

Alternative measures of aggregate company liquidity

The past seven years have seen a remarkable turn-round in the financial performance of industrial and commercial companies (ICCs). Gross trading profits (net of stock appreciation) rose at an annual rate of some 14½% between 1980 and 1987, and, excluding the contribution from North Sea activity (which is influenced by movements in oil prices), the recovery was even stronger (18%), with the pre-tax real rate of return rising from under 4% in 1980 to more than 10% by the end of 1987, its highest level since the early 1970s.

ICCs in aggregate have recorded eight consecutive years of financial surplus, giving rise to a net cumulative increase of some £45 billion in their holdings of financial assets. Nevertheless, a key feature of their behaviour over this period has been the significant increase in bank borrowing (some £56 billion) and net capital issues (around £26 billion). Of this £130 billion total, some £30 billion is accounted for by a net increase in investment abroad, but by far the most notable feature has been the rapid accumulation of liquid assets, amounting to over £46 billion.

The shift towards 'liquidity' appears particularly marked when asset accumulation is considered gross. However, the growth of short-term borrowing has also been rapid so that the net liquidity position is broadly unchanged. This note reviews the main alternative measures of aggregate liquidity. It concludes that no single measure can adequately represent the sectoral liquidity position; rather, a variety of indicators are required in order to monitor all aspects of the liquidity concept.

The importance of liquidity in monitoring corporate performance has long been recognised: many models which seek to explain corporate failure incorporate measures of liquidity as significant determinants.⁽¹⁾ On one level it is apparent that a measure which nets off assets against liabilities may, if interpreted in the broader context of companies' overall financial performance and the economic environment in which they are operating, provide some indication of solvency. But liquidity also embodies the idea of flexibility, suggesting the importance of the gross asset position. However, many companies may view approved yet undrawn credit facilities as a close substitute for holding bank deposits. Nevertheless, large movements in either net or gross liquidity provide evidence of structural shifts occurring in portfolios which may represent a significant change in the liquidity position. Such shifts should not, however, be viewed in isolation. They provide information on one aspect of company behaviour, the significance of which may vary according to the broader context of those actions.

Liquidity preference

The notion of liquidity preference derives from the potential costs arising out of uncertainty. Broadly, these fall into two types: those associated with interest risk—ie with uncertainty about the capital value of assets—and those associated more with the idea of flexibility, that is

with the desire to be able to respond promptly to future events, the nature and timing of which are uncertain. Interest risk involving uncertainty about the size and direction of future interest rate movements may lead to a generalised retreat from capital-uncertain assets. The question of flexibility derives from the uncertainty surrounding future cash flows and the cost of cash shortages and is to be balanced against the cost of holding liquidity.

The cost of holding liquidity may be thought of in two ways. First, where gross and net liquidity are equal, it will be measured by the slope of the yield curve. If the yield curve becomes less steep, portfolio holders will move increasingly towards higher proportional holdings of short-term liquid assets. Where the two are not equal, however, liquidity costs will instead be measured by the margin between loan and deposit rates, ie the cost of intermediation. As these margins are progressively squeezed, as they appear to have been over the past decade, the cost of liquidity achieved through a simultaneous build-up of liquid assets and borrowing is reduced. As this margin approaches zero, the demand for 'liquidity' will tend to become infinite. This would appear to offer an explanation for the observed growth of liquid assets and borrowing by ICCs during recent years.

The same processes of change which have encouraged a reduction in the cost of intermediation have also fostered

(1) The literature in this area is extensive. An article in the June 1982 *Bulletin*: 'Techniques for assessing corporate financial strength' gives a brief summary. An accessible subsequent discussion is presented in *Corporate Failure: Prediction, Panacea and Prevention* by O P Kharbada and E A Stallworthy, McGraw-Hill 1985.

an increased availability of credit by reducing rationing and may, accordingly, have raised the status of unused credit facilities as a source of liquidity. If borrowing has become both cheaper relative to the return on assets and less rationed, it might equally be argued that a given level of liquidity might be consistent with some reduction in holdings of liquid assets and associated borrowing, provided some accompanying increase occurred in unused credit facilities. In the absence of comprehensive data for the latter, the force of such an argument is difficult to assess but it seems likely that undrawn credit will be regarded as less liquid than a drawn facility placed on deposit, particularly during periods of financial stringency.

This view appears to be borne out by the behaviour of companies involved in takeover and merger activity. The high degree of association between capital issues and subsequent acquisitions reveals the source of much of the financing, yet the timing between these transactions is variable, suggesting that companies raise capital as favourable opportunities arise and place funds on deposit until they are required. Similar funding operations involving bank borrowing are also thought to account for a significant proportion of takeover activity.

While simultaneous borrowing and depositing by individual firms may be part of the explanation for the sector's aggregate portfolio behaviour, it may also be the case that different companies are engaged in the borrowing and lending activities. Thus, small companies with limited access to capital markets may be heavily dependent on bank finance as a source of funds for future expansion; larger established firms, by contrast, may enjoy healthy financial surpluses which enable them to accumulate liquid assets with a view to financing future investment from internal funds. The extent of this divergence is difficult to gauge, other than by inspection of individual company accounts. Preliminary work in the Bank suggests that it may well account for some part of the expansion of both sides of the sectoral balance sheet. Nevertheless, the simultaneous expansion of borrowing and lending by individual firms has probably been of rather more significance.

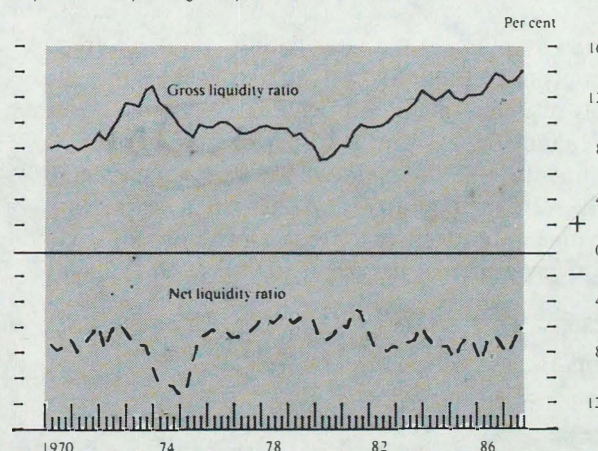
Such an observation must, at a minimum, place some bound on the interpretation of net liquidity and liquidity ratio measures. It suggests that liquidity cannot be viewed as unidimensional. For any given level of measured net liquidity it may be possible for a company to achieve a higher level of perceived liquidity by operating on its portfolio in one of a number of ways. These could include increasing undrawn credit facilities or the drawing and redepositing of existing credit lines as already discussed, but might also involve maturity switching operations wholly within or wholly outside the chosen definitions of 'liquid assets' and 'short-term liabilities'. These aspects of liquidity are inevitably dealt with somewhat inadequately by the standard liquidity measures.

Gross liquidity

The gross liquidity ratio (liquid assets as a proportion of capital base), shown in Chart 1, has exhibited a strong upward trend over the past two decades, with major interruptions in 1973–74 and 1979–80. The characteristics of these two collapses were quite distinct, however. In the first, the fall in liquidity followed a period of very rapid asset accumulation associated with the widespread adoption by commercial banks of the techniques of liability management, made possible by the introduction of *Competition and credit control*. In 1980, by contrast, the fall in liquidity followed several years of broad stability in the ratio, a period when real interest rates had been persistently negative and ICCs had been encouraged to limit their accumulation of financial assets. The fall in both cases may be considered acute, as judged by the associated real economy developments, yet, whereas in the former case subsequent asset accumulation remained modest, the latter was followed by a sharp resurgence of asset growth which has persisted to the present.

Chart 1
Liquidity ratios

Liquid assets as a percentage of capital base

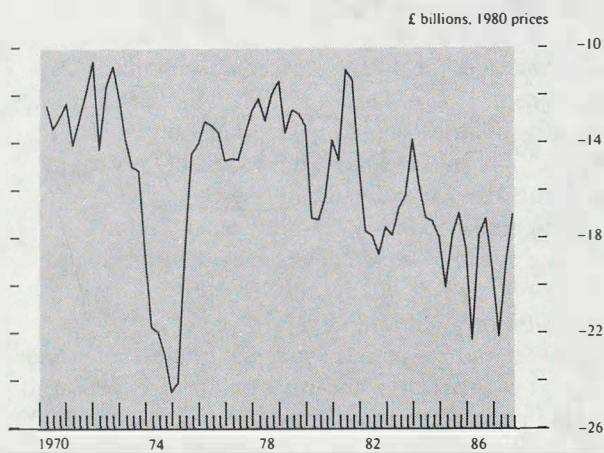


Net liquidity

The net liquidity ratio (net liquid assets as a proportion of capital base) provides a different perspective (Chart 1). The ratio is less clearly trended, exhibiting quarter-to-quarter volatility within a fairly constant range, and with only one major fall in 1973–74. The absence of a well-defined collapse in liquidity in 1980 may reflect the extent of corporate borrowing and depositing off balance sheet through overseas subsidiaries following the removal of exchange controls in October 1979 and before the abandonment of the corset (the supplementary special deposits scheme) in June 1980. It seems likely that the strength of gross liquidity through 1981 must partly reflect the subsequent process of reintermediation, so that, notwithstanding the emergence of distress borrowing, there was little change in the net liquidity ratio.

The picture may also be distorted, however, by the scaling factor—the capital base at replacement cost—adopted for these comparisons. One alternative is to express net

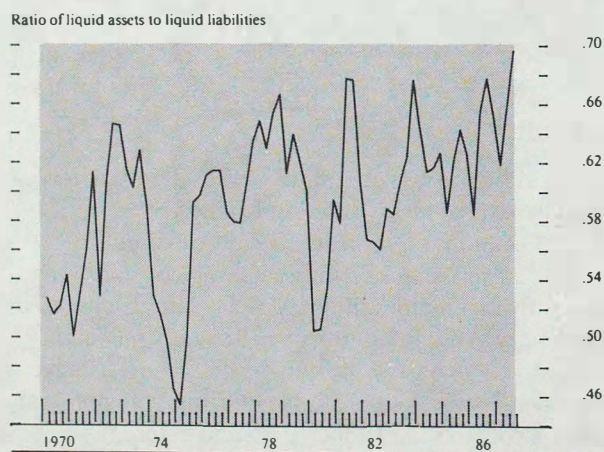
Chart 2
Real net current assets



liquidity in constant price terms (Chart 2), yet here too the appropriateness of any price deflator may be open to challenge. In the example illustrated here, which uses the TFE deflator, the measure indicates a downward trend in liquidity over the past decade, a result which appears at odds with the strength of ICCs' financial performance as based on a range of other measures.

A second alternative is the asset/liability ratio, referred to here simply as the liquidity ratio (Chart 3). This measure is closely related to net liquidity but has exhibited greater volatility and conveys a rather different view of the developments in ICCs' liquidity in recent years. Indeed, as can be seen, the liquidity ratio has actually shown an underlying *upward* trend over the past two decades, with major downward disturbances in 1973-74 and 1979-80.

Chart 3
Liquidity ratio



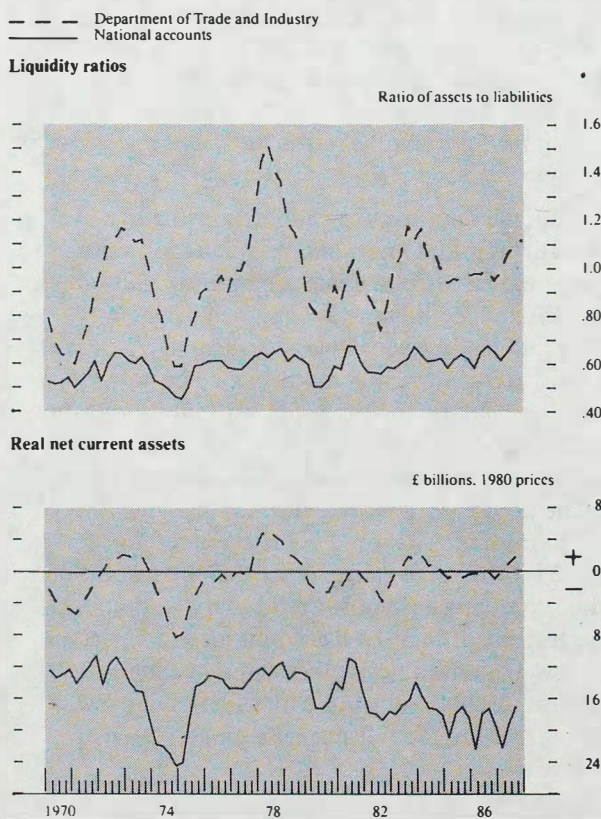
Sector accounts and survey data

Thus far, the liquidity measures illustrated have been constructed from national accounts sectoral balance sheet data. However, an alternative and perhaps more familiar measure is the liquidity ratio derived from DTI survey data. Chart 4 compares DTI survey data for the liquidity

ratio and the real net liquid assets ratio with their equivalent national accounts estimates.

A more detailed discussion of the relationship between these two data sources was contained in two articles in *Economic Trends* in the 1970s.⁽¹⁾ Essentially, a balance must be struck between reliance on national accounts estimates, for which much of the ICCs' data is derived as a residual counterpart to other sectors, and the survey data, which is based on a sample of only some 250 large companies, although these do account for about a quarter of the capital employed by all ICCs. The questions in the survey are able to focus more directly on those current assets and liabilities that companies consider affect their liquidity. One of the larger resulting differences is that the survey's measure of liquidity takes in only the 60% of bank borrowing which is short term whereas the national

Chart 4
Comparison of liquidity measures



accounts based estimate has to include all bank borrowing. Chart 4 reveals that the liquidity ratio based on survey data is more variable, although it has become less erratic over the past five years. Higher variability may be associated with the limited sample size⁽²⁾ which allows major transactions (acquisitions and share issues for example) to affect the totals, although it may also be the case that, by choosing large companies, the sample may be slanted towards those companies which are financially more sophisticated and more likely to move funds for portfolio management reasons.

(1) *Economic Trends* November 1974 and May 1977.
(2) The 1974 article, page vii, revealed the degree of variability for behaviour within the sample.

Nevertheless, the survey and national accounts data appear to tell a broadly similar story. This is seen more clearly in Chart 4 where a fairly close consistency exists between the main turning points in the series. The different levels of the two measures are the result of definitional differences.

The impact of simultaneous asset and liability growth differs between these various measures. The net liquidity measure is neutral with respect to such developments while the liquidity ratio, which responds to the proportional rather than the absolute difference between assets and liabilities, gives different results depending upon whether a company's liquid assets are greater or less than its short-term debt. In the former case, a simultaneous rise in assets and liabilities results in a fall in the liquidity ratio. The process always has the effect of pushing the ratio towards unity, and may accordingly provide part of the explanation for the increased stability of the DTI liquidity ratio over recent years.

A useful supplementary source of survey evidence is provided by the CBI. Chart 5 shows the balance of firms reporting an improvement in net liquidity over the preceding year—compared here with the DTI liquidity ratio for manufacturing companies. The results reflect respondents' perceptions of liquidity and implicitly take into account the economic context. They focus on the need to assess liquidity within the context of a range of other factors such as company profitability, access to capital markets and the market conditions for credit. In 1985, for example, when the DTI liquidity ratio fell to a

level which could have prompted concern, the CBI survey showed no such deterioration since the strength of profits and the availability of external funding were implicitly allowed for within firms' responses. In addition, the DTI result was influenced by sharp movements for a small number of companies which would have received a smaller relative weight in the CBI survey results.

Conclusions

It is clear from the above that it is unlikely that a single measure of ICCs' liquidity which fully captures the several dimensions of the concept may be found. Gross liquidity has risen very rapidly over recent years while the trend in net liquidity has been virtually flat, or declining in real terms. Profitability has improved steadily and, in this environment, firms have enjoyed ready access to external funds, through both the capital markets and the banks, involving the use of a growing range of financial instruments. The key question is whether a simultaneous accumulation of liquid assets and liabilities represents an improvement in liquidity.

The answer may, to an extent, depend upon the aspect of liquidity under consideration. If the principal concern is one of financial solvency, a simultaneous accumulation of assets and liabilities against a background of financial losses is unlikely to provide much comfort. If, on the other hand, the financial position of companies is fundamentally sound, then such a strategy may well afford increased flexibility and the ability to fund planned expenditures on the most favourable terms. Once again, therefore, a broad view of the background environment is crucial to the interpretation of these rather narrow measures.

A rounded assessment of ICCs' liquidity position must accordingly take account of more than one measure. For a fall in, say, the liquidity ratio to be regarded as a serious indication of deterioration it would need to be accompanied by a drop in gross liquidity on a fairly significant scale. The question of danger points is more complex. For the net liquidity ratio it may be that there exists some absolute level below which concern would be signalled. For other measures, however, the observed historical trends suggest that long-run structural changes, induced by deregulation or financial innovation, may also be influential and that it may therefore be more appropriate to consider relative movements. As noted above, however, these must always be set in the context of a wider range of financial indicators, and with the prevailing economic climate always in mind.

Chart 5
Comparison of CLS and CBI manufacturing liquidity

