Inflation and management accounting

This article reports on a survey by the Bank on the use made of inflation-adjusted accounts for internal management purposes. It is suggested that management should not rely exclusively on historic cost accounts, and should have inflation-adjusted figures available.

Introduction

Since the early 1960s, the real profitability of manufacturing industry has fallen to perhaps less than half of its former level, although returns reported at historic cost have been broadly maintained.[1] It is likely that one reason for this extremely disturbing trend is that managements have for many years been inadequately aware of the decline in real profitability because the conventional historic cost accounts showed what appeared to be a satisfactory return on capital. The Bank believes that it is important to establish a system of accounting which provides a realistic view of profits and capital employed, and has therefore strongly supported the principle of adjustment for changes in price levels.

With the issue by the Accounting Standards Committee of a statement of standard accounting practice on current cost accounting (SSAP16),[2] larger companies are now required to produce a current cost statement in their annual report and accounts. This ensures that the various users of published accounts will have access to inflation-adjusted results, but it does not guarantee that management will be aware of the impact of inflation in the day-to-day operation of their companies. Because current cost information gives the closest practicable indication of the real rate of return, it is clearly important that accounting data on this basis should be available to management both at holding company and divisional level. Financial information solely at historic cost cannot provide a true and fair view in an economic sense and is not therefore a proper basis for decision-making.

Because little information is publicly available about the extent to which current cost accounting (CCA) is used by management, the Bank has discussed, with forty companies to which the standard will apply, the use they make, or intend to make, of CCA, or of other methods of adjusting for aspects of inflation, for management purposes. These particular companies were selected partly because they were known to have some interest in the subject, and the Bank would like to thank them for their help. All except four of the companies are mainly in the manufacturing sector, and all but five have a stock exchange listing. They have the following spread by size of turnover:

Turnover	Number of companies
Over £500 million	16
From £100 million to £500 million	12
Less than £100 million	12

Accounting requirements

A number of proposals for the preparation of inflation-adjusted accounts have been considered in this country over the past few years, culminating in the publication of SSAP16. This requires the great majority of listed companies and larger unlisted companies to provide current cost accounts, as well as historic cost figures, for accounting periods commencing on or after 1 January 1980. The current cost accounts may be presented as the main financial statements of the company provided that they are accompanied by supplementary historic cost accounts or adequate historic cost information, but it seems that few companies are likely to adopt this alternative in the immediate future.

SSAP16 requires physical assets to be revalued, generally to current cost, in the balance sheet, while the profit and loss account is to include:

- a charge for depreciation based on the current replacement cost of fixed assets;
- cost of sales at the current value of goods consumed;
- provision for the additional funds needed to finance the increase in the net trade debtors of the business arising from inflation (or the corresponding gain where the business is a net recipient of trade credit);
- a gearing adjustment to reflect realised gains arising from inflation made by the equity shareholders of the company at the expense of lenders [specifically, that proportion of the total of inflation adjustments for depreciation, cost of sales, and net trade debt (credit), which the net borrowing represents of the net operating assets at current cost].

It appears from published accounts that the majority of listed companies either already provide current cost information in some form, or have undertaken to do so upon publication of a standard. Most companies are unlikely to experience difficulty in complying with SSAP 16. Those which have not yet included current cost statements in their annual accounts have mostly prepared the necessary information for internal purposes. Some unlisted companies and smaller listed companies may, however, require help from their auditors.

(1) See the supplementary note on profitability and company finance, page 191.

(2) 'Current cost accounting', *Statement of standard accounting practice No. 16.* The Institute of Chartered Accountants in England and Wales, March 1980.

The latest published accounts of the forty companies show the following position relative to the adoption of CCA:

	Number of companies
Supplementary statement in accordance with the Hyde guidelines(a)	15
Supplementary income statement along the lines of ED24(b)	10
Indication of the effect of inflation on the results by way of a note in the report and accounts	4
No inflation accounting information provided	11

(a) The Hyde guidelines were voluntary guidelines published in November 1977 by the Accounting Standards Committee for the inclusion by listed companies of a supplementary current cost profit and loss account incorporating adjustments for additional depreciation and the current cost of sales, and net monetary items.

(b) ED24 was the exposure draft issued in April 1979 which preceded SSAP16 and contained similar proposals in most respects.

The majority of those companies using the Hyde guidelines indicated that in their next published accounts they would follow ED24 or SSAP16.

All the companies indicated that they would comply with SSAP16 when required to do so, and the only major difficulty mentioned was in the preparation of results for overseas subsidiaries and certain associates. Few considered that the production of CCA information would entail substantial costs, other than in the professional revaluation of land and buildings. Some companies expressed reservations about certain aspects of the standard. These points are dealt with below where they are relevant to planning and management accounting.

A number of the companies perceive a lack of interest in, and acceptance of, published CCA figures by the main users of accounts, notably institutional shareholders, stockbrokers, banks, the financial press and trades unions. Several doubt whether significant progress will be made towards establishing CCA as the primary method of accounting until users start to focus on adjusted figures. Some companies are concerned too about the impact on their market image of the publication of current cost accounts which will show a lower rate of return than the comparable historic cost accounts. One company, which has already gone a long way towards CCA by providing replacement cost depreciation in its accounts, suggested that financial institutions often make inadequate allowance when comparing its results with those of other companies which base their depreciation charge largely on historic costs.

The need to adjust management information

Published financial statements are primarily the means whereby the board of a company communicates with the shareholders, and they have little operational significance. There is no framework of accounting standards covering the separate financial information which boards and senior management use to formulate strategy, to take shorter-term decisions, and to monitor performance. It is clearly important that the data presented to directors and management should include current cost accounting information consistent with that to be used in the published accounts. It would seem desirable for the information to include past results, forecasts, and actual and projected balance sheets. Where current cost figures are not available, management will not have an accurate understanding of the real rates of return achieved in different parts of the business, which should be a major factor to be taken into account when making decisions.

Current cost information is also relevant to groups other than shareholders and management. As the Governor of the Bank mentioned in his speech to the Industrial Society Conference in April,[1] there is a proper tendency for emphasis to be placed in pay negotiations on trading performance in real terms. Such discussions may often focus on the results of individual parts of a group and will be facilitated if the financial information in respect of divisions or subsidiaries is available in current cost terms on a basis consistent with the published accounts.

The information set out below represents the views and practices of the companies visited, and no attempt is made to rank these by reference to any particular view of best management accounting practice.

The survey

Management accounting

The attitude of the forty companies towards CCA and management information can be summarised as follows:

	Number of companies
Those using CCA information as the primary method of management accounting, or producing CCA management accounts in parallel with historic cost management accounts.	9
Those using CCA information (generally only in relation to profits) as a supplement to the historic cost management accounts.	6
Those producing no CCA information regularly for management purposes but intending to do so within a reasonable time.	9
Those having no plans to include CCA information in management accounts in the foreseeable future.	16

Companies producing CCA information, whether as their primary management accounts or as supplementary information, generally make only the additional depreciation and cost of sales adjustments for their subsidiary companies or divisions. But there is a growing recognition among them that it would also be desirable to reflect the effect of inflation on monetary working capital, and the majority intend to incorporate an adjustment here as well. Although some companies recognise the importance of a gearing adjustment in determining the real return to the equity shareholder, there is little support for making a gearing adjustment in divisional accounts since the financial structure of subsidiaries and divisions, and hence the basis for the adjustment, is normally dictated by

(1) See page 203.

considerations of convenience and taxation, and is seen as largely irrelevant to management performance. The majority of companies control their group borrowing requirement from head office, and they put this forward as a further reason for excluding the gearing adjustment from divisional management accounts. One company thought that for limited purposes, such as local pay negotiations, it might be necessary to present divisional profits including a gearing adjustment.

It is clearly preferable to include CCA adjustments in the costing of individual products. This was emphasised by four of the companies who have established systems of current cost management information. For the most part, these companies maintain their basic accounting records for fixed assets and stocks at current cost. Thus the costing of a product will include as part of the overhead content not only the replacement price of raw materials but also depreciation based on replacement cost and, in some cases, an estimate of the cost of financing the net trade debt associated with the product.

Measurement of returns at current cost are a better indicator of performance than ratios based on historic cost information. Where current cost management accounts are produced, the most usual measure of performance is to take operating profit, after charging cost of sales and depreciation at current cost (together, if applicable, with the monetary working capital adjustment), but before interest, as a percentage of capital employed, valued at current cost.

Some companies go only part of the way, for instance measuring profitability as profits at historic cost as a percentage of assets at current cost, or as profits at current cost as a percentage of assets at historic cost. Nearly all the companies compute capital employed after deducting accumulated depreciation from fixed assets. Two companies, however, calculate the return on the gross replacement cost of fixed assets before depreciation, on the grounds that net book value would show an unduly favourable result in a division whose assets were approaching the end of their useful lives and which had largely been written off. Two companies do not depreciate assets which they do not intend to replace, charging instead the cost of maintaining those assets. All the companies recognise that, as between divisions and subsidiaries within a group, the historic cost return on capital employed as a measure of relative performance has little significance.

The companies which do not intend to use CCA in the foreseeable future for management purposes argue that financial objectives and targets, if set appropriately at historic cost, will ensure that operating management will aim to achieve a reasonable real return on assets employed and that historic cost accounts give a valid indication of the performance of an individual subsidiary or division when compared over a period of time. Among the measures mentioned by companies were:

- return on historic cost capital employed;
- gross profit as a percentage of turnover;
- profit before interest as a percentage of turnover;
- funds employed as a percentage of turnover;
- turnover, or value added, as a percentage of total payroll costs;
- stocks or working capital in relation to turnover;
- capital expenditure as a percentage of turnover.

The last three of these are thought to be particularly useful by those companies which employ them, because they provide a comparison from year to year on the basis of the historic cost figures without the need to adjust for inflation. The following more limited uses for inflation-adjusted information have been made by certain of the companies not using CCA as a matter of routine for management:

- corporate plans prepared at constant prices;
- in the appraisal of substantial capital projects, several boards have found a summary of past years' CCA results for the subsidiary company or activity concerned to be useful, particularly in the allocation of limited cash resources and in assessing which capital projects to approve;
- comparison of the total CCA depreciation charge with proposed capital expenditure.

As a general rule, companies appear to be paying increasing attention to cash flow in planning and measuring performance. In a steady state, the operating cash flow of a business will bear a closer relationship to CCA profits than to the historic cost figures.

The main impediment to the use of CCA information for management is seen as the limited interest of operating management and boards of directors in CCA, and the confusion which is caused by two sets of figures for profits. Those firms which use CCA in their management accounts have made strenuous efforts through films and other presentations to educate those concerned.

Use of CCA in planning and forecasting

Those few companies with CCA-based management accounts also use CCA in their business plans, forecasts, and budgets. Generally, their financial projections take the form of forecasts of CCA profits, after provision for depreciation and cost of sales based on replacement cost, normally at forecast prices. The basis of the forecasts is therefore compatible with their management accounts, assisting comparison and the identification of reasons for deviations from plan or budget.

The majority of the companies not using CCA also prepare their budgets at forecast prices, making assumptions about future differential price movements, both in general and affecting specific components of costs and revenue, especially raw materials and rates of pay. Some companies, particularly those which are highly centralised or whose activities are fairly homogenous, lay down economic assumptions to be followed by accounting units in formulating their budgets and plans, while others allow operating managements wide discretion, subject, of course, to disclosing the assumptions to head office and justifying them as necessary.

One of the main reasons which companies give for not yet adopting CCA management accounts is a lack of comparable information for earlier years; thus, either CCA adjustments will have to be introduced gradually, or two sets of accounts will have to be kept until management are familiar with the CCA figures. In a few instances, this is considered to entail too much work to be contemplated at present.

None of the companies has established rigid performance criteria in terms of a required rate of return to be achieved by individual divisions or subsidiary companies: this was considered to be dependent largely on previous performance, although all lay considerable emphasis on the achievement of a satisfactory overall return on capital, however measured. The companies' views on an acceptable overall return on capital vary between 20% to 30% before interest on historic cost, and between 5% and 10% on current cost.(1)

CCA and management policy

The prevalent view among the companies, whether or not they are users of CCA information, is that neither the publication of current cost financial information, nor its use by management, is likely to have a significant effect on corporate policy and behaviour, other than in the consideration of dividend policy. All companies already have some CCA figures available, at least for internal purposes, if often in the form only of adjustments to their published results, although in several instances this information is not discussed by or referred to the board of directors and is not available to subsidiaries or divisions. Companies relying on historic cost information in their budgetary control and management information systems, which generally place considerable emphasis on cash, seemed satisfied that they are doing enough to ensure that their boards and senior management are not seriously misled about the effect of inflation, although, as noted below, competitors using fully-integrated CCA management accounting are sceptical.

Several companies emphasise the importance of CCA information when considering dividend policy, and a few believe this to be the only practical use of current cost information. Although CCA profits are one of the factors to be considered when fixing the dividend, they will only determine the maximum amount which a company may legally distribute where a company uses CCA for its statutory accounts. Nevertheless, now that directors are required to publish CCA figures, there is evidence that they will increasingly have regard to real earnings as one of the main factors in determining dividend policy and in ensuring that the capital base of a company is not eroded.(2) For those of the companies which consider maintenance of the capital base to be relevant to determining the dividend, the expected CCA cover for dividends varies between once and about three or four times covered.

The use of current cost information in pay negotiations was not widely favoured on the basis that the results are inadequately understood and, in several instances, are thought to have stimulated suspicion. A number of companies are however starting to educate their workforces by incorporating CCA information in their annual employee reports.

Companies said that the immediate scope for raising prices to restore profitability in businesses with poor returns at current cost is limited by competition, especially in international markets. A majority of the companies recognise that, in the longer term, the introduction of current cost adjustments integrated into the costing system for individual products is likely to increase either the size or the frequency of price rises. Only where a company holds a dominant market share did companies think that pricing action is likely to improve profitability in the shorter term. Two companies which do include current cost adjustments at product group level attribute the poor profit margins in a major market to underpricing by major competitors through their reliance on historic cost information. Correspondingly, there was some fear among companies that market share may be lost at a time when many are working below capacity if prices are raised on the basis of CCA information. Companies are also somewhat apprehensive of the stimulus to inflation and the effect on import penetration of CCA-induced price increases.

Companies believe that the use of CCA information will not significantly affect investment decisions except, as noted above, that businesses within a group showing the highest real return will tend to have first call on cash available for investment. Boards may also find it useful to compare investment with the CCA depreciation charge as an indication of whether a business is devoting adequate resources to renewing its capital.

A number of companies favouring management information at current cost feel that it may have an influence in two respects:

- charging cost of sales at replacement cost may impel firms to increase prices sooner than where consumption of stock is accounted for at cost on the basis of first in, first out;
- the closure, rundown, or divestment of activities showing an unsatisfactory rate of return may be accelerated.

The first of these is particularly relevant where products whose prices are based on a standard price-list include a commodity with a volatile market value.

Several companies make the point that the introduction of CCA accounts, which will reveal that profitability is less

(1) See the supplementary note on profitability and company finance.
(2) As noted in the article 'Dividend payments: some recent trends' in the March *Bulletin*, page 33.

than indicated by the historic cost accounts, could have an adverse effect on the morale of the management of divisions and subsidiaries. The weight of opinion, however, suggests that few managers are now under any illusion as to the performance of their business and, provided that the change is properly planned and accompanied by appropriate explanations and training, the switch to CCA is unlikely to damage morale.

Use of indices

The choice of appropriate indices and the method of revaluing assets are important for the determination of CCA profit. The majority of the companies use published indices, generally those issued by the Government Statistical Service (GSS), to compute the amount of the current cost adjustments in the annual accounts. Plant has almost always been revalued by reference to published indices for both management and annual accounts—although in certain cases professional valuations of buildings, or internal estimates of cost of plant, have been used when it has been considered that the application of a published index would give a misleading result, usually where large specialist items of plant are concerned. However, the cost of sales adjustment for the annual accounts has sometimes been calculated from the costing system or internal indices.

Those companies using CCA in their management accounts generally base the cost of sales adjustments in the management accounts on an internal index; in one or two cases, the information approximating to a cost of sales adjustment came directly from the costing system. Nevertheless, where the cost of sales adjustment is produced from the costing system, some companies used published indices in their annual accounts.

Certain companies have hitherto faced difficulties because the GSS indices have not been published in time for their monthly or annual accounts. This should no longer be a problem because the relevant statistics are now published monthly, but in case of difficulty the GSS will help by providing the necessary index numbers over the telephone.

Choice of asset lives

The estimation of the life of assets is as important as the choice of index when calculating the depreciation adjustment. A majority of companies retain the same asset lives in their current cost accounts as in the historic cost accounts, and have not continued to provide current cost depreciation on assets still in use after the end of their predetermined accounting life. Companies generally accept that this treatment is conceptually incorrect, but justify it on the practical ground that it would be confusing either to adopt different lives in the current than in the historic cost accounts, or to recalculate or to extend the life of assets in the historic cost accounts. The result is that these companies do not charge replacement cost depreciation on all of the assets in use. They argue, however, that the excessive depreciation which arises from using pre-set lives, which are generally shorter than the useful lives of assets concerned, offsets the underprovision from failure to depreciate written-down assets still in use.

Those companies that do use different asset lives in the current cost accounts generally also depreciate assets still in use which have reached the end of their historic accounting life. One company regularly reviews the expected life of plant; but the majority fix, and do not vary, the current cost life for specific items of plant. The current cost life they use is generally longer than the historic life, though not invariably. In two instances, companies which prepare detailed internal CCA accounts have lengthened historic lives in the light of the asset lives used in the current cost accounts.

Taxation

If accounting information is to be based on current costs, it could be argued that the tax charge should be based on similar concepts, and companies were asked whether they would welcome such a change.

The companies are generally sceptical about whether it will be practical in the foreseeable future to switch the corporation tax system on to a current cost basis. Nor do they expect that such a shift would result in a significant change in the total burden of taxation, although the incidence from company to company might show marked variation.

Most of the companies, however, appear broadly happy with the present system of company taxation, which incorporates 100% first-year allowances on investment in plant and machinery, 50% on industrial buildings, and relief for the increase in the historic cost balance-sheet value of stocks (subject to a 15% profits restriction). There was some concern about the position on clawback of stock relief where, for any reason, the value of stocks shown in the accounts falls. The proposal in the 1980 Finance Bill to allow deferral of a proportion of any liability to clawback for one year is aimed to help here.

The companies generally recognise that stock relief is unsatisfactory for the Inland Revenue, and they would regard an allowance based on the cost of sales adjustments as fair, provided that businesses are allowed to adopt an index appropriate to the type of stock they carry.

Companies which have had experience of working with the last in/first out method of stock valuation—those with extensive interests in the United States—tend to favour it as a practicable alternative to a cost of sales adjustment, particularly because it can be more easily integrated into the books and records.

Other points

The following further points arose in discussions with the companies.

Use of CCA in control of cash flow

Companies appear to focus to a greater extent than before on cash flow as a measure of performance, although the degree of emphasis varies markedly. Several firms find a sources and uses of funds statement based on the CCA accounts valuable in measuring the cash generated by operations. In such a statement, capital expenditure is grouped with the funds retained through provision for current cost depreciation, and only the real increase or reduction in the level of stocks and monetary working capital is included as a movement in funds. One or two firms pay considerable attention to the relationship between current cost depreciation and capital expenditure as an indication of whether their physical assets are being maintained. One company which does not use CCA in its management accounts sets its capital expenditure objective as a percentage of sales revenue, saving the need for adjustment for inflation when making year-to-year comparisons.

Replacement cost of assets
Several companies said that they are unlikely to replace certain categories of equipment or specialised buildings because it would be uneconomic to do so. These assets are usually large machines whose life can readily be prolonged through adaptation and rebuilding, or machines which have been purchased second-hand. In these circumstances, under CCA, companies may base their charges for depreciation on the estimated amount recoverable by the business from the assets' future use.

Intangible assets
One company drew attention to the lack of guidance in the standard on the valuation of intangible assets (for example, newspaper titles) which might form a significant part of the real worth of the business.

Fixed-asset records
Several firms said that the preparation of periodic CCA accounts is greatly facilitated by maintaining detailed fixed-asset records by computer at current cost, with the valuation being updated monthly through the application of a relevant index. One company has found the property register compiled as a result of the valuation work carried out for CCA to be of great practical and commercial value.

Specific industry points
Some points arose on the relevance of CCA to specific industries.

Construction (three companies interviewed). In general, construction and civil engineering are little affected by CCA since they deploy modest fixed assets, and their work in progress may largely be covered by progress and advance payments. The construction companies in the sample made the point that a substantial part of their fixed assets are purchased for specific contracts, are costed accordingly, and are normally funded by means of an advance payment from the customer; they consider it unreasonable to provide depreciation for these at replacement cost.

Housebuilding (two companies). Profits made on the sale of new houses represent in part a profit on building work, and in part a gain on the sale of land. One company with a housebuilding division considered that to charge land at replacement cost at the time of sale would exclude from the CCA accounts profits arising from skilful purchasing and dealing in land by the builder. SSAP16 and the accompanying guidance notes to some extent recognise this problem but do not offer a clear-cut practical solution.

Shipping (one company). Particular problems arise over the replacement cost of ships, whose market values often fluctuate widely with little relation to the cost of building them. Construction costs are also difficult to estimate because subsidies and preferential interest rates play a significant part in any package which a shipbuilder may offer to a prospective owner. Replacement costs can be of little relevance for certain long-term charters which are essentially financial transactions and will not necessarily be repeated.

Conclusion

While virtually all companies to which SSAP16 applies will be able to implement it in their annual financial statements by the required date, practice in relation to internal management accounts seems likely to continue to vary widely. A minority of companies in the sample already prepare CCA information accounts regularly for management, and a substantial number expect to do so in the future. The detail with which such information is prepared will, of course, vary from company to company. A significant number have no intention of using CCA for management purposes until it has become the primary basis for company accounts and will rely instead on the traditional historic cost and other measures of performance.

The following aspects of current cost accounting emerged as being particularly relevant to management accounts:

- CCA results can be useful when deciding dividends;
- the demonstration of a lower rate of return at current cost has led, or may lead, to greater pressure to run down or dispose of activities with an inadequate return;
- current cost results, or the current cost depreciation charges, are occasionally useful in determining the appropriate allocation of capital expenditure;
- prices are predominantly determined by market forces, but the inclusion of CCA adjustments in the estimated cost of producing goods may increase pressure on salesmen to obtain higher prices; this is particularly relevant when a company has a dominant market share.

While it is unlikely that the use of CCA information will have a marked effect on company policy in the shorter term, it is clearly of great importance that management should have inflation-adjusted figures available regularly in order that their perception of returns achieved in the company's principal activities is not distorted by reliance on misleading historic cost information.