

# The financial behaviour of industrial and commercial companies, 1970-86

*Companies' financial decisions can usefully be divided into two categories. One set of decisions is concerned with more long-term, strategic issues, such as the choice between equity and debt finance and the maturity structure of debt. The other category relates to companies' short-term financial requirements—the need to fund the transactions associated with day-to-day business, and to cope with or respond to unforeseen developments, such as an unexpected fall in revenue or a favourable investment opportunity.*

*This article<sup>(1)</sup> discusses the factors affecting these two aspects of the financial behaviour of industrial and commercial companies (ICCs) since 1970. Several important patterns are identified: the increased importance of equity finance after 1975, the collapse of the market for long-term corporate debt after 1974 and its subsequent revival since 1983, and the recent build-up in corporate liquidity.*

*The prospects for company sector finances in the late 1980s are discussed at the end of the article. The conditions remain favourable for the use of long-term debt, and the recent fall in equity prices makes equity finance less attractive than it was for most of 1987. There is as yet little sign that the build-up of ICCs' liquid assets has begun to moderate.*

## Background

In the last fifteen years there have been rapid and substantial changes in the economic environment faced by ICCs, and the financial behaviour of the sector can in many respects be interpreted as a response to these changes. From the macroeconomic point of view the abandonment of fixed exchange rates, the emergence of high and varying inflation and interest rates, and shifts in emphasis in monetary policy and financial regulation have all contributed to the uncertainties facing companies during this period. A number of policy changes aimed directly at the company sector have also occurred: for example, two major reforms of the corporate tax system have been enacted, in 1973 and 1984, and during the latter half of the 1970s companies' dividend payments were restricted.

Several of the main factors affecting companies during the period 1970-86 can be identified in the movements of the main components of the sector's financial accounts (see Table A). The sector was in substantial surplus in 1971 and 1972, as a result of the combination of falling tax payments, restrained capital expenditure and stable debt servicing costs and dividend payments. This situation altered rapidly in 1973 and 1974. Nominal interest rates almost doubled, leading to large increases in ICCs' interest payments. Furthermore, the rate of inflation picked up

sharply, with the result that current-cost profits were squeezed<sup>(2)</sup> and companies' payments of tax on income rose by almost 70% in real terms between 1972 and 1974.<sup>(3)</sup> The continued stockbuilding by the sector, probably associated with over-optimistic output growth expectations, also required finance, and in 1974 companies recorded a large financial deficit, equal to about 12½% of their total income (see Table A). For the rest of the 1970s, the sectoral financial surplus was, in historical terms, relatively small, and in 1979 a small deficit was recorded. The pattern in the 1980s has been quite different, with ICCs' surplus averaging about 10½% of their income between 1983 and 1986, a ratio not previously witnessed since the early 1970s. The surplus has reflected the steady increase in companies' income from 1981 to 1985 and substantial destocking by the sector in the early 1980s. Oil companies probably made a significant positive contribution to the surplus between 1982 and 1985, although the size of this effect is not known precisely.

## ICCs' capital structure

Throughout the late 1960s and early 1970s, ICCs' capital gearing, as measured by the ratio of their net debt<sup>(4)</sup> to capital base,<sup>(5)</sup> remained slightly under 20%. A considerable proportion of their debt was in the form of

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(2) The widespread practice of pricing on the basis of historic costs meant that companies were initially slow to pass on increases in input and capital costs to their customers. Only with the subsequently greater focus on current cost accounting did companies realise the true extent of the fall in their profits.

(3) Stock relief was introduced subsequently in order to alleviate the problems caused by the interaction of high rates of inflation with the corporate tax system.

(4) Net debt is defined in this article as the market value of ICCs' loan stock and preference shares plus their bank borrowing less holdings of liquid assets.

(5) ICCs' capital base is defined in this article as the replacement cost of the sector's capital stock plus the book value of inventories.

**Table A**  
**The financial balance of industrial and commercial companies**

£ billions, 1980 prices; percentages in *italics*

	Total income (a)	Dividends on ordinary shares(b)	Other dividend and interest payments	Profits due abroad	UK taxes on income(c)	Undistributed income	Stock appreciation and capital transfers	Receipts	Gross domestic fixed capital formation	Value of physical increase in stocks and other expenditure(d)	Financial balance	Financial balance as a percentage of total income
	1	2	3	4	5	6 = 1 - (2 + 3 + 4 + 5)	7	8 = 6 - 7	9	10	11 = 8 - (9 + 10)	12
1970	31.4	5.2	4.3	1.2	5.0	15.6	1.3	14.3	12.5	1.8	—	0.1
1971	31.2	5.2	4.1	1.4	3.9	16.6	0.9	15.7	11.6	0.1	4.1	13.1
1972	33.0	4.7	4.3	1.7	3.2	19.1	2.1	17.0	11.7	-0.2	5.5	16.7
1973	40.8	4.0	6.1	1.9	4.0	24.9	5.4	19.5	13.7	4.0	1.8	4.3
1974	40.7	3.1	7.5	1.2	5.4	23.5	11.6	11.9	14.3	2.8	-5.1	-12.6
1975	31.4	2.6	5.7	0.8	3.4	19.0	7.8	11.1	13.1	-2.9	1.0	3.0
1976	35.2	2.6	6.2	1.2	2.5	22.7	8.7	14.0	13.5	0.7	-0.3	-0.8
1977	38.9	2.6	5.5	2.6	3.7	24.5	5.7	18.8	14.6	2.4	1.7	4.5
1978	39.8	2.6	5.7	2.7	4.3	24.5	4.0	20.5	16.1	2.1	2.2	5.6
1979	47.5	4.1	7.5	4.4	5.0	26.4	8.3	18.1	16.7	2.3	-0.9	-1.9
1980	40.0	3.2	8.8	4.4	5.7	17.8	4.8	13.0	14.9	-2.5	0.6	1.6
1981	39.1	3.0	8.0	3.8	6.9	17.4	3.9	13.5	13.3	-2.2	2.4	6.1
1982	39.5	3.3	8.3	3.4	7.8	16.8	2.4	14.5	13.0	-1.4	2.9	7.3
1983	44.7	3.7	7.7	3.7	8.7	20.9	2.8	18.1	12.4	0.2	5.4	12.2
1984	50.9	3.9	8.4	4.2	9.8	24.5	3.1	21.4	14.8	0.7	5.9	11.5
1985	54.6	4.6	9.9	4.6	10.9	24.6	1.5	23.1	17.7	0.1	5.3	9.7
1986	50.9	6.1	8.7	3.4	8.8	24.0	0.8	23.1	18.2	0.4	4.5	8.9

(a) Total income comprises gross trading profits of ICCs plus rent and non-trading income plus income from abroad.

(b) From 1970 to 1972 this series includes the payments of income tax by shareholders arising from the receipt of dividends. Thereafter the series represents actual payments and is net of advanced corporation tax paid. The series excludes dividend payments by UK subsidiaries to their overseas parents; these payments are included in 'profits due abroad'.

(c) This series includes, after 1973, payment by ICCs of advanced corporation tax.

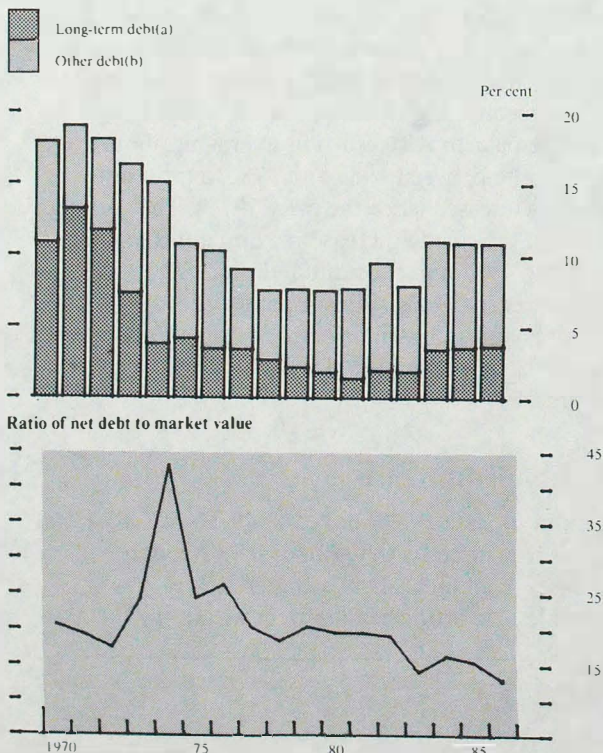
(d) Including taxes on capital and other capital transfers.

debentures, loan stock and preference shares; in the final quarter of 1972 the aggregate market value of these components was around two thirds as large as total bank lending to ICCs. Subsequently, ICCs' capital gearing fell and the composition of their debt changed radically, with the long-term component forming a much lower proportion of the total (see the upper section of Chart 1). The changes which occurred in the period 1972-74 were

due partly to the absence of new issues on the debenture market, and partly to an upward movement in nominal interest rates, which reduced the market value of outstanding long-term debt. As a consequence, the market value of ICCs' debenture and loan stock fell from £6½ billion to £4¼ billion between 1972 and 1975. Long-term debt continued to decline in relative importance until the early 1980s, when the debenture market began to revive and lower long-term interest rates raised the market value of outstanding debt.

**Chart 1**  
**ICCs' capital gearing**

Debt as a proportion of capital base



(a) Loan stock plus preference shares.  
(b) Bank borrowing less liquid assets.

ICCs' gearing may also be viewed in terms of debt as a proportion of the financial valuation of the sector (see the lower section of Chart 1). On this basis, the contrast between the high gearing of the early 1970s and the lower gearing subsequently is not so sharp, but 1974-75 emerges as a period of exceptionally high gearing. The movements in the following years depicted in the chart are largely explicable in terms of changes in the financial valuation of the sector's equity. Thus, the sustained increase in equity prices which occurred between 1982 and 1986 reduced this measure of ICCs' gearing from 20% to 12½%.

### The corporate tax system

The corporate tax system, and the tax position of individual firms, has a significant influence on the cost of different forms of finance, and therefore on firms' desired capital structure. From 1970 to 1972, the corporation tax rate stood at 40%, and was raised to 52% in 1973, remaining at this higher rate until 1983. Since most interest payments have been, in practice, deductible from profits when assessing corporation tax liabilities, the tax system provided companies with a considerable incentive to use debt rather than equity finance. This incentive was attenuated, however, in cases where a company had no mainstream corporation tax liability, ie when it was tax exhausted. Tax exhaustion could arise, for example, if a company's investment programme and associated tax

allowances implied a tax credit in excess of the tax liabilities resulting from its profits in the current year.

Tax exhaustion is not necessarily reflected in a company's published accounts. However, estimates of the proportion of companies which were tax exhausted in each year since 1968 have been made by the Institute for Fiscal Studies,<sup>(1)</sup> from data covering several hundred firms. These estimates indicate that, in each of the years 1975–79, around 30% of the sample were tax exhausted, rising to more than 35% in the period 1980–82. Furthermore, the vast majority of firms experienced tax exhaustion at some point, weakening the tax incentive for them to incur debt.

Since 1981, various developments have influenced the tax position of the company sector. There has been a sustained rise in profits, nominal interest rates have fallen, and companies' capital expenditures have risen less quickly than their profits. All these factors have tended to reduce the number of tax-exhausted companies, a trend which has been accentuated by the 1984 reforms of the corporate tax system. The reforms had a particularly acute effect in the period 1984–86 when, as a result of the declining first-year capital allowances, the net tax liabilities of ICCs increased rapidly, so that in 1986, according to IFS estimates, only a quarter of their sample were tax exhausted. The overall effect of the reforms on firms' desired capital structure is nevertheless ambiguous, and seems unlikely to be large. While firms which were paying mainstream corporation tax prior to 1984 have faced a higher relative cost of debt since then, with the corporation tax rate progressively reduced to 35% in 1986, firms which have recently emerged from tax exhaustion currently have an increased tax incentive to raise their gearing.

#### Agency costs

The fact that firms use equity finance, despite the bias present in the tax system in favour of debt, has been the subject of considerable theoretical discussion. One set of explanations for the observed capital structure of companies relates to the different interests of debt-holders, equity-holders and management within a company and the fact that holders of debt and equity cannot easily observe the actions taken by management.<sup>(2)</sup> Several related problems can be identified:

- (i) The managers of a company, who have considerable specific human capital locked in a firm, are likely to prefer less risky corporate strategies than those favoured by shareholders holding diversified portfolios.
- (ii) Whereas non-controlling shareholders of a company are likely to be almost exclusively concerned with its market value, the managers' welfare will be affected by corporate policy in various other ways. As a consequence, there are

gains available to shareholders through monitoring or constraining the actions of managers.

- (iii) Monitoring is a costly process. Shareholders are therefore faced with the problem of whether and how this task may be accomplished.
- (iv) Riskier corporate strategies tend to favour the interests of equity-holders over debt-holders.
- (v) The issuing of new debt may lower the expected payoff to existing debt-holders.

These factors give rise to what have been termed the agency costs of using external finance. For example, as soon as some dilution of an owner-manager's equity in a company occurs, through the issue of shares to outside agents, the need arises for a mechanism to resolve the difficulties identified in (i)–(iii). The cost of operating such a mechanism will be reflected in the cost of using this form of finance. Equally, there are agency costs associated with issuing debt, as points (iv)–(v) suggest, and these are likely to be larger for companies with high debt-equity ratios.

Many of the practical implications of the theory of agency costs depend upon the way in which these costs vary according to the level of external funding used by a company. It seems likely that agency costs are proportionally much higher when a company uses relatively large amounts of external funding, as in this instance much more strain is placed on the existing mechanism used to cope with the informational problems and conflicts of interest identified above. Some of the evidence on firms' financial behaviour can be interpreted in this light. Firms with more volatile rates of return tend to choose lower levels of gearing and lower ratios of dividends to capital employed<sup>(3)</sup> and these financial policies reduce their need for external finance in periods when income is unexpectedly low. At the aggregate level, these considerations help to explain the fall in companies' gearing ratios in the middle and late 1970s, given the income uncertainties that they faced during that period. Furthermore, companies' continued reliance on retained profits after 1973, despite the fact that the imputation system offered a tax incentive in favour of external borrowing, may partly be attributed to the existence of agency costs.

#### ICCs' long-term debt

Within ICCs' total liabilities, the importance of long-term debt has changed considerably since 1970, reflecting primarily nominal interest rate developments and their impact on the debenture market.

The fact that the great bulk of long-term debt of UK ICCs has been and continues to be denominated in nominal

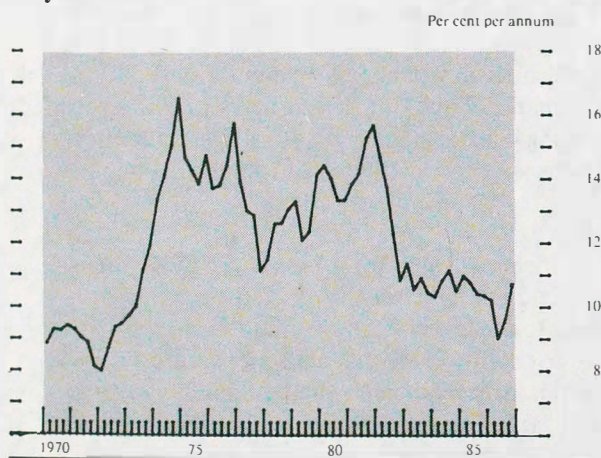
(1) These are reported in Devereux, M. 'Taxation and the Cost of Capital', *Oxford Review of Economic Policy*, vol 3, no 4, 1987.

(2) See Jensen, M C and Meckling, W H 'Theory of the Firm: Managerial Behaviour, Agency Costs and Ownership Structure' *Journal of Financial Economics*, no 3, 1977, pages 305–60.

(3) See Chowdhury G and Miles D K, 'An empirical model of companies' debt and dividend decisions: evidence from company accounts data', Bank of England *Discussion paper* No 28.

terms carries with it several important consequences in a period of high and varying rates of inflation. First, a rise in long-term nominal interest rates alters the maturity profile of the debt servicing costs of new debentures, with an increased burden falling in the immediate post-issue period. When such a rise occurs, a company which seeks to finance a certain proportion of its borrowing using long-term debt must either increase the frequency with which it makes issues of such debt or raise the real value of each issue, holding larger levels of short-term assets in the intervening periods. Either policy is likely to involve additional costs for the firm, suggesting that higher nominal long-term interest rates lower the attractiveness of using debenture finance.

**Chart 2**  
20-year interest rates



A second important consequence concerns the impact of interest rate uncertainty on the riskiness of issuing or holding long-term debt. In particular, increased uncertainty concerning future nominal interest rates tends to raise the riskiness of fixed-rate debt relative to that of floating-rate borrowing. In view of the risk-aversion which is thought to characterise companies' financial strategies, this suggests that changes in perceived interest rate uncertainty will exert a powerful influence on their choice of financing. The importance of such effects is difficult to gauge in practice because of the absence of hard information concerning expectations, and in particular the degree of uncertainty associated with those expectations. These difficulties can be partly countered if it is assumed that *ex post* interest rate volatility is an indicator of *ex ante* uncertainty. With this assumption in mind, the path of long interest rates in the last twenty years is shown in Chart 2. From 1973 to 1983, interest rates were both relatively high and relatively volatile, providing some explanation for the depressed state of the debenture market during that period.

### External borrowing

The tax system, interest rate movements and income uncertainty all affect a company's desired capital

**Table B**  
ICCs' external financing and acquisition of financial assets

£ billions, 1980 prices

Total	External financing						Acquisition of financial assets		
	Bank borrowing	Other loans and mortgages	UK capital issues		Capital issues overseas	Overseas investment	Liquid	Other	
			Ordinary shares	Debentures and preference shares					
1970	7.8	4.3	1.2	0.1	0.8	0.2	1.3	-0.6	—
1971	6.3	2.5	1.0	0.5	1.0	0.3	1.0	-3.2	0.5
1972	11.6	9.3	0.4	0.9	0.9	0.4	-0.3	-6.8	-0.5
1973	17.2	13.8	1.3	0.3	0.3	0.3	1.2	-7.7	-0.3
1974	14.4	10.1	0.9	0.1	0.1	—	3.1	0.8	0.6
1975	6.2	0.9	1.0	1.8	0.5	—	2.0	-3.3	-0.8
1976	8.3	4.5	0.4	1.3	0.1	—	2.0	-2.6	-0.6
1977	7.1	3.7	0.6	1.1	-0.1	0.1	1.6	-4.2	-1.0
1978	5.6	3.2	0.7	1.1	-0.1	-0.1	0.8	-3.4	—
1979	7.2	4.7	0.9	1.0	—	-0.1	0.6	-1.0	0.1
1980	9.9	6.3	0.2	0.9	0.5	—	1.9	-3.6	-0.3
1981	9.1	5.3	0.6	1.5	0.7	—	1.0	-4.3	-0.9
1982	8.3	5.6	0.7	0.9	0.2	—	1.1	-2.4	-1.3
1983	5.2	1.3	0.6	1.5	0.5	—	1.3	-4.7	-1.4
1984	5.0	5.4	0.3	0.9	0.2	0.2	-2.1	-1.7	-1.3
1985	9.5	5.5	0.5	2.5	0.6	0.6	-0.1	-3.6	-0.3
1986	14.8	6.9	0.9	3.8	0.5	1.0	1.7	-8.2	1.0

structure. The process of adjusting towards this structure is a gradual one, and can be partly observed in companies' financial transactions.

The composition of ICCs' gross external borrowing in each year since 1970 is shown in Table B, from which the increased importance of new equity issues after 1974 can be seen. The fluctuations which have occurred during this period appear to have been partly related to equity price movements,<sup>(1)</sup> with issues of ordinary shares subdued, for example, in 1980, but rising strongly in the period 1984–86. In Table B, the relative unattractiveness of issuing long-term debt in the middle and late 1970s also emerges, in the figures for domestic issues (debentures) and issues overseas (primarily eurobonds). More recently, the shift in maturity preferences of ICCs in favour of long-term debt has caused their external borrowing to resemble more closely the pattern of the early 1970s, when issues of such debt were about 20%–30% as large as bank borrowing. The balance of issues is now more concentrated on the euromarkets, however, for reasons discussed elsewhere.<sup>(2)</sup>

### Dividends

The dividend decision of a firm is closely related to its overall external financing requirements since, if the real part of the firm's operations—such as the levels of production and investment—is taken as given, every additional outflow of funds in the form of dividends must be financed either by the sale of new equity or by increasing net debt. Since 1973, when the imputation system was introduced into the United Kingdom, a significant tax incentive has existed for non tax-exhausted

(1) The evidence in Edwards, Jeremy and Mayer, Colin. *An Investigation into the Dividend and New Equity Issue Practices of Firms: Evidence from Survey Information*. IFS Working Paper No 80. Institute of Fiscal Studies London 1985, supports the supposition that movements in equity prices are an important determinant of new issues.

(2) See 'Recent developments in the corporate and bulldog sectors of the sterling bond market', on pages 62–8.

firms, in favour of new equity finance rather than retentions<sup>(1)</sup> and, therefore, in favour of high dividend payments.

Despite the introduction of the imputation system, there was no sharp rise in the dividend-income ratio in 1973 and 1974 (see Table C); indeed, dividend payments fell in real terms (1980 prices) from £4.7 billion in 1972 to £3.1 billion in 1974. This fall partly reflected the more pessimistic outlook for company profitability in 1974 and the fact that, after 1973, companies paying dividends were required to make simultaneous payments of advance corporation tax. When the latter are taken into account, the fall in the dividend-income ratio between 1972 and 1974 appears less marked. Between 1974 and 1979, companies' dividend payments were restricted under the provisions of the Counter-Inflation Act 1973, and this had a depressing effect on the dividend-income ratio, as can be seen from the sharp rise in dividends after the restrictions were terminated in 1979. After a period of stability, the ratio rose strongly between 1984 and 1986, an unusual feature given the large increase in ICCs' income that occurred in 1985, since dividends tend to lag income, so that the pay-out ratio more usually declines during a period of rapid income growth. The recent rise in the ratio may be attributable to the large number of firms currently emerging from tax exhaustion and facing, as a consequence, a higher relative cost of retentions finance.

**Table C**  
Dividend-income ratios for industrial and commercial companies

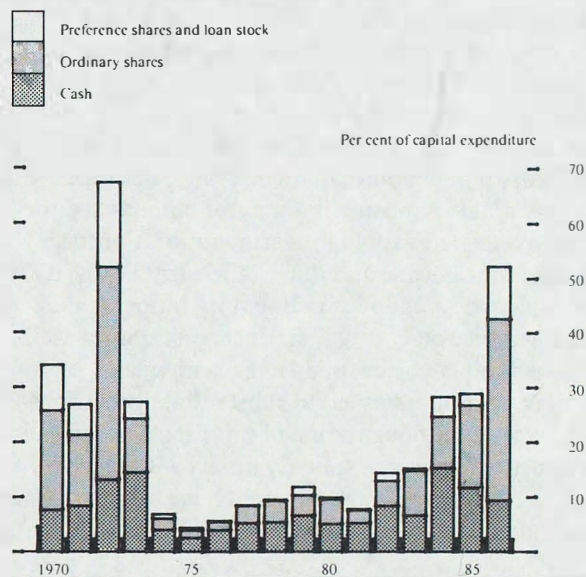
£ billions, current prices; percentages in italics

	Dividends on ordinary shares	Total income	Dividends as percentage of income	Dividends on ordinary shares plus payments of advanced corporation tax	Dividends plus ACT payments as percentage of income
1970	1.4	8.3	16.7	1.4	16.7
1971	1.5	9.1	16.8	1.5	16.8
1972	1.5	10.7	14.3	1.5	14.3
1973	1.4	14.2	9.7	1.6	11.3
1974	1.3	16.5	7.6	1.6	9.6
1975	1.3	16.3	8.2	1.7	10.7
1976	1.6	20.9	7.5	2.0	9.8
1977	1.7	25.9	6.7	2.2	8.6
1978	1.9	29.9	6.5	2.4	8.1
1979	3.5	39.9	8.7	4.2	10.6
1980	3.2	40.0	8.0	3.9	9.6
1981	3.3	43.1	7.6	3.9	9.1
1982	3.8	46.6	8.2	4.5	9.7
1983	4.6	55.7	8.2	5.4	9.7
1984	5.1	66.4	7.7	5.9	8.9
1985	6.4	75.6	8.4	7.3	9.6
1986	8.7	72.6	12.0	9.9	13.2

### Acquisitions

A takeover involves the exchange of assets between the acquiring firm and the acquired firm's shareholders, and in the process some change in the capital structure of the acquiring firm takes place. Equity-holders of the acquired firm receive some combination of debt, cash and equity from the acquiring firm. The relative sizes of these three components in the funding of acquisitions have varied over time, with some tendency for high levels of takeover

**Chart 3**  
Expenditure on acquisitions



activity to be associated with relatively high levels of equity funding used (see Chart 3). The overall effect of acquisitions is usually to raise the debt-equity ratio of the company sector; an acquisition which is financed by a reduction in the acquirer's holdings of bank deposits, for example, involves a reduction in the market value of ICCs' outstanding equity and an increase in the value of their net debt.

Table D allows an assessment to be made of the gearing implications of the various financial transactions by companies which have been discussed. There is evidence to suggest that in the early 1970s ICCs desired to raise their debt-equity ratios. Issues of new equity were quite

**Table D**  
The gearing effects of selected financial transactions

Changes in debt-equity ratio; all transactions expressed as percentages of ICCs' capital base(a)

	Transactions tending to lower the debt-equity ratio		Transactions tending to raise the debt-equity ratio			
	Issues of ordinary shares	Liquid assets acquired	Bank borrowing	Issues of debentures and preference shares(b)	Capital issues overseas	Acquisitions of shares(c)
1970	-0.1	-0.4	2.4	1.0	0.1	0.5
1971	-0.3	-1.8	1.4	0.9	0.1	0.6
1972	-0.5	-3.7	5.0	1.4	0.2	1.3
1973	-0.1	-3.8	6.8	0.3	0.2	1.4
1974	—	0.4	4.5	0.1	—	0.4
1975	-0.9	-1.5	0.4	0.2	—	0.3
1976	-0.6	-1.2	2.1	—	—	0.7
1977	-0.5	-1.8	1.6	—	0.1	0.5
1978	-0.5	-1.5	1.4	—	—	0.7
1979	-0.4	-0.4	1.9	0.1	—	0.8
1980	-0.4	-1.5	2.6	0.2	—	0.5
1981	-0.6	-1.7	2.2	0.3	—	0.5
1982	-0.4	-1.0	2.3	0.2	—	0.2
1983	-0.6	-2.0	0.6	0.2	—	-0.2
1984	-0.4	-0.7	2.3	0.3	0.1	1.1
1985	-1.0	-1.4	2.1	0.4	0.2	0.4
1986	-1.5	-3.2	1.4	0.9	0.4	0.3

(a) A negative sign indicates that the transaction, taken on its own, lowered the debt-equity ratio.  
(b) Including debentures and preference shares issued as payment for shares.  
(c) Including takeover-related cash payments for shares.

(1) See Devereux M. 'Taxation and the Cost of Capital'.

small, substantial funds flowed out of the sector via share purchases (which were largely takeover-related), and large volumes of additional marketable debt were issued. By 1974, however, the position of many ICCs had altered. A large proportion of them had become tax exhausted, and for them the tax incentives favouring the use of debt rather than equity finance were limited. Furthermore, the combination of high nominal interest rates, increased uncertainty and low income in that year emphasised the problems associated with high gearing ratios. For the remainder of the decade and during the early 1980s, ICCs appear to have desired lower debt-equity ratios, as the increased reliance on equity finance suggests. Since 1982, however, a number of new trends have emerged. The recent takeover boom has led to substantial flows of cash out of the sector (although some of this cash was raised in equity issues which were explicitly linked with takeover funding), and issues of long-term debt have again assumed the importance that they had in the early 1970s.

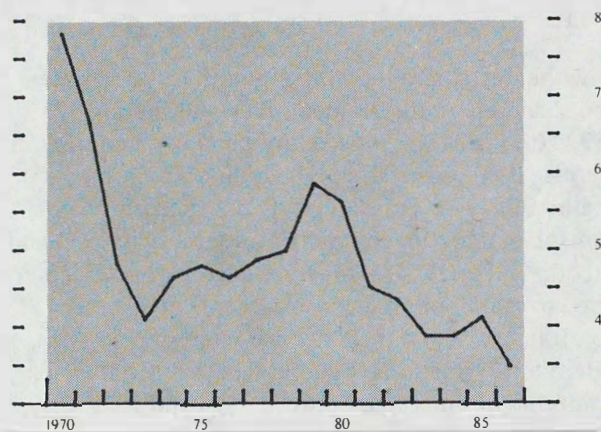
### ICCs' liquidity

The concept of liquidity is useful when thinking about the factors underlying companies' short-term financial decisions. Liquidity is essentially concerned with the ability to respond promptly to future events, the nature and timing of which are uncertain. With this broad characteristic in mind, it seems unlikely that any single indicator can adequately represent the liquidity position of a sector, as a number of factors must be taken into account.

One way of assessing the adequacy of company sector liquidity is to examine the movements of their 'transactions velocity', ie the level of their transactions relative to their holdings of liquid assets. In Chart 4, such a measure is shown, allowing some evaluation to be made of the trends which have occurred since 1970. The velocity of companies' M3 holdings fell markedly in the period 1971-73, largely as a result of the widespread adoption by commercial banks of the techniques of liability management, made possible by the introduction of *Competition and credit control*. In 1974, ICCs' liquidity was squeezed by the combination of a large financial deficit, subdued capital issues and the introduction of the supplementary special deposits scheme. Thereafter, the velocity of companies' money holdings remained stable until 1978 before again rising sharply; this rise was temporary, however, and was followed by a resurgence in the growth of ICCs' holdings of M3.

The proxy for the level of companies' transactions used in Chart 4, ICCs' value added, cannot be regarded as entirely satisfactory for several reasons. Companies' desire to hold liquidity may relate not only to their net income but also to transactions involving the transfer of assets. In recent years, ICCs' demand for liquidity has been boosted

Chart 4  
Ratio of value added by ICCs to their M3 holdings



by the growth of two important categories of financial transaction. First, the merger boom has involved some build-up of company liquidity for strategic reasons, since acquiring firms must be sure that there are funds available to finance any cash element in an acquisition. The size of this build-up is related to the time-lag between the date at which funds for the acquisition are raised and the date on which it actually takes place. If the average lag is assumed to be two quarters, this would suggest that around £1½ billion (or roughly 3%) of ICCs' holdings of M3 in the last two years was attributable to domestic takeover activity. The second important factor has been the abolition of exchange controls, which has enhanced companies' ability to act in overseas financial markets. One indicator of this has been the high level of overseas acquisitions by UK companies in the past few years, which will have been associated with some increase in their demand for liquidity.

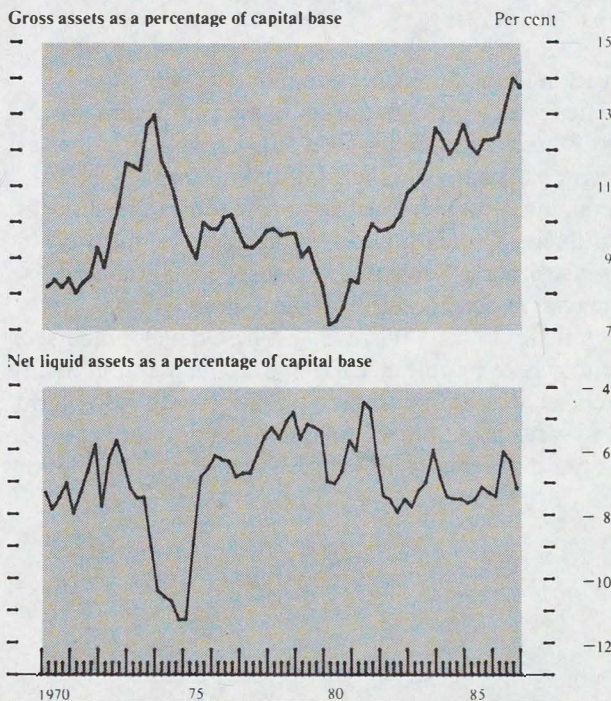
### The cost of holding liquid assets

The holding of liquid assets entails opportunity costs from a company's point of view. By reducing the amount of liquid assets in its portfolio, with all other elements of its business and financing unchanged, a company can reduce its external borrowing. This suggests that companies' holdings of these assets will be sensitive to the differential between the rates at which companies borrow funds and the rates of return available on liquid assets.

There is little doubt that periods of financial deregulation have been associated with some narrowing of the average margin between the rate charged on bank borrowing and the rate of interest available on liquid assets. This narrowing has been evident recently from the reports of the clearing banks<sup>(1)</sup> and the increased proportion of bank deposits which are interest-bearing. Furthermore, work at the Bank on company accounts data has shown that the average rate of return earned by companies on their liquid assets has been higher, relative to other short-term interest rates, in the 1980s than in the middle and late 1970s. The fall in the cost of intermediation implies that the cost of holding any given level of liquid assets is lowered, and it is presumably this effect which led to the rapid increases in

(1) See, for example, the Lloyds Bank Annual Report, 1985.

**Chart 5**  
**ICCs' liquidity ratios**



companies' gross liquidity between 1980 and 1986, a period during which net liquidity remained quite stable (see Chart 5). Examination of individual company accounts data reveals the extent to which these trends are attributable to an increasing amount of covered debt<sup>(1)</sup> (see Table E). The evidence suggests that a considerable number of firms have improved their liquidity position during the 1980s while simultaneously increasing their short-term debt.

In addition to the cost of intermediation, the financial surplus of the company sector has also had an important influence on the cost of holding liquid assets. The three years in which the company sector has been in financial

**Table E**  
**Covered debt: evidence from individual company accounts<sup>(a)</sup>**

£ millions, current prices; percentages in italics

	Aggregate stock of short-term debt	Aggregate stock of liquid assets	Total covered debt <sup>(b)</sup>	Covered debt as a percentage of short-term debt
1970	1,941	1,293	742	38
1971	1,738	1,841	825	47
1972	1,884	2,842	1,065	56
1973	2,777	3,722	1,469	53
1974	3,782	4,210	1,644	43
1975	3,280	5,050	1,842	56
1976	3,514	6,517	1,973	56
1977	3,753	7,152	2,219	59
1978	4,274	8,054	2,610	61
1979	4,885	7,456	2,673	55
1980	5,355	7,644	2,978	56
1981	7,446	10,361	4,126	55
1982	7,185	11,057	4,418	61
1983	8,003	13,520	5,273	66
1984	10,241	14,605	7,418	72
1985	9,983	15,107	7,001	70
1986	11,953	19,996	9,004	75

(a) Based on a sample of 658 non-financial companies.

(b) This series shows the amount of short-term debt which is at least matched by the stock of liquid assets, company by company.

(1) Covered debt is the proportion of a firm's short-term debt which is matched by holdings of liquid assets. For example, a firm with £1,000 of bank borrowing and £400 of liquid assets has 40% of its debt covered.

deficit, 1974, 1976 and 1979, have all been associated with falls in the sector's gross and net liquidity. To some extent these falls illustrate the way in which liquid assets act as a buffer stock, accommodating the differing time profiles of income and expenditure flows, but they are also an indicator of the rising cost of external borrowing, the reasons for which have already been discussed.

Longer-term trends in ICCs' financial balance also appear to have affected their liquidity position. The strong growth of companies' M3 holdings in the periods 1971-73 and 1980-86 and the decline in their gross liquidity in the intervening years correspond closely with the average level of their financial balance in each period.

### Summary and prospects

A comparison between the financial position of the company sector in 1970 and its position in 1986 not only highlights the substantial changes which have occurred in companies' financial behaviour in the intervening decade and a half, but also allows certain similarities to be identified. By the end of 1986, companies were enjoying the benefits of six years of sustained growth, long-run interest rates had averaged 9¼% in the previous twelve months, and the underlying annual inflation rate as measured by the RPI was close to 4%. In all these respects the economy in 1986 bore more resemblance to the situation before 1970 than to that in much of the intervening period. This resemblance is of particular interest when a comparison is made of the sector's capital structure at the two points in time. The sector was less highly geared in 1986, and a much smaller proportion of its liabilities was in long-term debt, the latter feature reflecting the damaging impact, during most of the 1970s and early 1980s, of high and volatile interest rates on the debenture market.

The tax incentives in favour of debt finance in 1970 were probably somewhat greater than in 1986. The corporation tax rate was higher (40% rather than 35%), and few companies were tax exhausted. Nevertheless, companies currently have relatively low debt-equity ratios by historical standards, suggesting that they have some incentive to increase their use of debt finance and, in view of the level of long interest rates, issue substantial amounts of new long-term debt. There are signs of this occurring; ICCs have issued about £8½ billion of long-term debt on the domestic and euro markets in 1986 and 1987, roughly 2% of their capital base. This is still significantly less than the sums raised by the sector in ordinary share issues (about £18 billion during the same period), but the latter has undoubtedly been related to the growth of equity prices, and there is some likelihood that the balance of capital issues will now shift in favour of long-term debt.

A comparison of ICCs' holdings of liquid assets in 1970 and 1986 reveals the important changes which have

occurred in this part of companies' balance sheets. The expansion of ICCs' liquidity is revealed by the near doubling of the ratio of their gross liquid assets to capital base. There is little doubt that companies' ability to respond promptly to unexpected future events has been considerably enhanced by these developments. This improvement has occurred partly as the result of the financial surplus enjoyed by the company sector in the periods 1971-72 and 1980-86, but perhaps more importantly because of the rapid innovation that has occurred in the financial system. This process of innovation, stimulated by reforms such as the abolition of exchange controls and the termination of the supplementary special deposits scheme, has been associated with a narrowing of the margins between rates of return available on liquid assets and the rates paid by companies for their borrowing. The cost of holding liquid

assets has consequently fallen for companies, encouraging them to increase both their holdings of liquid assets and their bank borrowing.

Innovation in the financial system has also been associated with a proliferation of financial instruments. Some of these instruments, such as swaps and options, allow companies to plan their future funding requirements with increased certainty, and can be thought of as influencing their liquidity preferences in this way. Other instruments, such as note issuance facilities and commercial paper, appear to possess similar characteristics to bank borrowing. These developments are primarily of importance to large companies, but in any case represent an important continuation of the long-term trend towards providing companies with liquidity at lower cost, a trend which as yet shows no sign of moderating.