' cash and marketable securities were being liquidated.

Table D shows how short-term assets compare with short-term liabilities in the consolidated balance sheet of the quoted companies. The pressure which has been apparent on company liquidity for some years past shows clearly in the figures, although the pressure has eased a little during 1961 and 1962 when company activity was not expanding at the rate of earlier years. The high level of investment in 1960, both in stocks and in fixed assets, caused companies to run down their liquid resources by £100 million; sales of marketable

Company liquidity

TABLE D

£ million

	1960	1961	1962(1)
Liquid resources:			
Cash	675	631	619
Tax reserve certificates	215	201	150
Marketable securities	609	589	539
Total liquid resources	1,499	1,421	1,308
Less Bank overdraft and loans ...	709	880	879
Taxation, dividend and interest payments due	1,082	1,154	1,066
Excess of bank overdrafts and payments due	291	614	636
Liquidity ratios:			
Current assets/current liabilities ...	*2·11*	*2·02*	*2·02*
Immediate assets(2)/current liabilities	*1·08*	*1·02*	*1·02*

(1) Figures for 1962 exclude about 100 companies whose accounts were not received in time for inclusion in the analysis.
(2) Liquid resources *plus* trade and other debtors.

securities, partly perhaps in response to the buoyancy of stock market prices, accounted for about one-third of the reduction. At the same time, companies were calling on their overdraft facilities with banks to an unprecedented extent, and increases in dividend as well as in tax appropriations on the high level of profits in 1959 and 1960 were awaiting payment and providing a source of very short-term finance to companies. 1961 and 1962 saw a slowing down in the rate of fall of liquid assets, although the lower level of profits encouraged companies to run down their holdings of tax reserve certificates. But liquidity ratios at the end of the period were lower than at any other time since this analysis began in 1949.

The earning power of assets

The statistics of quoted company finance have recently been used to a growing extent in studies of the earning power of assets—in relation, for instance, to studies of the trend of profits of quoted companies and of the comparative profitability of quoted companies and of the nationalised industries. Among the many problems which arise in studies of this nature are questions of the basis of valuation of assets which constitute the denominator of an income/asset ratio, and what are the appropriate definitions of income and assets.

The basis of valuation of fixed assets—and hence of the issued capital and reserves underlying them—varies from company to company. The age of assets (and consequently the level of prices at which they were bought) is spread over a wide span of years; and changes in the value of assets recorded in balance sheets between one year and the next arise not only from the installation of new assets (and the scrapping of old ones) but also from revaluations of assets and the writing off of goodwill. These are considerable difficulties, but they can be exaggerated. In the first place, a considerable proportion of a company's assets consist of current assets like cash and trade and other debtors which are by definition at current price levels. In 1962, net current assets—that is, current assets less current liabilities—of the quoted companies in total amounted to about £5,000 million, or 60 per cent. of the net value of tangible fixed assets, £8,340 million. Secondly, a number of companies, including some of the very large ones, have revalued their assets so that they reflect price levels of recent years. (The effect on asset values of purely 'book' transactions like revaluation and writing off of goodwill, which can usually be identified from the resulting changes in the company's reserves, has as far as possible been eliminated in calculating the income/asset ratios shown in the chart accompanying this article. The value of assets at the end of 1960 are as recorded in companies' balance sheets, but for 1961 and 1962 they have been calculated by adding to the 1960 figures 'true' changes which have occurred, ignoring for instance changes arising from revaluation of assets, bonus issues, writing off goodwill, etc.)

The definitions of income and assets to be used in calculating measures of the return on capital depend to a large extent on the purpose of the measures. For instance, if the purpose is to examine the trend of earnings of a particular company, the finances of the company can be examined in detail. If a run of balance sheets shows a bank overdraft running at a fairly high level over a period of years, it would be reasonable to treat the loan as capital employed by the firm, while if the loan appeared only in the balance sheet for one year it might be more appropriate to treat it as a current liability. When, however, the accounts of a wide variety of companies are being aggregated into a consolidated set of accounts, it is desirable to analyse the accounts on a standard basis which minimises as far as possible the effect of different accounting practices. For example, income may be defined as the sum available to the company either before or after deducting depreciation provisions. On the one hand, from the accountant's point of view a profit cannot be struck until provision has been made for maintaining capital intact; and it is prudent to make a larger provision for depreciation for a new plant which is expected to become obsolete rapidly than for one which is expected to have a long effective life. But from the point of view of economic analysis, depreciation provisions are an arbitrary allocation from the total sum (accruing from the year's working) whose appropriation is under the control of the company and there is little significant difference between depreciation provisions as such and the portion of profit retained by the company as reserves. If, for instance, a company earns only sufficient to cover its direct costs, it will debit to its profit and loss account a depreciation provision and, in the balance sheet, the resulting loss appears as a reduction in reserves. Similarly many company accounts show, in addition to a depreciation provision, an appropriation

to capital replacement reserves: a return net of depreciation would include the former but exclude the latter, although the difference is an accounting and not an economic one.

Similarly, capital employed may be defined either as including or as excluding the depreciation which has accumulated over the years in fixed assets. Sometimes annual depreciation provisions are regarded either as a measure of the extent to which capital is 'used up' during the year or as offsetting a fall in the plant's market value as it becomes more worn out; but it is probably more realistic to assume generally that a plant's productive capacity is roughly constant over its life, and this assumption leads to the approach of measuring capital before depreciation. As an extreme example, a plant which has been operating for a number of years and has been fully depreciated (so that it stands at a nil net valuation in the company's books) may still be operating profitably; in such a case, the ratio of net income to assets net of depreciation will be infinite.

Both the 'gross' and the 'net' approaches to trying to measure the return on capital have serious difficulties inherent in them, and although on balance perhaps the ratio of gross income (that is, before providing for depreciation) to gross assets (fixed assets gross of depreciation *plus* current assets *less* current liabilities) provides a rather better basis for an aggregative analysis than the net ratio, it is preferable to study the trend of both ratios; the chart accompanying this article shows the trends in both the gross and the net ratios for some selected industry groups over the period 1954 to 1962.

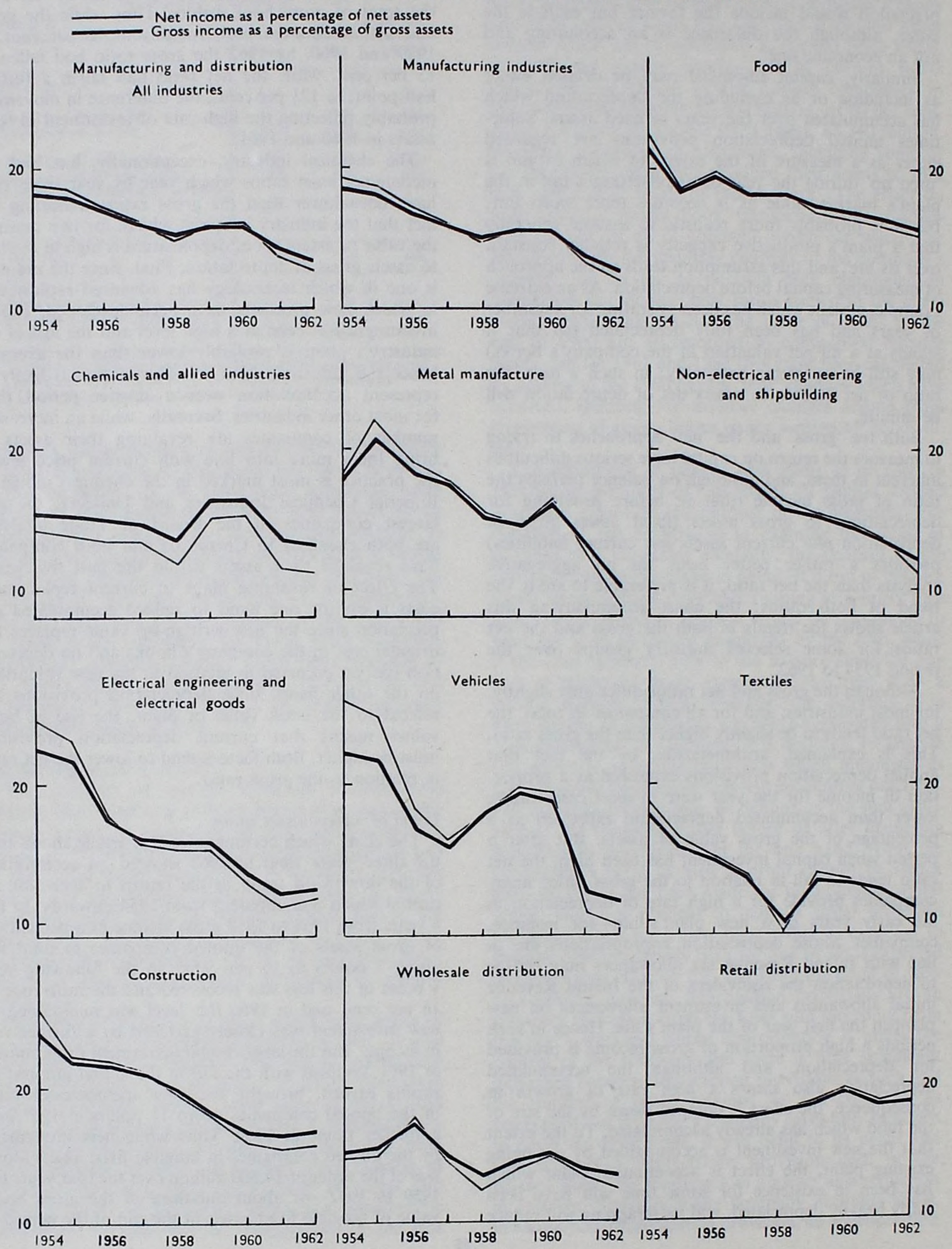
Although the gross and net ratios differ only slightly, for most industries, and for all companies in total, the net ratio tends to be slightly higher than the gross ratio. This is explained, arithmetically, by the fact that annual depreciation provisions expressed as a proportion of income for the year were in most cases rather lower than accumulated depreciation expressed as a percentage of the gross value of assets. But after a period when capital investment has been high, the net ratio tends to fall in relation to the gross ratio: many companies provide for a high rate of depreciation in the early years of a new plant's life—for instance, companies whose depreciation appropriations are in line with Inland Revenue tax allowances may charge to depreciation the equivalent of the Inland Revenue initial allowances and investment allowances on new plant in the first year of the plant's life. Hence in such periods a high proportion of gross income is provided for depreciation, and although the accumulated depreciation also shows a high rate of growth in consequence, the effect is damped down by the size of the fund which has already accumulated. To the extent that the new investment is accompanied by scrapping existing plant, the effect is accentuated; plant which has been in existence for some time will have been fairly heavily depreciated, and its scrapping will reduce the total of net book values proportionately less than the total of gross book values. Thus while the gross and net ratios were both roughly at 16 per cent. in 1959 and 1960, by 1962 the gross ratio had fallen to 13 per cent. while the net ratio had fallen a further half point, to 12½ per cent., the difference in movement probably reflecting the high rate of investment in fixed assets in 1960 and 1961.

The chemical industry, exceptionally, has had net income/net asset ratios which year by year since 1954 have been lower than the gross ratios, reflecting the fact that the industry is one in which, for two reasons, the value of assets net of depreciation is high in relation to assets gross of depreciation. First, since the industry is one in which technology has advanced rapidly and in which new products have been developed, capital investment has been at a high level and the age of the industry's plant is probably lower than the average; hence the industry's fund for depreciation is likely to represent accumulation over a shorter period than for most other industries. Secondly, while an increasing number of companies are revaluing their assets to bring them more into line with current price levels, the practice is most marked in the chemical industry: Imperial Chemical Industries and Unilever, the two largest companies in the Board of Trade analysis, are both classified to Chemicals and both companies have revalued their assets within the past five years. The effect of revaluing plant to current replacement costs is on the one hand to reduce accumulated depreciation since the new written-up value replaces the original cost in the company's books and no depreciation has yet occurred in relation to the new valuation; on the other hand, since depreciation provisions are related to the book value of plant, the rise in book values means that current depreciation provisions must be higher. Both factors tend to lower the net ratio in relation to the gross ratio.

Trend of income/asset ratios

The chart which accompanies this article shows that the three years 1960 to 1962 showed an acceleration of the downward trend in the return to each unit of capital which was apparent from 1954 onwards. In the 4 years from 1954 to 1958 gross income as a percentage of gross assets of the quoted companies in total fell about 3 points to 15 per cent.; in the following year 1 point of this loss was recovered and the ratio rose to 16 per cent. and in 1960 this level was maintained as new investment was closely matched by a further rise in income. But the large capital investment programmes of 1961, coupled with the fall in the actual amount of profits earned, brought the gross income/asset ratio of the quoted companies down 1½ points in 1961 and a further point in 1962. Thus while new investment by the quoted companies in tangible fixed assets alone was of the order of £4,500 million over the four years for 1959 to 1962—or about one-third of the gross book value of tangible fixed assets at the end of the period—

INCOME/ASSET RATIOS OF SELECTED INDUSTRIES



the return on each £100 of the gross book value of capital fell from £16 in 1959 and 1960 to only £13 in 1962.

The downward movement in earnings on capital between 1960 and 1962 was apparent in almost all the 22 separate industry groups for which figures are calculated; only among the tobacco firms was a rise recorded in the ratio in both 1961 and 1962, and in both years the increase was very small. The construction industry, in which earnings ratios were falling rather steeply in the years up to 1960, showed no further decline in 1962, and companies classified to transport (excluding shipping) and retail distribution—which exceptionally, saw a steady growth in income per unit of capital during the 1950's—as well as the electrical engineering industry recorded only small falls in their income/asset ratios. The vehicles industry in 1962 earned less than two-thirds of the return it received in 1960 on each £100 of capital, but this is an industry whose profitability fluctuates widely over periods of two or three years, while earnings ratios of companies in metal manufacture, where the steel companies predominate, also fell steeply and in 1962 each £100 of capital earned a return of only £10.

NOTES AND DEFINITIONS

Companies included

The companies included in this analysis, numbering about 2,000, are those which in 1960 (a) had assets of £0·5 million or more or income of £50,000 or more; (b) whose shares were quoted on a United Kingdom stock exchange; and which (c) are mainly engaged in the United Kingdom in manufacturing, distribution, construction, transport and certain other services. Companies whose main interests are in agriculture, shipping, insurance, banking, finance and property and those operating wholly or mainly overseas are not included.

Method of presentation

Wherever possible the accounts used in the analysis are the consolidated accounts of groups of companies, including the balance sheets and the profit and loss accounts of subsidiary companies within each group. The statistics are not therefore confined to activities in the United Kingdom since over one-quarter of the companies are known to have subsidiaries operating overseas whose accounts are consolidated with those of the group. Figures for the earlier years include companies which were independent in that year but which were acquired later by another company in the population.

The Appendix tables, which cover all the companies analysed and also those in manufacturing industry only, are divided into a standard appropriation of income account, a balance sheet and a table setting out the sources of companies' funds and showing how these funds were used. In the latter table changes which are not due to true cash transactions, for example, those resulting from revaluation of fixed assets and reorganisation of capital, have been eliminated as far as possible.

Because of rounding, the total of a row or column may not be exactly equal to the sum of its components.

The accounting 'year'

The figures for the year '1960' relate to companies' accounting years finishing between 6 April 1960 and 5 April 1961; other years are similarly defined. The accounting years of companies end on different dates throughout the year, but about 40 per cent. of quoted companies have accounting periods ending in the fourth quarter of the calendar year, and a further 30 per cent. in the first quarter.

In the text tables, the figures for 1960 and 1961 are 'final'—that is, they include accounts of all the companies in the field covered by the analysis. The figures for 1962 relate to companies whose accounts for 1962 had been received by 30 September 1963; they are provisional since they exclude about 100 companies whose accounts for 1962 had not been received in time for inclusion in the analysis.

The Appendix tables include final figures for 1960 and 1961 and provisional figures for 1962 (with comparable figures for 1961).

Industry classification

Each company whose accounts are included in the analysis is allotted to an industry group, corresponding generally to an Order of the *Standard Industrial Classification, 1958* (S.I.C.). If a company has diverse activities it has been classified to the industry in which its main activity lies; but for some companies, and particularly for industrial holding companies with interests in a number of manufacturing and service industries, the classification is a very arbitrary one. Tables similar to those in the Appendix to this article for each of 22 industry groups are published in *Statistics on Incomes, Prices, Employment and Production*, No. 7, December 1963 (H.M.S.O., price 12s. 6d. net).

Board of Trade

APPENDIX

Appropriation of income

TABLE I

£ million

	Manufacturing and distribution: all industries				Manufacturing industries			
	Final figures		Accounts received up to 30 September 1963		Final figures		Accounts received up to 30 September 1963	
Accounts for 'year' ...	1960	1961	1961	1962	1960	1961	1961	1962
Number of companies ...	2,241	2,173	2,033	1,981	1,688	1,632	1,549	1,509
Trading profit (before depreciation and other provisions)	2,415	2,344	2,262	2,266	2,010	1,918	1,855	1,837
less Provision for depreciation	516	572	550	604	439	486	469	515
less Other provisions	22	21	20	20	16	15	14	13
Trading profit	1,877	1,750	1,692	1,641	1,555	1,417	1,371	1,309
plus Income from investments	104	115	113	118	87	95	93	98
plus Other income	10	13	13	13	8	13	12	13
less Interest on long-term liabilities	69	76	73	87	61	67	64	77
Net income (before taxation)	1,921	1,802	1,745	1,685	1,589	1,457	1,413	1,342
less Taxation	903	867	839	818	744	696	674	647
Net income (after taxation)	1,018	935	906	867	845	761	739	695
plus Prior year adjustments:								
Tax	26	29	28	27	19	23	22	21
Other	8	6	6	8	7	6	6	6
Disposable income	1,051	970	940	902	871	789	766	722
less Dividends (net):								
Ordinary	412	426	413	429	332	341	331	340
Preference, etc.	36	36	34	35	29	29	28	28
less Share due to minority interest	29	26	26	27	23	22	21	23
Balance retained in reserves	574	482	467	410	486	398	387	330

Balance sheet summary

TABLE 2

£ million

Balance sheet at end of 'year'	Manufacturing and distribution: all industries				Manufacturing industries			
	Final figures		Accounts received up to 30 September 1963		Final figures		Accounts received up to 30 September 1963	
	1960	1961	1961	1962	1960	1961	1961	1962
Fixed assets:								
Tangible fixed assets, net	7,136	7,965	7,634	8,340	5,868	6,557	6,329	6,907
Goodwill, etc.	377	467	451	491	297	371	360	388
Trade investments	512	591	577	699	424	499	486	597
Investments in unconsolidated subsidiaries ...	59	42	42	99	55	38	38	79
Total fixed assets	8,084	9,066	8,704	9,629	6,643	7,465	7,212	7,972
Current assets:								
Stocks and work in progress	4,758	5,060	4,802	4,883	4,052	4,296	4,133	4,196
Trade debtors	3,468	3,719	3,572	3,711	2,765	2,975	2,883	3,001
Other debtors	47	25	20	28	32	18	14	23
Marketable securities	609	589	577	539	527	506	497	453
Tax reserve certificates	215	201	197	150	184	171	167	123
Cash	675	631	603	619	528	485	467	480
Total current assets	9,772	10,225	9,770	9,931	8,088	8,451	8,160	8,276
less Current liabilities:								
Bank overdrafts and loans	709	880	815	879	527	678	639	695
Trade creditors	2,602	2,792	2,619	2,742	2,018	2,150	2,053	2,163
Other creditors	113	111	95	101	81	82	74	82
Dividends and interest due	305	306	295	307	244	242	234	240
Current taxation	777	848	823	759	647	702	684	617
Provisions...	127	132	127	138	96	99	95	103
Total current liabilities	4,633	5,070	4,773	4,925	3,613	3,953	3,779	3,900
Net current assets	5,139	5,156	4,997	5,006	4,475	4,497	4,382	4,376
Total net assets	13,223	14,221	13,701	14,635	11,118	11,962	11,594	12,347
less Future tax reserves	672	609	587	568	553	486	469	444
less Long-term loans	1,391	1,552	1,488	1,786	1,230	1,377	1,324	1,596
less Minority interest in subsidiaries	433	434	416	414	343	346	335	349
Shareholders' interest in total net assets ...	10,727	11,627	11,210	11,867	8,991	9,753	9,466	9,959
	4,066	4,436	4,291	4,476	3,458	3,767	3,657	3,797
	[illegible]	980	929	952	780	783	756	770
	[illegible]	6,210	5,989	6,439	4,752	5,203	5,054	5,392
	[illegible]	700	677	563	608	618	600	485
	[illegible]	3,853	3,687	4,104	2,957	3,303	3,184	3,543

With the Compliments of

CENTRAL STATISTICAL OFFICE
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TABLE 2

Balance sheet summary

£ million

	Manufacturing and distribution: all industries				Manufacturing industries			
	Final figures		Accounts received up to 30 September 1963		Final figures		Accounts received up to 30 September 1963	
Balance sheet at end of 'year'	1960	1961	1961	1962	1960	1961	1961	1962
Fixed assets:								
Tangible fixed assets, net	7,136	7,965	7,634	8,340	5,868	6,557	6,329	6,907
Goodwill, etc.	377	467	451	491	297	371	360	388
Trade investments	512	591	577	699	424	499	486	597
Investments in unconsolidated subsidiaries ...	59	42	42	99	55	38	38	79
Total fixed assets	8,084	9,066	8,704	9,629	6,643	7,465	7,212	7,972
Current assets:								
Stocks and work in progress	4,758	5,060	4,802	4,883	4,052	4,296	4,133	4,196
Trade debtors	3,468	3,719	3,572	3,711	2,765	2,975	2,883	3,001
Other debtors	47	25	20	28	32	18	14	23
Marketable securities	609	589	577	539	527	506	497	453
Tax reserve certificates	215	201	197	150	184	171	167	123
Cash	675	631	603	619	528	485	467	480
Total current assets	9,772	10,225	9,770	9,931	8,088	8,451	8,160	8,276
less Current liabilities:								
Bank overdrafts and loans	709	880	815	879	527	678	639	695
Trade creditors	2,602	2,792	2,619	2,742	2,018	2,150	2,053	2,163
Other creditors	113	111	95	101	81	82	74	82
Dividends and interest due	305	306	295	307	244	242	234	240
Current taxation	777	848	823	759	647	702	684	617
Provisions...	127	132	127	138	96	99	95	103
Total current liabilities	4,633	5,070	4,773	4,925	3,613	3,953	3,779	3,900
Net current assets	5,139	5,156	4,997	5,006	4,475	4,497	4,382	4,376
Total net assets	13,223	14,221	13,701	14,635	11,118	11,962	11,594	12,347
less Future tax reserves	672	609	587	568	553	486	469	444
less Long-term loans	1,391	1,552	1,488	1,786	1,230	1,377	1,324	1,596
less Minority interest in subsidiaries	433	434	416	414	343	346	335	349
Shareholders' interest in total net assets ...	10,727	11,627	11,210	11,867	8,991	9,753	9,466	9,959
Represented by:								
Issued share capital:								
Ordinary shares	4,066	4,436	4,291	4,476	3,458	3,767	3,657	3,797
Preference, etc., shares	974	980	929	952	780	783	756	770
Capital and revenue reserves	5,688	6,210	5,989	6,439	4,752	5,203	5,054	5,392
Contracts for capital expenditure not provided for	687	700	677	563	608	618	600	485
Accumulated depreciation on fixed assets ...	3,454	3,853	3,687	4,104	2,957	3,303	3,184	3,543

Sources and uses of capital funds during year

TABLE 3

£ million

	Manufacturing and distribution: all industries				Manufacturing industries			
	Final figures		Accounts received up to 30 September 1963		Final figures		Accounts received up to 30 September 1963	
Accounts for 'year'	1960	1961	1961	1962	1960	1961	1961	1962
Sources of funds								
Receipts from issues of:								
Long-term loans	27	105	92	291	10	91	80	266
Ordinary shares	414	491	457	255	350	440	409	195
Preference, etc. shares	27	16	11	28	22	14	9	15
Total loan and share capital issued	468	611	560	575	382	545	498	476
Increase in amount owing to:								
Banks	149	175	164	69	126	155	142	58
Trade creditors	319	196	185	125	254	136	135	109
Other creditors	22	1	—	4	18	5	5	6
Addition to accruals:								
Tax	94	65	64	– 61	82	49	49	– 65
Dividends and interest	33	1	—	12	27	– 2	– 3	6
Total increase in credit received	617	439	413	148	508	342	327	114
Balance retained in reserves	574	482	467	410	486	398	387	330
Provisions out of income for depreciation, etc.	538	594	570	625	455	501	484	528
Additions to future tax reserves	58	– 59	– 58	– 18	51	– 63	– 62	– 24
Total additions to reserves and provisions ...	1,171	1,016	979	1,017	992	836	809	834
Increase in liability to minority shareholders ...	—	5	4	– 1	3	10	8	14
Surplus on disposal of fixed assets	63	57	55	59	48	41	40	43
Other receipts on capital account	8	6	5	4	5	4	4	3
Total of other sources	71	68	64	62	57	55	53	60
Total sources of funds	2,327	2,135	2,015	1,802	1,939	1,778	1,686	1,484
Uses of funds								
Expenditure on:								
Tangible fixed assets	1,070	1,312	1,255	1,238	897	1,093	1,055	1,035
Goodwill and other intangibles	34	19	18	23	20	9	8	15
Trade investments	76	81	77	147	69	76	72	136
Total expenditure on fixed assets	1,180	1,412	1,349	1,408	986	1,178	1,135	1,186
Increase in value of:								
Stocks	615	300	285	77	539	241	232	55
Trade debtors	391	258	255	159	306	214	210	131
Other debtors	18	– 22	– 23	5	7	– 15	– 15	5
Total increase in stocks and debtors	1,024	536	516	241	852	440	427	191
Expenditure out of provisions	18	22	21	18	14	17	16	12
Other expenditure on capital account	16	21	21	23	13	18	18	20
Expenditure on acquisition of subsidiaries ...	328	374	302	270	288	332	262	221
Adjustments due to consolidation	– 140	– 127	– 92	– 104	– 117	– 106	– 71	– 81
Total of other uses	222	290	252	208	198	262	226	172
Total uses of funds	2,427	2,238	2,118	1,856	2,036	1,880	1,787	1,549
Balance represented by								
Increase in holdings of:								
Marketable securities	– 31	– 49	– 50	– 43	– 31	– 48	– 50	– 49
Tax reserve certificates	– 1	– 16	– 15	– 47	1	– 15	– 15	– 44
Cash	– 71	– 46	– 44	19	– 69	– 46	– 43	13
Residual and other adjustments	3	8	7	17	3	7	7	15
Total balancing items	– 100	– 103	– 103	– 54	– 97	– 102	– 101	– 65