Current cost accounting

This article analyses the accounts of some 250 major companies, prepared according to current cost and historic cost conventions, for the last three years.

Historic cost accounting generally overstates profitability—the average current cost pre-tax return on capital is around half the historic cost figure. Industries most affected are textiles, motors, paper and packaging and chemicals, while construction, engineering contracting and retailing are least affected. Post-tax returns on equity are reduced even more using current cost accounting.

Around half the companies studied have paid dividends that were not fully covered by current cost profits.

Introduction

In recent years, various articles in the *Bulletin* have discussed trends in the real profitability of industrial and commercial companies (ICCs).[1] These articles were based on national accounts data, and use aggregate figures for ICCs;[2] they do not use companies' own current cost (CC) adjustments. However, most major companies have by now produced two, and in some cases three, years' results on a CC basis under the Statement of Standard Accounting Practice No 16 (SSAP 16) introduced with effect from January 1980; their accounts, taken together, represent a substantial body of information on the impact of inflation on company results and on the effects on management decisions of CC accounting. This article discusses some findings of a recent study of the accounts of a sample of almost 250 major companies, most of which have turnover in excess of £100 million; in 1981 the total of their current cost capital employed was some £165 billion. The aim was to examine the impact of the SSAP 16 adjustments on corporate profitability, net earnings and dividend cover as reported on an historic cost (HC) basis, distinguishing where possible between different industrial sectors.

The findings of this study are not directly comparable with the estimates of company profitability derived from national accounts data. There are a number of obvious differences:

- the national accounts data exclude overseas activities, whereas the analysis described here is based upon the reported consolidated results of UK company groups, including where applicable overseas activities;
- profitability measures based on national accounts data exclude non-trading income, which is included by companies in their accounts;
- the national accounts figures make no allowance for the accelerated write-off of obsolete or redundant plant and machinery—such write-offs by companies in their accounts may have become increasingly significant in recent years;
- the companies included in this study are major listed companies, while the national accounts data seek to cover the whole corporate sector;
- differences arise between the financial information reported by companies and the data collected in the national accounts because of the different treatments of, *inter alia,* depreciation, taxation and extraordinary items (eg redundancy payments);
- the data do not cover identical time periods because company accounting periods are not uniform and it is impossible to aggregate company results according to precise calendar years.

These variations in approach give rise to different absolute levels of real profitability, but the trends identified in this study are generally consistent with the trends in real profitability calculated from national accounts data.

In preparing data for this analysis, the only adjustments made to companies' reported financial information have been to remove the effects of any prior-year deferred taxation adjustments following the changes in stock relief introduced by the *Finance Act* 1981; and to reverse, wherever possible, the effects on the HC accounts of any revaluations of fixed assets and of any additional depreciation in the cases of companies which adopt a modified HC convention.[3] The analysis covers the three years 1979–81; company results were aggregated on the basis of accounting periods most closely coinciding with calendar years. Approximately half of the companies reviewed chose not to publish comparable figures for 1979 in their 1980 CC statements; this was permitted by SSAP 16. Those companies whose real profitability was most depressed were perhaps more likely to choose not to

(1) See for example 'Profitability and company finance' in the June 1982 *Bulletin*.

(2) However, some work has been done on a sectoral breakdown of real profitability: see, N P Williams, *Influences on the profitability of twenty-two industrial sectors,* Bank of England Discussion Paper No 15, March 1981.

(3) However, in the majority of cases where companies have incorporated revaluations into their HC accounts, it has not been possible to identify the effects, if any, on capital employed or on the depreciation charge, and the results should be interpreted in this light.

publish CC results so the aggregates for 1979 may have a degree of upward bias. In addition, a small number of companies had not published their latest accounts when the study was completed; however, it is unlikely that these omissions materially affect the results for 1981.

Background to SSAP 16

After several years of discussion on the appropriate ways of accounting for inflation, including the Sandilands Report,[1] SSAP 16 was issued by the Accounting Standards Committee in March 1980. The standard was introduced for an initial three-year period and is effective for all accounting periods starting on or after 1 January 1980. The standard applies to almost all listed companies, and other large companies satisfying certain criteria of size are also affected.

It is estimated that some 5,500 companies (approximately 1% of all live companies registered in the United Kingdom) fall within its scope, although a significant number of the companies not required to comply with SSAP 16 are subsidiaries of companies which do comply.

This article does not attempt to review the arguments that have been advanced for and against the detailed structure of SSAP 16, but it may be useful to restate the fundamental principle underlying inflation accounting. It is generally accepted that the HC convention has failed to present a realistic view of a company's state of affairs in an inflationary climate, in that it has usually overstated both the profitability achieved by industry and the profits prudently available for distribution. A major purpose of CC accounting is to provide a more realistic measure of the profitability of a company's business, and to enable the efficiency with which managements of different companies use the assets entrusted to them to be compared more easily.

CC results for a particular year cannot strictly be compared with those of previous years if the purchasing power of the currency in which they are measured has changed. To overcome this problem SSAP 16 suggests that when comparing CC profits for a series of years, these should be expressed in units of constant value. For individual years, CC accounting is a practical and realistic way of adjusting the accounts of companies to provide for the maintenance of operating capacity in periods of inflation. It recognises that the true cost to a going concern of producing goods or providing services is the replacement cost of assets that are consumed in the process, rather than the original cost of the assets actually consumed. A company must maintain its real capital base, necessarily involving expenditure at current replacement costs, or its productive capacity will inevitably decline, unless it can make more efficient use of its assets or adopt improved production methods. These principles are not new to management. For example, in determining depreciation policies in the HC accounts, companies have long recognised that depreciation charges calculated on purely historic costs will not adequately provide for the essential replacement of fixed assets. To an extent this is reflected in managements' choices of HC depreciation rates which often bear little resemblance to expected asset lives.

To provide for the maintenance of the capital base, SSAP 16 requires the following adjustments to profits arrived at on a purely HC basis:

(a) *a depreciation adjustment* which, together with the HC depreciation charge, will write-off the current replacement cost of fixed assets (as stated in the CC balance sheet) over their expected useful lives;

(b) *a cost of sales adjustment* of an amount necessary to ensure that stocks consumed by the business are charged at the cost of replacement as at the date of consumption;

(c) *a monetary working capital adjustment* to provide for the additional funds needed to finance the increase in net trade debtors arising from inflation (or the corresponding gain where the business is a net recipient of trade credit);

(d) *a gearing adjustment* to reflect realised gains arising from inflation made by equity shareholders at the expense of lenders—ie that proportion of the adjustments (a) to (c) above which net borrowings bear to total net capital employed.

Adjustments (a) to (c) are made in arriving at CC operating profit; the gearing adjustment and interest charges (which will tend to offset each other) are deducted to show the CC profit before tax.

In addition to these adjustments to the profit and loss account, revaluations of fixed assets and stocks are made in the balance sheet. While these are entirely proper for the purpose of calculating the real profitability of a business, it is important to appreciate that, as with HC accounts, CC accounts do not necessarily reflect the realisable value of the underlying assets. For instance, the recent market capitalisation of companies in the sample amounted to no more than two-thirds of the net asset value in their CC accounts.

The above CC adjustments may also be used in management accounts. An earlier survey[2] on the use made of inflation-adjusted accounts for internal management purposes, carried out by the Bank in 1980 on an admittedly small sample of listed companies, indicated that 15 of the 40 companies approached used CC information either as the primary method of management accounting or in parallel with or to supplement historic cost management accounts; a further 9 companies intended to introduce regular CC accounting information for management purposes within the foreseeable future; the remaining 16 companies surveyed had no such intentions. It is to be hoped that in the intervening two years, experience of reporting under SSAP 16 will have led more companies to use CC accounting information in their management accounts. The analysis described in this article suggests

(1) *Inflation Accounting — Report of the Inflation Accounting Committee* (HM Stationery Office. Cmnd 6225, September 1975).
(2) See 'Inflation and management accounting' in the June 1980 *Bulletin*.

that few companies can afford to ignore the effects of current costs in assessing their real profitability and in determining the dividends which may be paid without impairing their operating capacity.

Analysis of sample accounts

The effect of these CC adjustments on various measures of performance of the companies in the sample group is now examined.

Return on capital employed

Table A compares CC and HC measures of profitability. The average return before interest payments and taxation on total capital employed, expressed in CC terms in accordance with the requirements of SSAP 16, is around half of the average return reported under the HC convention in each of the three years to 1981.

The level of real profitability reported by the non-oil companies in the sample is appreciably higher than the estimated rates of return on trading assets, based on the national accounts. National accounts data for non-North Sea ICCs have been revised since the June 1982 *Bulletin* article 'Profitability and company finance'; based on this revised data it is now estimated that the real rates of return on trading assets in the last three years were 5.4%, 4.0% and 3.3%, whereas the weighted average returns on capital employed for the companies in the sample are 8.2%, 7.4% and 7.5% respectively. As noted above there are variations in coverage and accounting treatment which explain these differences in the level of profitability according to the two measures, although the trend is similar. One difference is in asset lives where those shown in the published accounts of companies analysed are significantly shorter than assumed lives of fixed assets in the national accounts;[1] this difference could account for perhaps half of the discrepancy between the two measures of profitability.

Table A
Rates of return on capital employed[a]
Percentages

	1979		1980		1981	
	HC	CC	HC	CC	HC	CC
Arithmetic averages						
Motors	14.1	6.5	8.1	−0.5	8.1	2.2
Textiles	15.9	4.1	13.0	3.5	12.5	3.9
Packaging and paper	18.8	7.0	12.9	3.4	13.2	4.7
Metals	17.3	8.9	13.9	5.5	10.6	5.0
Mechanical engineering	16.6	6.3	14.5	5.8	12.7	5.3
Building materials	19.3	8.2	15.6	6.7	13.6	5.3
Chemicals	13.1	4.4	12.4	4.1	13.4	5.5
Other industrial materials	18.0	8.4	15.6	7.0	15.3	7.8
Brewers and distillers	15.6	7.1	14.1	6.8	14.7	8.2
Stores	19.6	11.4	16.2	8.5	15.5	9.2
Food manufacturing	16.8	8.4	17.0	8.6	17.2	9.3
Leisure	16.3	10.1	13.0	7.9	14.9	10.4
Contracting and construction	17.4	10.3	18.3	11.1	16.5	10.7
Electricals	20.9	10.9	21.5	13.2	18.6	10.8
Engineering contractors	20.6	14.1	19.9	13.6	18.8	13.1
Health and household products	20.6	8.5	20.2	9.4	26.4	13.9
Food retailing	18.2	10.7	22.9	13.4	22.8	14.4
Oils	27.3	13.3	25.9	13.9	26.9	15.7
All companies	18.0	8.7	16.5	8.1	15.2	8.1
Weighted averages[b]						
Non-oils	17.4	8.2	15.4	7.4	15.0	7.5
Oils	30.6	11.2	25.9	11.3	24.0	10.5
All companies	22.9	9.5	18.9	8.8	17.6	8.6

(a) Profit before interest charges and taxation as a percentage of end-year capital employed, excluding goodwill.

(b) The sum of operating profits of all companies in the sample divided by their total capital employed.

The decline in profitability appears to be less marked in CC terms than the HC trend. This may be partly because lower working capital adjustments were generally required in 1981 when there was a sharp deceleration in the rate of increase of the All Stocks Index.[2] Direct comparisons between years should nevertheless be treated with caution as it is possible that companies whose results were most adversely affected by CC adjustments may have chosen not to publish comparable data for years when SSAP 16 was not mandatory.

There is a wide dispersion in the performance of individual sectors, both in HC and CC terms. Sectors where the return on capital employed appears to be least affected by reporting under SSAP 16 include construction, engineering contracting and retailing. In these sectors, working capital requirements tend to be largely financed by customers or suppliers so that the cost of sales adjustment is offset by an opposite monetary working capital adjustment to leave a much reduced net working capital adjustment. It is also true that some companies in these sectors have low levels of total capital employed, and for them inflation adjustments will tend to have less impact on their HC results.

Industries where HC figures appear to give a particularly misleading picture of company profitability include textiles, where the CC return on capital employed averages about a quarter of the return expressed in HC terms, and motors, where an average HC return of around 8% is eliminated in 1980 and much reduced in 1981. The chemicals, mechanical engineering, metals, building materials and packaging and paper sectors also show substantially reduced rates of profitability when stated in CC terms, with many companies in these sectors reporting CC operating losses.

Return on equity

The average real return on equity funds after interest, gearing adjustment, taxation accruals, minority interests and extraordinary items are deducted, shows a very sharp decline between 1979 and 1981; and the gap between historic cost and current cost results appears to be widening. The average CC return was only a third of the HC return in 1979, and in the later years average HC returns on equity of 8%–9% are reduced to returns of only 1% or so in CC terms. The post-tax returns of companies in 1981 would have been worse but for the changes in stock relief introduced by the *Finance Act* 1981. The new form of stock relief applies only to increases in stock values due to higher prices whereas the old form of relief was based on a method which was affected by volume changes. It is clear that, with the substantial de-stocking which has taken place, many companies would have incurred higher taxation under the old form of stock relief.

(1) The average life of assets (buildings, vehicles, plant and machinery) shown in the HC accounts of the sample companies is around fifteen years. This compares with an average for similar assets of around fifty years assumed in the national accounts.

(2) The monthly index, published by the Department of Industry for the purpose of calculating stock relief, which measures the movements in the average price of stocks held by corporate and unincorporated businesses in the United Kingdom.

Table B
Rates of return on equity[a]

Percentages

	1979		1980		1981	
	HC	CC	HC	CC	HC	CC
Arithmetic averages						
Textiles	10.4	−1.4	−2.9	−9.6	−0.8	−6.9
Motors	13.1	5.1	−2.8	−9.6	−1.5	−6.4
Packaging and paper	15.9	3.2	0.7	−4.7	1.2	−5.9
Mechanical engineering	12.7	2.5	5.9	−1.9	2.3	−3.6
Metals	13.3	4.9	5.7	−1.0	3.8	−1.9
Chemicals	11.1	1.9	3.3	−2.9	5.2	−1.8
Building materials	16.7	4.4	10.6	1.6	7.7	−0.1
Other industrial materials	13.1	3.7	8.2	0.3	6.1	—
Brewers and distillers	12.6	4.2	10.2	3.2	10.2	3.8
Food manufacturing	14.7	4.4	12.6	2.5	12.5	4.2
Oils	30.0	10.2	28.3	8.0	20.4	4.4
Stores	16.6	8.4	11.6	4.0	10.8	4.7
Electricals	14.4	4.4	12.0	4.7	12.9	4.8
Leisure	12.9	6.3	5.9	1.4	10.4	5.5
Health and household products	15.3	2.6	11.8	1.7	20.0	7.1
Contracting and construction	15.5	7.5	17.3	9.3	13.5	7.4
Engineering contractors	17.3	8.8	14.7	8.1	14.6	8.4
Food retailing	22.6	11.7	18.0	8.6	19.5	10.2
All companies	15.3	4.9	9.3	1.1	8.8	1.6
Weighted averages[b]						
Non-oils	14.7	4.2	9.3	1.5	9.5	2.0
Oils	30.3	7.2	21.1	5.4	14.0	2.7
All companies	20.7	5.5	12.9	2.8	11.0	2.3

(a) Post-tax profits attributable to shareholders as a percentage of closing shareholders' funds, excluding goodwill.
(b) The sum of attributable profits of all companies in the sample divided by the total of their shareholders' funds.

The general level of real profitability (measured as the pre-tax return on current cost capital employed) appears to be much higher for the sample companies than in the national accounts data, whereas reported returns to the equity interests appear to be rather lower. Thus, while estimates based on the national accounts data indicate that real post-tax returns on equity for non-North Sea ICCs over the last three years were about 8%, 5% and 4%, the average returns for the companies analysed were 4%, 1½% and 2% respectively. The principal reason for the discrepancy is probably that the national accounts data assume that full utilisation is made of stock relief and capital allowances. In practice, a number of companies are unable to do this, so that total taxation accruals actually made by companies are higher. The Green Paper on Corporation Tax[1] estimated that unused tax reliefs and allowances carried forward, then standing at some £30 billion (excluding public corporations), are increasing by roughly £5 billion a year; these figures may be compared with the total yield from all taxes on company income of some £6.7 billion in 1980/81. A further reason for differences between the two analyses is that companies have reported their results under SSAP 16, whereas the statistics based on the national accounts assume a 'natural' gearing adjustment in arriving at the real post-tax return on equity.[2]

The much sharper drop in post-tax equity profitability between 1979 and 1980 when compared with the fall in pre-tax return on capital employed probably reflects the increased propensity of companies to charge redundancy payments and other closure costs as extraordinary items in recent years. It can be argued that, where business rationalisation costs secure higher labour productivity and the more efficient utilisation of the remaining trading assets in future years, such expenditure could be regarded in economic terms as capital in nature, except for instance where a complete operation is closed. In this latter case no direct benefit from greater utilization of trading assets is obtained and such expenditure might be more properly regarded as revenue in nature. Either way these charges represent an erosion of shareholders' funds; and in most cases clearly affect the liquidity of companies and their ability to service their capital.

A more obvious cause of the poor returns on equity prevailing in recent years is, of course, the high cost of borrowing. At the same time there has been a decline in profits at the operating level because industry and commerce has become less competitive and because of the general economic recession, and the combination of these factors has left a much smaller share of profits available for shareholders.

Those same sectors where pre-tax and interest returns are substantially affected by CC adjustments also display poor post-tax returns on equity. Motors and textiles typically show net losses, not only in CC terms, but also in HC terms, while mechanical engineering, metals, packaging and paper, and chemicals also show net losses in CC terms. Conversely, as might be expected, sectors which are least affected by CC adjustments at the operating level show better real returns on equity.

Current cost adjustments

The total CC adjustments to profits of all companies analysed are shown in Table C, expressed as a percentage of HC operating profits. The relative increase in CC operating profits from 56% of HC profits in 1979 to 65% in 1981 reflects the lower general level of price increases in later years; but the individual CC adjustments need to be examined more closely. The depreciation adjustment in particular has increased in importance over the last three

Table C
HC and CC profits[a]

Percentage of operating profits

	1979		1980		1981	
	HC	CC	HC	CC	HC	CC
Operating profits (HC)	100	100	100	100	100	100
CC adjustments:						
depreciation		−14		−16		−17
working capital[b]		−27		−20		−17
other[c]		− 2		− 2		− 1
Operating profits	100	56	100	62	100	65
Finance charges	−12	−12	−17	−17	−20	−20
Gearing adjustment		11		9		9
Pre-tax profits	88	55	83	54	80	54
Taxation	−28	−28	−37	−37	−35	−35
Post-tax profits	60	27	46	17	45	19
Minority interests and extraordinary items	− 6	− 5	− 5	− 3	− 8	− 7
Profits attributable to shareholders	54	22	41	14	37	12
Dividends	−12	−12	−14	−14	−14	−14
Retained profits	42	10	27	—	23	− 2

(a) Aggregation of all companies surveyed (HC operating profits = 100).
(b) Cost of sales and monetary working capital adjustments.
(c) Principally on disposals of fixed assets or the CC adjustments of associated companies.

(1) HM Stationery Office. Cmnd 8456, January 1982.
(2) Rates of return on equity incorporating an SSAP 16 gearing adjustment are likely to be lower than estimates incorporating a 'natural' gearing adjustment. (See June 1980 *Bulletin*, page 193.)

years, but probably because of the fall in total profits rather than any increase in the average age of fixed assets which, in CC accounts, would give rise to a higher depreciation adjustment. On the other hand, the working capital adjustments have become less important, even expressed as a proportion of declining profits, reflecting the much sharper reduction in the rate of increase of labour and material input costs to manufacturing industry, and also declining stock levels. The reasonably stable gearing adjustment over the three years is consistent with the more or less stable level of capital gearing during that time (Table D), although there is evidence that both the average capital gearing, and consequently the gearing adjustment, were marginally higher in 1981 because of increased net borrowings. This appears to support the observation in the June 1982 *Bulletin* that the underlying financial position of ICCs may not have improved much in 1981, especially when account is taken of the increase in the sterling value of foreign currency liabilities following the depreciation of sterling.

Table D
Capital gearing

Percentages

	1979	1980	1981
Debt/equity ratio(a): historic cost	35.1	34.6	35.1
current cost	25.5	25.1	26.8

(a) Defined as the ratio of total borrowings (including overdrafts *less* liquid funds) to shareholders' funds.

Dividend cover

While some 80% of dividends paid by the companies analysed were fully covered by HC profits in 1980 and 1981, only half of all companies in the sample covered their dividends in current cost terms (Table E). Out of the smaller sample of companies disclosing comparable figures for 1979, the proportion of companies reporting fully covered dividends in both HC and CC terms was higher, but again this may partly reflect a slight bias in the sample of companies disclosing current cost results when SSAP 16 was not mandatory, even though profits achieved in 1979 were generally better. In all three years, however, the average dividend cover calculated on CC profits attributable to shareholders is found to be less than half the cover based on HC profits.[1] A weighted average dividend cover, based on an aggregation of the profit and loss accounts of the companies analysed, shows dividend cover to have worsened in real terms from 1.8 in 1979 to 0.7 in 1981. While dividends paid were, in aggregate, fully covered by CC profits in 1979 and 1980, they were only partly covered by profits available in 1981.

Table E
Extent of dividend cover[a]

	1979		1980		1981	
	HC	CC	HC	CC	HC	CC
Dividend cover						
Average(b)	3.5	1.7	2.7	1.3	2.6	1.2
Weighted average(c)	4.5	1.8	2.9	1.0	2.5	0.7
Percentage of companies						
Fully covered(d)	94	63	79	51	81	48
Partly covered	5	15	7	15	5	16
Wholly uncovered	1	22	14	34	14	36
	100	100	100	100	100	100

(a) Profits available for distribution divided by dividends declared.
(b) Arithmetic mean of individual companies, taking the dividend cover of companies paying wholly uncovered dividends as 'nil'.
(c) The sum of total profits *less* losses divided by total dividends declared.
(d) Including a small proportion of companies which paid no dividends.

These calculated levels of dividend cover make no adjustment for cases where companies have insufficient corporation tax liabilities against which to offset the advance corporation tax payable when distributions are made. To the extent that this advance corporation tax cannot be recovered in the foreseeable future, and has not been written-off as part of the total tax charge, the real cost of paying a dividend would be that much higher.

Industrial sectors where the payment of dividends out of capital in CC terms appears to have been the rule rather than the exception include motors, metals, packaging and paper, textiles and, to a lesser extent mechanical engineering, chemicals and other industrial materials.

Without further injections of equity capital, the real operating capacity of companies which have paid uncovered dividends can be maintained only by further borrowings, as the increased capital gearing in certain sectors testifies. Conversely, those companies which have continued to pay dividends despite incurring real losses, and which have not been able to raise further equity or increase their borrowings, will necessarily have contracted their trading base. To the extent that these companies are in declining industries, the payment of dividends out of reserves may theoretically be justified on the grounds that the shareholders may be able to obtain a better return by reinvesting their capital elsewhere. But it is likely that directors will in practice have been more influenced by a concern to minimise the risk of any weakening in their share price, and thus of increased exposure to takeover, in circumstances in which, for many companies, market valuations have been materially below net asset value at replacement cost.

Conclusions

While experience so far with inflation-adjusted company accounts is generally limited to two or at most three years, there is now ample evidence of the effects of SSAP 16 on the reported results of major industrial companies.

- As measured by the return on capital employed, the profitability of companies on a CC basis is only half the apparent profitability suggested by the HC convention which overstates pre-tax profits and understates the value of the assets employed in a business.
- The post-tax return attributable to the equity interests of the sample in the last two years is almost eliminated when stated in CC terms, in sharp contrast to the situation revealed by HC accounting.

(1) All these averages may be overstated in absolute terms because some companies have declared dividends which are not only uncovered but which have been paid in spite of substantial losses; for the purposes of calculating an arithmetic mean, such companies have been taken to have nil dividend cover.

- While it is apparent that the profitability of major companies as measured both by the return on capital employed and by the return on equity has declined in 1980 and again in 1981 in HC terms, there are indications that in inflation-adjusted terms the declining trend may have been arrested in 1981.

- Whereas some 20% of sample companies have paid dividends not fully covered by earnings calculated on historic costs, under the current cost convention around half the companies have paid dividends wholly or partly out of reserves. The weighted average of CC post-tax profits of the sample of companies shows these were insufficient to cover dividends declared in 1981.

Looking at particular company sectors, it is noticeable that those for which HC accounting presents the most distorted description of their situation are those whose profits have tended to suffer most in the present world recession. This reflects, in particular, those companies' high working and fixed capital requirements. Whether or not management has been misled by these distortions remains a matter for conjecture.