

# Company profitability and finance

*This article presents updated and revised estimates of company profitability and financing.<sup>(1)</sup> Among the main developments in 1984:*

- *company profitability improved for the third year in succession, although for non North Sea companies the rise may have been checked at the end of the year as cost pressures re-emerged;*
- *fixed investment grew strongly, but destocking persisted, leaving companies in record financial surplus;*
- *a large 'unidentified' item makes it unusually difficult to interpret the financial behaviour of companies: it is particularly difficult to reconcile the apparent financial health of companies with their heavy borrowing from banks in 1984;*
- *company liquidity deteriorated, while the rapid growth of bank lending in a period of comparatively low inflation has caused capital gearing ratios to rise.*

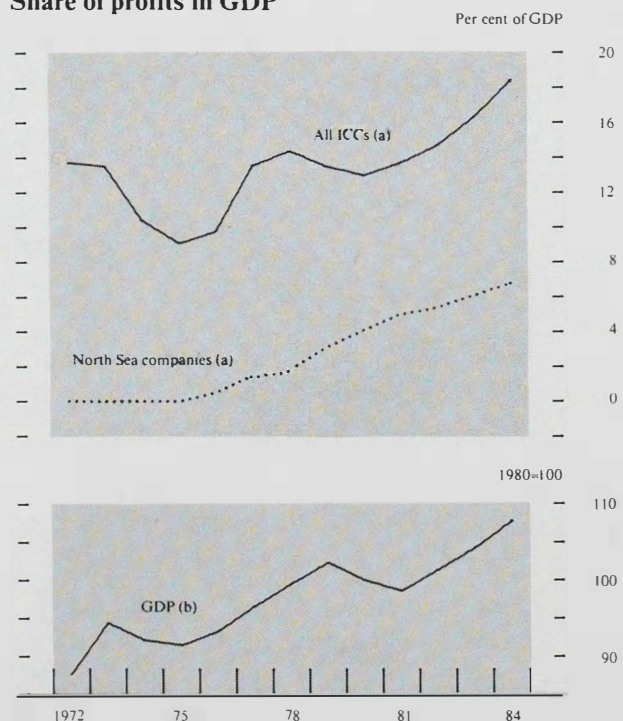
*An appendix considers the post-tax profitability of companies and the returns earned on equity capital.*

## Gross trading profits and profitability

The profitability of industrial and commercial companies (ICCs) increased in 1984, maintaining the recovery that had begun in early 1981. Indeed, 1984 was an exceptionally good year for company profitability with gross trading profits,<sup>(2)</sup> at £51.5 billion, £9.3 billion higher than in 1983. Profits have grown much faster than other forms of income since 1981 and this is reflected in a sharp rise in the share of profits in GDP—from 13% in 1980 to 18½% in 1984. In the early stages of the current recovery, the increase in the share of profits in GDP largely reflected the growth of oil production, though since mid-1983 the profits from non North Sea activities, which tend to be much more cyclical, have grown equally fast. In 1984 for example, both North Sea profits and those earned from other activities increased by 22%.

With nominal profits rising much more rapidly than retail prices, it is not surprising that, on average, the real rate of return on capital employed by ICCs has increased strongly during the last two years. The pre-tax profitability of companies' non North Sea activities averaged nearly 7% in 1984, its highest level since 1973 and twice that in 1981 (Chart 2). The real return on the equity stake in the company sector has recovered even more sharply, rising from 2.4% in 1981 to 6.8% in 1984. Measures of post-tax returns also point to a strong recovery in profitability.<sup>(3)</sup>

**Chart 1**  
Share of profits in GDP



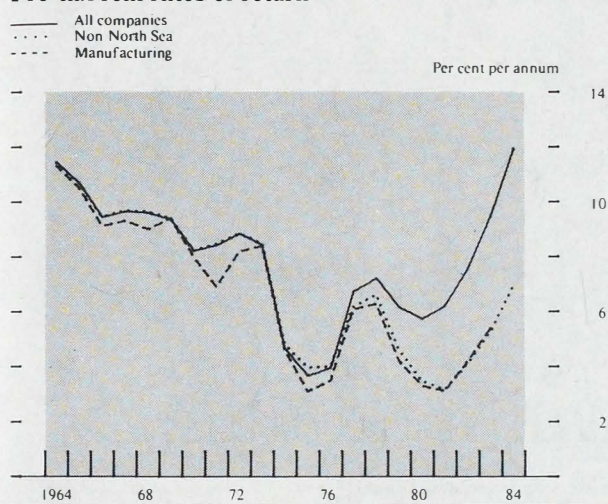
(a) Gross trading profits net of stock appreciation, expressed as a percentage of the current price income measure of GDP.  
(b) Constant prices, income measure.

(1) Previous articles in this series have appeared in the September 1984 *Bulletin* and in June issues for earlier years. The figures have been derived from the national income statistics.

(2) Net of stock appreciation.

(3) Estimates of the return on equity and of post-tax returns are presented and discussed in the appendix.

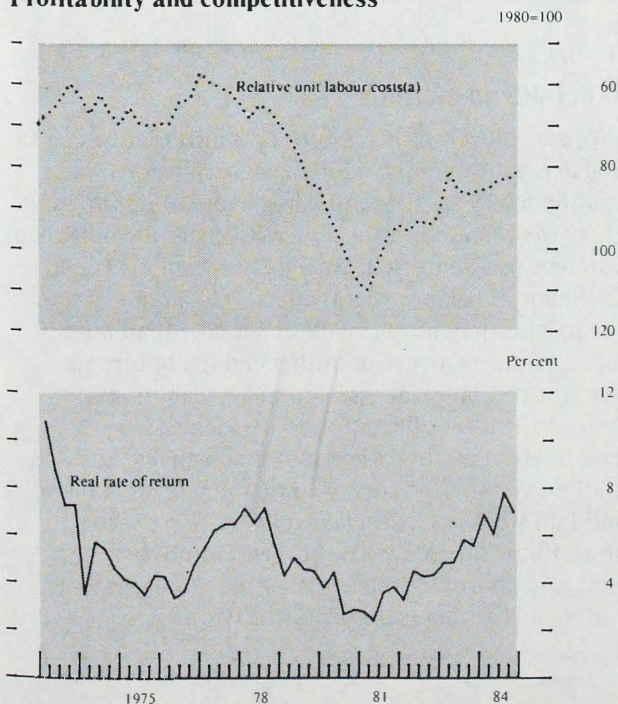
**Chart 2**  
Pre-tax real rates of return



The increase in profits during 1984 reflected both a growth of output and a widening of margins, especially on exports. Output of the North Sea sector rose by 7% during 1984 and the rest of the economy, apart from sectors directly affected by the coal strike, probably grew by between 3% and 3½%. North Sea oil revenues were also boosted in sterling terms by a depreciation of sterling against the dollar (the currency in which oil prices are fixed) from about \$1.44 in December 1983 to \$1.19 in December 1984.

The effective depreciation of sterling during 1984, amounting to about 10%, generally improved the relative price competitiveness of UK producers. This provided an opportunity both to improve sales volumes and to widen profit margins in both the domestic and export

**Chart 3**  
Profitability and competitiveness



(a) Inverted scale: a rise in the index means that competitiveness has improved.

markets. As far as exports are concerned, the emphasis seems to have been on widening profit margins. Non-oil export prices were nearly 8% higher in sterling terms in 1984 than in 1983, but volumes were also buoyant, increasing by 7%, with the result that export revenues were some 15% higher in 1984 than in 1983. However, companies appear to have behaved differently in the domestic market with more emphasis on improving price competitiveness. Manufacturing companies' domestic selling prices, for example, increased by only 6% in the course of 1984, despite rises of around 9% in their fuel and raw materials costs and of 5%–6% in unit wage costs. By the end of 1984, manufacturers' profit margins on domestic sales were almost certainly coming under some pressure on account of the steady acceleration in the rates of increase in their costs, reflecting the earlier weakness of sterling and a slowdown in productivity growth. Thus, during 1984, producers have responded in quite different ways in home and overseas markets—increasing margins on exports while trying to maintain domestic sales by improving competitiveness against imports.

**Table A**  
Industrial and commercial companies' income and appropriations

	1981	1982	1983	1984		
				Year	Seasonally adjusted	
				H1	H2	
Gross trading profits (net of stock appreciation):						
Non North Sea	18.7	22.3	26.5	32.4	15.4	17.0
North Sea	10.9	12.7	15.7	19.1	8.8	10.2
Total	29.6	35.0	42.2	51.5	24.2	27.2
Rent and non-trading income	3.4	3.8	3.5	3.8	1.8	2.0
Income from abroad	5.4	5.2	6.1	7.2	3.2	4.0
<b>Total income</b>	<b>38.4</b>	<b>43.9</b>	<b>51.8</b>	<b>62.5</b>	<b>29.2</b>	<b>33.2</b>
<b>Distribution of income</b>						
Dividends	3.2	3.6	4.5	5.2	2.2	2.9
Interest payments	7.7	8.9	8.2	9.4	4.2	5.2
Profits due abroad	4.2	4.1	5.0	5.5	3.0	2.5
Tax payments (including North Sea royalties)	8.8	10.4	12.5	15.1	7.2	7.9
<b>Total distributed income</b>	<b>24.0</b>	<b>27.0</b>	<b>30.2</b>	<b>35.2</b>	<b>16.7</b>	<b>18.5</b>
Undistributed income (net of stock appreciation)	14.4	16.9	21.6	27.4	12.6	14.8

### Other company income

Unlike profits, ICCs' rent and non-trading income has not increased significantly since 1981 and was lower in real terms in 1984 than three years earlier. In part, this reflected the decline in nominal interest rates over this period. Income from abroad, however, has risen strongly in recent years reflecting strengthening economic recovery. The sterling value of overseas earnings was also boosted in 1984 by the depreciation of sterling against most other currencies.

### Appropriations of company income

ICCs' allocations of income to dividends, interest, taxes and related concerns overseas all increased substantially in 1984: these appropriations totalled £35 billion, some £5 billion higher than in 1983. Higher tax payments were, in part, a lagged response to the earlier recovery in profits. Payments of tax by oil companies continued to dwarf tax

paid by other companies and represented almost 70% of all ICCs' payments, but payments of corporation tax by non-oil companies appear to have grown sharply in 1984. For the future, the recent recovery in company profits, together with the gradual reduction in first year allowances on investment expenditure,<sup>(1)</sup> will begin to reduce the substantial stock of unused tax allowances and it is likely that more firms will pay mainstream corporation tax than in recent years.

Increasing profitability also has a strong indirect influence on tax payments via its effect on dividends and hence on payments of advanced corporation tax. Dividends have tended to be less cyclical than profits, reflecting companies' reluctance to cut them when profits are weak. Between 1980 and 1984, for example, company profits almost doubled while dividends increased by around 60%. Dividends have nonetheless grown faster than other forms of personal income in recent years.

ICCs' net payments of interest increased by 17% in 1984 after two years of little change: the stock of companies' debt to the banking system grew by over £10 billion<sup>(2)</sup> in 1984 (a rise of almost one fifth) while in the middle of the year interest payments increased sharply when short rates rose to 12%. After falling back later in the year, interest rates climbed steeply again in January 1985.

Companies' income gearing—the ratio of their interest payments to their available income<sup>(3)</sup>—declined rapidly during 1982 and 1983, but levelled out in the course of 1984 (and is likely to have increased in early 1985). Income gearing remains low by past standards because recent years' increases in company income have more than offset higher debt servicing costs.

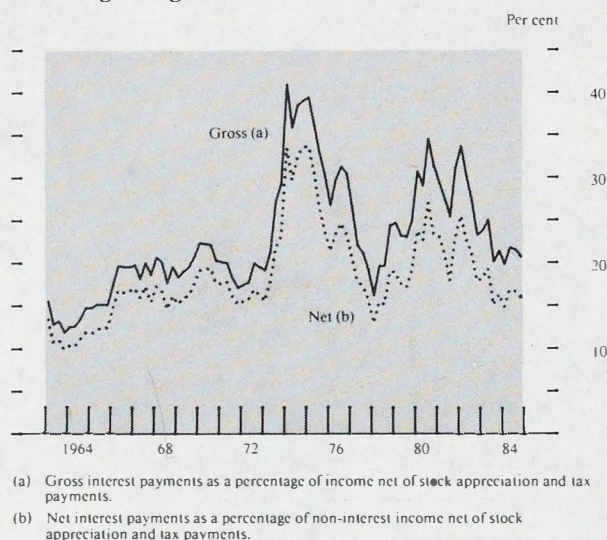
### Undistributed income

The increases in appropriations in 1984, though substantial, absorbed less than half the increase in ICCs' income, with the result that there was a sizable increase of about £6 billion in their undistributed income. Being the difference between income, a cyclical magnitude, and the less variable flows of payments, undistributed income is itself highly cyclical and has been closely correlated with companies' real profitability.

### Capital spending and stockbuilding

For most of the period since 1979, the ICCs' expenditure on fixed capital has been depressed, not rising significantly even in nominal terms, while stocks have been massively run down. In 1984 however, the picture changed sharply, with fixed capital formation some 16% higher in nominal terms than in 1983, while destocking was just £0.3 billion, about the same as in 1983 but a marked moderation from the reductions averaging £2½ billion a year in the 1980–82 period. Estimates of the volume of capital expenditure by ICCs are not published, but the nominal figures adjusted

**Chart 4**  
Income gearing



using the nearest national accounts deflator suggest that investment grew by about 13% in real terms in 1984. The volume of assets leased by ICCs also seems to have risen strongly in 1984. Nevertheless, it is estimated that ICCs' real direct investment and their leasing were together some 7% lower than in 1979.

Destocking continued through much of 1984, though in the final quarter there was net stockbuilding, primarily by manufacturing companies and retailers. Despite the heavy destocking which has occurred since 1979, most firms, according to CBI survey evidence, still consider their current stock levels adequate or more than adequate. Indeed, stock/output ratios are generally still higher than in 1974 when stock relief was introduced. This, together with the abolition of stock relief in the 1984 Budget and better stock controls, suggests that a significant buildup of stocks is unlikely in the foreseeable future.

### Financial transactions

The recorded levels of ICCs' profits, appropriations and capital expenditure imply a financial surplus of about £9½ billion for 1984. This compares with £6½ billion in 1983, a year when profits also increased sharply but when investment was depressed. On a longer-term view, the ICCs' financial balance was at a record level in real terms<sup>(4)</sup> last year. This may be the result of a longer than normal lag between the recovery in profits and the upturn in expenditure on physical assets or the distribution of income in the form of taxation or dividends. Alternatively, it might suggest a more defensive attitude than in the past on the part of companies, leading them to build up stocks of financial assets for risk-related reasons. But it should also be borne in mind that the income and appropriation statistics may exaggerate the size of the ICCs' financial surplus in 1984.

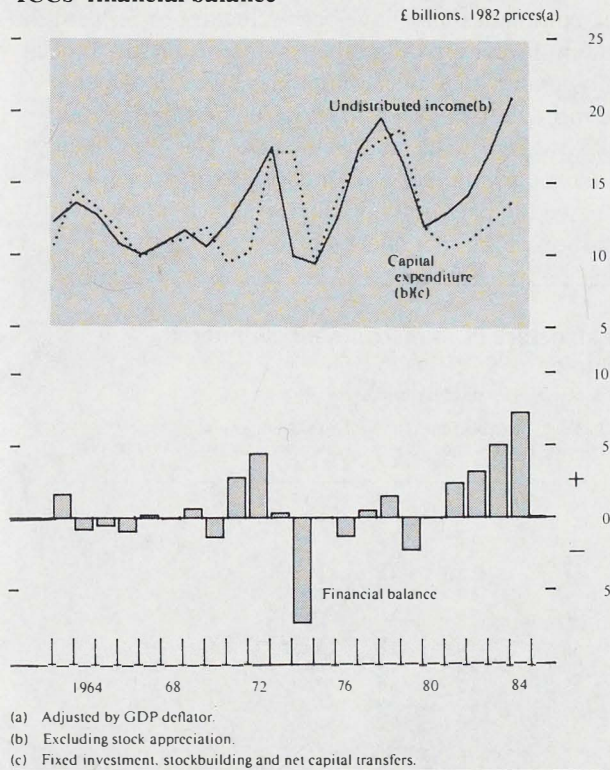
(1) Announced in the March 1984 Budget as part of the reform of corporation tax.

(2) Including valuation effects resulting from the fall in sterling.

(3) See definitions on Chart 4.

(4) Nominal flow adjusted by the GDP deflator.

**Chart 5**  
**ICCs' financial balance**



The ICC sector's financial balance is the difference between companies' income net of tax, interest and dividend payments, and their expenditure on physical assets net of capital transfers. By definition, it should be equal to the sum of the sector's net financial transactions, such as the acquisition of domestic financial assets in their various forms, overseas investment and different types of borrowing. In practice, however, the accounts rarely add up, because of measurement errors and omissions, the gap being shown as the 'unidentified' or the 'balancing item'. On a quarterly basis, this item is highly volatile, although on average the error tends to be in the same direction, with the financial surplus estimated from companies' income and capital accounts typically exceeding their recorded net acquisitions of financial assets.<sup>(1)</sup>

Last year, the problem of the ICCs' 'unidentified' was particularly acute. It is estimated that the ICCs had a financial surplus of £9.6 billion in 1984 (Table B), a record in both nominal and real terms. Information so far available on ICCs' financial transactions, however, points to a small increase in their net liabilities, implying an 'unidentified' net acquisition of financial assets which could be as high as £10 billion for 1984. A figure of this magnitude would be equivalent to 28% of the ICCs' total sources of funds,<sup>(2)</sup> considerably larger than in any year since 1963, and three times the average 'unidentified' over this period.<sup>(3)</sup>

To a certain extent, a gap of this magnitude is an indication of the provisional nature of the 1984 statistics and, given the diversity of sources from which the underlying data are collected, the existence of some errors and inconsistencies is perhaps not surprising. However, the sheer size of the unidentified item suggests important shortcomings in the official statistics on the company sector.<sup>(4)</sup> Although in principle the errors may lie anywhere in the company sector accounts, three main areas have been suggested:

- profits may be overstated, perhaps because insufficient weight is being given to loss-making companies and/or to small companies which are perhaps less profitable than the average. But a downward revision to profits sufficient to explain a large part of the 'unidentified' would leave profitability too low to be consistent with published company accounts and anecdotal evidence from the CBI and elsewhere;
- investment and/or stockbuilding may be higher than indicated in official statistics. But, even if these items were underestimated by as much as 10%, this would account for less than £2 billion of the 'unidentified';
- companies may have been acquiring financial assets or claims which have not been picked up in official data. One obvious area is trade credit, for which there

**Table B**  
**Industrial and commercial companies' capital account and financial transactions**

	1981	1982	1983	1984		
				Year	H1	H2
					<i>Seasonally adjusted</i>	
<b>Undistributed income</b>						
(net of stock appreciation)	14.4	16.9	21.6	27.4	12.6	14.8
Net capital transfers	0.6	0.6	0.5	0.4	0.2	0.2
Fixed investment (increase-)	-15.0	-15.6	-15.9	-18.5	-8.9	-9.6
Stockbuilding (increase-)	2.7	1.9	0.2	0.3	0.4	-0.1
<b>Financial balance</b>	<b>2.7</b>	<b>3.8</b>	<b>6.4</b>	<b>9.6</b>	<b>4.3</b>	<b>5.3</b>
<b>Financial transactions(a)</b>	-0.6	0.3	-5.0	0.2	-0.4	0.7
<i>of which:</i>						
Accruals adjustment(b)	1.1	-2.2	0.8	0.1	1.4	-1.3
Investment in UK company securities	-1.3	-1.3	-1.4	-2.2	-1.5	-0.7
Direct and other investment overseas	-3.9	-2.7	-2.4	-4.6	-3.2	-1.3
Liquid assets	-4.8	-2.8	-6.1	-2.0	1.0	-2.9
Other financial assets	-1.0	-1.4	-1.6	-0.3(d)	0.5	-0.8(d)
Net trade credit	-0.6	0.6	-0.7	-0.5	-0.6	0.1
Bank borrowing(c)	5.8	6.6	1.4	7.2	3.4	3.7
Other loans and mortgages	0.5	0.8	0.7	0.6	0.3	0.3
UK capital issues	2.4	1.3	2.5	1.4	0.7	0.7
Overseas investment in the United Kingdom	1.2	1.4	1.8	0.3	-2.5	2.8
<b>Unidentified (balancing item)</b>	<b>-2.1</b>	<b>-4.1</b>	<b>-1.4</b>	<b>-9.9(d)</b>	<b>-3.9</b>	<b>-6.0(d)</b>

- (a) Inflow of funds +, outflow -. Totals may not match components, due to rounding errors.  
(b) Including net unremitted profits.  
(c) Before deducting Issue Department transactions in commercial bills.  
(d) Estimates.

(1) On an annual basis, the error has been in the opposite direction only once (in 1976) since the data were first published in 1952.

(2) Defined as internal funds (excluding stock appreciation) plus external borrowing and other credits.

(3) Complete estimates of ICCs' financial transactions during 1984 are not yet available. The cumulative 'unidentified' in the first three quarters was £6.7 billion. The £10 billion estimate for the whole of 1984 is very tentative.

(4) The statistical problems affecting the ICCs sector in the national accounts are currently the subject of a special investigation by statisticians in the Central Statistical Office and the Bank. They will also be considered in a paper to be presented by the Central Statistical Office at the Statistics Users' Conference on financial statistics, to be held later this year, see page 247.

is only limited statistical coverage, but which may represent an important use of funds by companies, especially in a period, as at present, when they are relatively liquid. Another area of uncertainty is direct and portfolio investment abroad, which may also be higher than recorded; in this case, the quality of information has deteriorated since the abolition of exchange controls, while the range of transactions and financial instruments open to companies has increased.

The pattern of ICCs' recorded financial transactions showed some significant changes between 1983 and 1984. One important factor was the Shell Group's purchase of minority shareholdings in its main US affiliate which, when complete, will have cost \$5 billion. The transaction was reflected in a near doubling of ICCs' investment abroad in 1984, while overseas investment in the United Kingdom fell sharply as the Shell Group withdrew funds from London in order to finance the deal. As a result, there was a substantial rundown of ICCs' foreign currency deposits with UK banks in the first half of 1984, which helps explain why ICCs' liquid assets rose by just £1½ billion last year, compared with a £6 billion increase in 1983 (some of which may have occurred in anticipation of the purchase of Shell's US affiliate). 1984 also saw a great deal of merger and takeover activity within the UK corporate sector, which produced a sharp rise in purchases by ICCs of UK company securities.

On the liabilities side, the striking feature in 1984 was the substantial growth, totalling more than £7 billion, in ICCs' bank borrowing, a sharp contrast with the modest increase recorded in 1983. This renewed surge in bank borrowing at a time when companies appeared to be in a healthy financial state is difficult to explain, especially as there are such large gaps in the ICC sector's accounts for 1984. Even if the statistical problems could be resolved, however, the impression might still remain that bank borrowing grew unexpectedly fast in 1984. One possible explanation, which is likely to be masked in highly aggregated data, may lie in the diversity of experience within the company sector, such as differences between liquid and illiquid firms or between large and small enterprises. Small firms are usually more dependent on bank finance than large ones; and their financing needs may in any case be greater, if they are expanding faster than the average. A second possible explanation for the surge in bank borrowing may lie with the high volume of merger and takeover activity in 1984, which probably called for large scale temporary bank finance. A third explanation is that bank borrowing may have filled the gap left by the relatively low level of domestic capital issues by the ICCs in 1984. These raised just £1.4 billion (net of redemptions), the lowest amount in real terms<sup>(1)</sup> for six years, and less than the average amount raised in the 1970s and barely half the amount typical in the 1960s. This low level of new issues was surprising at a time when companies' demand for external finance was apparently

very strong, and when the domestic capital markets, especially for equities, were generally buoyant. To a certain extent, companies may have been reluctant to come to the market in the run-up to the British Telecom issue. Indeed, the subsequent surge of capital issues by ICCs, which raised more than £2½ billion net in the first five months of 1985, suggests that this was the case. The high level of issues so far this year does not, however, appear to have eased the pace of bank borrowing, which rose by £4.4 billion in the first quarter of 1985.

**Table C**  
**Debt structure of industrial and commercial companies**

£ billions: amounts outstanding at end-year

	Bank borrowing (a)	Debenture and loan stock (b)	Other loans	Gross debt (columns 1+2+3)	Liquid assets	Net debt (columns 4-5)
	1	2	3	4	5	6
1966	5.0	3.2	2.2	10.4	3.5	6.9
1969	6.5	4.1	2.9	13.5	4.2	9.3
1972	11.2	6.4	3.8	21.4	7.2	14.2
1975	19.2	4.2	4.9	28.3	11.5	16.8
1978	26.7	4.6	5.0	36.3	17.5	18.8
1979	30.2	4.4	5.6	40.2	17.7	22.5
1980	36.0	4.2	5.3	45.5	20.9	24.6
1981	43.2	3.8	5.4	52.4	26.2	26.2
1982	52.0	6.0	4.9	62.9	30.1	32.8
1983	54.9	6.9	5.2	67.0	36.5	30.5
1984(c)	65.4	8.1	5.6	79.1	40.2	38.9

(a) Includes Bank of England holdings of commercial bills.

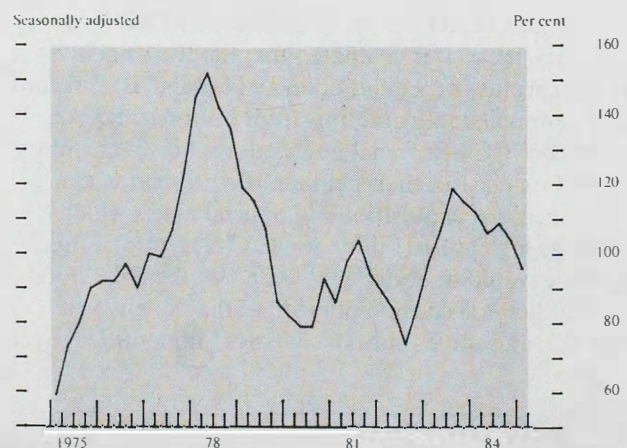
(b) Expressed at market values.

(c) Provisional.

### Structure of company balance sheets

The substantial additions to ICCs' bank deposits and other liquid assets in 1983, combined with a slowdown in the rate of growth of bank borrowing, helped to produce a large improvement in their net liquidity. The Department of Trade and Industry's liquidity survey (covering more than 260 large ICCs) illustrates this development, but shows the net liquidity ratio of the survey companies reaching a peak in the second half of 1983, still some way short of the level achieved in 1978. Moreover, it points to a steady deterioration in net

**Chart 6**  
**Liquidity ratio**



Source: Department of Trade and Industry survey of company liquidity.

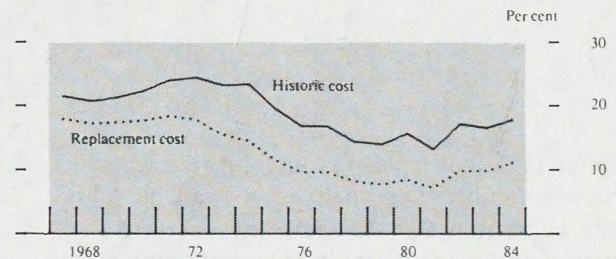
(1) Adjusted using the GDP deflator.

liquidity during 1984, especially in the manufacturing sector. Although the survey companies are not necessarily representative, the recorded financial flows described in the previous section—especially the surge in bank borrowing and the smaller additions to liquid assets—are also consistent with a significant worsening of the net liquidity position of the ICC sector as a whole. Once again, however, the statistical problems of the company sector make these figures difficult to interpret—whether, for example, the deteriorating liquidity picture marks the re-emergence of pressures on corporate finances, or whether it mirrors heavy investment by companies in fixed capital, stocks and illiquid financial assets.

After its strong growth in 1984, the stock of bank borrowing has become even more dominant within the structure of companies' gross debt. By end-1984, ICCs' debt to banks (of which about one quarter is in foreign currencies) accounted for more than 80% of their gross indebtedness; this compares with a share of less than half until the early 1970s when traditional bond finance began to fall out of favour. The growth of companies' net debt was held in check in the early 1980s, as a result of the recovery in their profits and their cautious approach to investment; in 1984, however, companies' net indebtedness increased by more than a quarter as a result of the financial transactions discussed earlier.

After a period of progressive decline, companies' capital gearing has begun to rise again (Chart 7). Capital gearing is a measure of companies' cumulative reliance on debt rather than equity to finance the capital employed in their businesses. It declined in the mid-1970s, mainly as a

**Chart 7**  
**Capital gearing<sup>(a)</sup>**



(a) National accounts data: net debt as a percentage of trading assets.

result of the effects of high inflation. This boosted the replacement value of the ICCs' capital stock causing their gearing, measured on this basis, to decline sharply from 1972; the fall in the historic cost measure came somewhat later. Since 1981, however, low fixed investment, substantial destocking and the steady decline in inflation have combined to produce a very slow rise in the ICCs' capital stock measured at replacement cost. As a result, capital gearing has climbed over this period; with inflation remaining low, this trend may continue unless the recent pace of ICCs' bank borrowing eases back. Developments in early 1985 may provide some pointers to ICCs' future financing behaviour. The sharp rise in banks' base rates in January, for example, will have increased companies' awareness of their exposure to variable interest rates. This may be one factor lying behind the surge in equity issues in recent months. In addition, the 1984 corporation tax reforms, in particular the planned reduction in tax rates, have provided an incentive for companies to shift their balance sheets away from the debt finance that has been so predominant since the early 1970s.

## Appendix

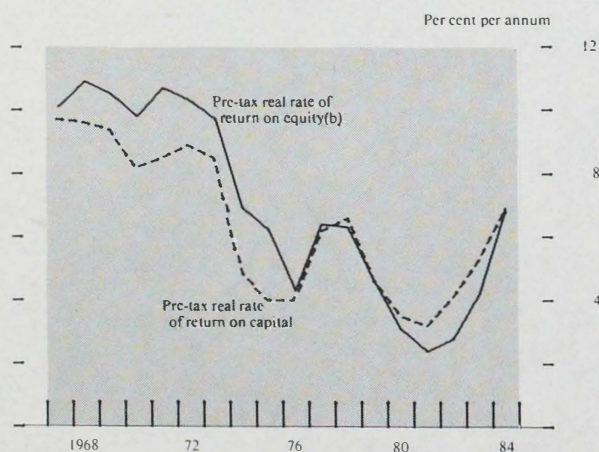
In addition to the concepts of profitability discussed in the article, a number of alternatives are available. This appendix concentrates on the equity rate of return and measures of post-tax profitability. The corporation tax changes in the 1984 Budget have necessitated some changes in the calculation of post-tax rates of return; their effect is discussed below. Reference is also made to the cost of capital and the valuation ratio.

### The pre-tax rate of return to the equity interest

The *rate of return to capital* measures the return on trading assets irrespective of how they are financed; it is defined as the ratio of operating profits at replacement cost<sup>(1)</sup> to the sum of net debt and the equity interest. Measuring the *return to equity* involves subtracting net interest payments from profits and subtracting net debt from the denominator. Additionally, a gearing adjustment<sup>(2)</sup> is made to profits to reflect changes in the real value of nominal debt that result from general price inflation.

With real rates of return on trading assets exceeding real ex-post interest rates for much of the period to the late 1970s, the rate of return to equity typically exceeded the return on trading assets by a factor reflecting income gearing. When real interest rates rise, however, the rate of return on equity tends to fall relative to that earned on trading assets; indeed, for most of the period since 1980 high levels of real interest rates have kept the return on equity below the real rate of return on the trading assets of non North Sea ICCs (Chart 8).

**Chart 8**  
Rates of return<sup>(a)</sup> to equity and on trading assets



(a) Excluding North Sea activity; national accounts data.

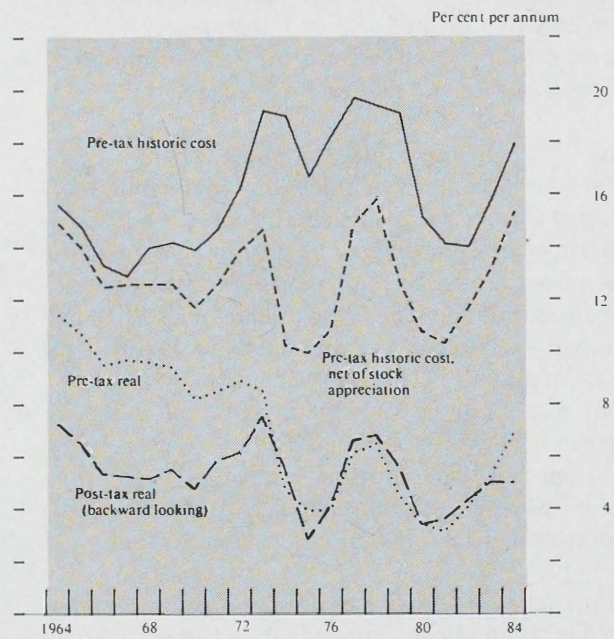
(b) Incorporating a natural gearing adjustment.

(1) Gross trading profits plus rent less stock appreciation less replacement cost capital consumption.

(2) A 'natural' gearing adjustment is used here, obtained by multiplying the stock of net debt by the rate of inflation. Alternative gearing adjustments were discussed in the December 1978 *Bulletin*, page 513.

(3) For a detailed explanation of the concepts behind these and other measures discussed in this appendix, see the articles published in the March 1976 and June 1976 *Bulletins*, 'Trends in company profitability' and 'The cost of capital, finance and investment', respectively.

**Chart 9**  
Rate of return on trading assets of industrial and commercial companies<sup>(a)</sup>



(a) Excluding North Sea activity.

### Real post-tax profitability

The *real post-tax rate of return* measures the real rate of return after taking account of both tax liabilities on income and tax subsidies in the capital stock. There are two ways in which post-tax rates of return can be estimated.

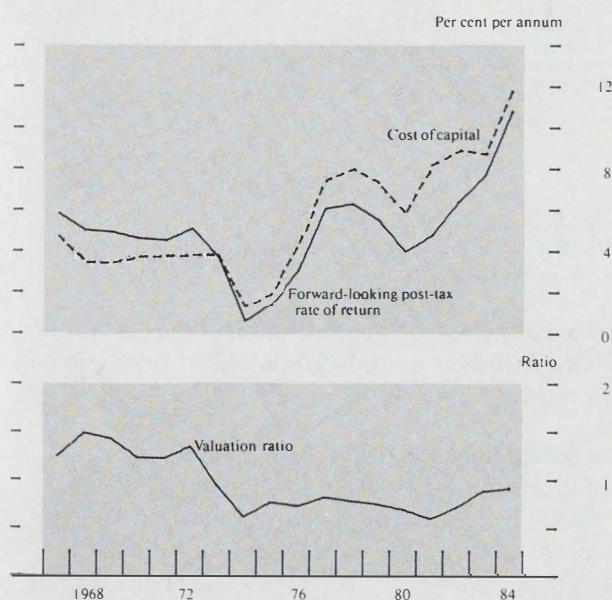
The *backward-looking* measure calculates the tax-adjusted capital stock using the actual post-tax cost of each unit of capital installed—that is it uses the tax system in operation at the time of installation. This gives a measure of realised profitability to compare with the pre-tax rates of return discussed earlier.

The *forward-looking* measure uses the tax system in operation in a particular year to adjust the value of the whole existing capital stock, treating it as if it were all installed in that year; this gives a measure of the post-tax return to be expected on new investment, which can most appropriately be compared with the cost of capital.<sup>(3)</sup>

The real pre-tax rate of return fell in the 1970s although on historic cost measures the decline was masked by inflation (Chart 9). Changes in the tax regime from 1973/74, in particular the introduction of 100% first year allowances and stock relief, meant that post-tax rates of

return were, unlike in the 1960s, not so obviously lower than pre-tax returns in the 1970s, though cyclical fluctuations were still quite strong. More recently, the post-tax rate of return recovered in line with the increase in pre-tax profitability up to 1983, but the reduction in first year investment allowances and abolition of stock relief during 1984 caused pre and post-tax rates to diverge: the pre-tax real rate of return increased to 6.9% in 1984, but the post-tax return remained unchanged at 5.1% between 1983 and 1984.

**Chart 10**  
Real rate of return, cost of capital and valuation ratio<sup>(a)</sup>



(a) All industrial and commercial companies.

The rise in post-tax forward-looking rates of return in 1984 (Chart 10) contrasts with the flat trend for the backward-looking rate of return shown in Chart 9. This is because the forward-looking measure takes a discounted view of the future, most of which, as far as tax payments are concerned, is made up of years when corporation tax is at its reduced rate of 35%, whereas first year allowances available in 1984/85 were still quite high (75%). In the backward-looking measures, on the other hand, reductions in first year allowances and the loss of stock relief outweigh the first stage in the phased reduction of the corporation tax rate.

As described in previous articles (for example, the September 1984 *Bulletin* page 358) the forward-looking rate of return and the cost of capital between them provide

a measure of the incentive to invest. The higher the former relative to the latter, the greater the incentive to invest.<sup>(1)</sup> The *valuation ratio* ('q') shows the same information.<sup>(2)</sup> Since reaching a low point in 1981, 'q' has risen quite sharply (Chart 10). The revival in confidence on the stock market in recent years has increased investors' valuation of companies relative to the replacement cost of their physical capital, so that in 1983 and 1984 'q' has been at its highest level since 1973.<sup>(3)</sup>

#### The effects of changes in the tax system on forward-looking post tax profitability

The 1984 Budget represented a major overhaul of the system of company taxation: on the one hand, stock relief was immediately abolished and first year capital allowances are to be withdrawn gradually and, on the other hand, the rate of corporation tax is to be reduced, also in stages. As one of the objectives of these changes was to reduce the implicit subsidy given to certain types of capital expenditure, it is not surprising that they affect measures of post-tax profitability. This section presents some illustrative estimates of their effects on forward-looking post-tax rates of return.

The principal changes in company taxation since 1965/66 when corporation tax was introduced have been in the treatment of investment incentives and stock appreciation (Table D). Throughout most of the period, attempts were made to use the tax system to stimulate investment, initially by way of investment grants and more recently by way of generous capital allowances.<sup>(4)</sup> Another important feature of the company tax system between 1973/74 and 1983/84 was the availability of stock relief. Stock relief was introduced to mitigate the effect of inflation in increasing companies' tax liability by boosting the value of stocks and consequently historic cost profits. This caused cash flow problems for many companies since higher taxable revenues were not matched by cash receipts. Between 1973/74 and 1978/79 the stock relief scheme allowed increases in the volume of stocks as well as true stock appreciation (less a proportion of profits) to be set against income for tax purposes. Such relief was, however, liable to be clawed back whenever the book value of stocks fell. In the recent recession however, companies cutting stocks against a background of falling demand were faced with considerable potential tax bills and, to alleviate the liquidity problems which would have ensued, limitations were put on the liability to clawback. From 1981/82 onwards the clawback provisions were cancelled; and, at the same time, stock relief was limited to stock appreciation.<sup>(5)</sup>

(1) If these were marginal measures, no investment would in theory occur if the cost of capital exceeded the rate of return. As only average measures can be calculated, it has to be assumed that there is some positive relation between these and the marginal measures. The nature of the data on market valuation of firms also prevents the separation of North Sea and non North Sea companies in these measures.

(2) 
$$\text{Post-tax rate of return} = \frac{\text{post tax profits/replacement cost capital stock}}{\text{market valuation}}$$

(3) The calculated 'q' remains below unity, but possible inaccuracies in measurement of the capital stock—treatment of scrapping in the national accounts is particularly difficult—are among the reasons why no particular importance can be attached to the value of unity in measured 'q'. though in theory whether marginal 'q' is greater or less than unity is important, also, no attempt is made here to model the complexities of taxation of North Sea activities. These deficiencies make 'q' and post-tax calculations for all ICCs rather uncertain.

(4) The period 1965-70 also saw the development of an array of regional incentives of various kinds. The table considers only the 'standard' tax system and thus understates the degree of assistance available to companies in assisted areas.

(5) Since then stock levels have been kept at much lower levels than had been typical in the 1970s. Some of this is probably due to technical improvements allowing better stock control, but some is no doubt explained by the absence of tax incentives to increase stocks to the levels they reached after the stock relief scheme was introduced.



**Table D**  
**Corporate tax rates and allowances**

Per cent

Financial year	Corporate tax rate	First year capital allowances(a)		Investment grants(a)	Depreciation allowance(a) (b)		Stock relief
		Plant and machinery	Industrial buildings		Plant and machinery	Industrial buildings	
1965/66	40	—	15	20	30	4	None
1966/67	40	—	15	25	30	4	None
1967/68	42.5	—	15	25	30	4	None
1968/69	45	—	15	20	30	4	None
1969/70	42.5	—	15	20	30	4	None
1970/71	40	—	30	20	25	4	None
1971/72	40	35	40	—	25	4	None
1972/73	40	55	50	—	25	4	None
1973/74	52	100	50	—	25	4	Increase in book value of stocks less 10% of trading profits
1974/75	52	100	50	—	25	4	
1975/76	52	100	50	—	25	4	Increase in book value of stocks less 15% of trading profits after capital allowances Limitation on clawback Deferral of clawback Opening value of stocks multiplied by change in all stocks price index
1976/77–							
1978/79	52	100	50	—	25	4	
1979/80	52	100	50	—	25	4	
1980/81	52	100	50	—	25	4	
1981/82–							
1983/84	52	100	75	—	25	4	
1984/85	45	75	50	—	25	4	None
1985/86	40	50	25	—	25	4	None
1986/87	35	—	—	—	25	4	None

(a) Only the principal standard allowances are reported here. No account is taken, in particular, of the various regional investment grants and allowances that have been available at different times.

(b) Depreciation allowances are 'reducing balance' for plant and machinery, 'straight line' for buildings.

Table E shows some illustrative calculations identifying the effects of the changes in the corporation tax system and associated reliefs since 1979. Line 1 of this table shows the forward-looking post-tax rate of return calculated using data on pre-tax profits, interest payments, stockbuilding, inflation, investment and other relevant factors for 1983, the latest year for which full information is available. In other words, it shows the actual rate of return for 1983. The other lines of Table E show what the rate of return would have been had the specified tax structure been in place.

Calculation of forward-looking post-tax rates of return is complicated by the fact that the tax parameters are known to be changing over the next few years. In principle it matters which time of year an investment is undertaken. This complication has been ignored.

A second simplifying assumption underlying Table E is that every company earns sufficient profit to take full advantage of its entitlement to stock relief and capital allowances. To the extent that this has not been the case, Table E probably overstates actual post-tax rates of return.<sup>(1)</sup> As long as the degree of overstatement is roughly constant, it should not invalidate comparisons of rates of return in different years. However, because the withdrawal of 100% first year allowances and of stock relief is likely to reduce the number of companies which are 'tax exhausted', Table E probably exaggerates the impact of the 1984 Budget measures. For this reason, it should not

be regarded as more than an illustration of the effects of the 1984 Budget reforms of the corporation tax system on post-tax rates of return.<sup>(2)</sup>

Comparison of lines 1 and 2 in Table E shows the effect of the withdrawal of stock relief in reducing forward-looking post-tax profitability. Line 3 shows post-tax profitability during the present transitional period to the post 1986/87 tax regime. The calculated rate of return is higher than, say, in lines 1 and 4 because companies benefit from both relatively higher first year allowances and lower corporation tax rates in the future. Finally, line 4 shows the full effect on the forward-looking post-tax rate of return of the 1984 Budget changes. Comparison with line 2 shows that the effect of the abolition of first year investment allowances just offsets the effect of the full reduction in the rate of corporation tax.<sup>(3)</sup>

**Table E**  
**Estimated post-tax returns in 1983 under different tax regimes**

Tax structure (see Table D)	Post-tax rate of return (a) per cent
1 As at 1983/84	4.0
2 As at 1983/84 but without stock relief (b)	3.4
3 As at 1984/85 (c)	4.2
4 As at 1986/87	3.1

(a) Forward-looking, non North Sea ICCs, average for 1983, ie assuming profits, investment, interest rates etc are all as they actually were during 1983.

(b) Not taking into account the other changes in the 1984 Budget.

(c) Taking into account known future changes in the tax system.

(1) The Inland Revenue estimated that at the end of 1983 approximately £25 billion of unused corporation tax allowances were outstanding.

(2) Table E does not take account of other measures in the 1984 Budget which were aimed at improving the business environment. One such measure was the final abolition of the national insurance surcharge, which will have increased companies' pre-tax profits by almost 1%.

(3) Of course these comparisons are merely illustrative and do not reflect accurately the position of any one company. Furthermore, being forward-looking calculations they do not necessarily reflect likely changes in realised post-tax profitability.