

# CURRENT COST ACCOUNTING: IMPLICATIONS FOR THE DEFINITION AND MEASUREMENT OF CORPORATE INCOME

BY JOHN WALTON\*

This paper is in 7 sections. Section 1 gives as background a chronological account of the steps taken in the United Kingdom, from 1974 to late 1977, towards the development of a new system of accounting in company reports which would allow for the effect of changing costs and prices on the measurement of profit and of capital employed in the business. Section 2 discusses the main features of the system, known as current cost accounting, as it is seen in the United Kingdom. Section 3 surveys the relationship between current cost accounting and the national income and expenditure statistics, and the likely implications of the introduction of current cost accounting upon the quality of macro-economic statistics, including estimates of national and sector balance sheets. Section 4 describes some of the problems of implementing current cost accounting, particularly in special situations, and outlines the solutions which were proposed in the "Exposure Draft" published in 1976 by the accountancy profession in the United Kingdom. Section 5 considers the definition of distributable profit in relation to the need to maintain capital, considering the concept of gain, the system of valuing assets and liabilities, and the enterprise's capacity to take on additional debt as a means of financing its assets. Section 6 briefly surveys the implications for taxation, price control and price setting. Section 7 concludes by surveying the scene at the end of 1977 and by looking at likely future developments.

## 1. BACKGROUND

A Committee of Enquiry into inflation accounting was appointed by the United Kingdom government in January 1974 chaired by Mr (now Sir) Francis Sandilands, Chairman of the Commercial Union Assurance Company. Its report "Inflation Accounting" was published in September 1975 [21].

In November 1975, the Government stated [13] that it agreed with the Committee that company accounts should allow for the effects of inflation and that current cost accounting (CCA), by bringing out the effects of changes in costs and prices on the fixed assets and stocks (inventories) used in a business, could lead to a better understanding of the economic performance of companies; and endorsed the recommendation that the detailed practical problems should be examined urgently with a view to CCA becoming the future basis for company accounts. With the Government's agreement the accountancy profession established a Steering Group to consider further the practical and other issues involved, with a view to implementing CCA for accounting periods beginning after 24 December 1977, if that proved feasible.

The Government stated that it would consider whether guidance was necessary on the amount available for distribution to shareholders under the proposed

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accounting system. It would also be necessary to consider further the desirability of showing the effects of inflation on the capital invested by the enterprise, and of continuing to provide historical cost figures as a supplement to current cost figures, at least for a transitional period. The Government added that the Committee's recommendations on taxation and prices, which were independent of the main recommendations on company reports, would need further consideration. (Previously, in November 1974, the Chancellor of the Exchequer had introduced an interim system of "stock relief" affecting liability to corporation tax for accounting periods ending in 1973 and 1974.)

The "Inflation Accounting Steering Group" (IASG) was set up early in 1976 under the auspices of the accountancy profession's Accounting Standards Committee, under the chairmanship of Mr Douglas Morpeth. It is composed of 12 members—3 practising accountants, 4 accountants working in industry, the Professor of Accountancy at the London School of Economics, 2 members from the City, and 2 Government representatives including the head of the Government Accountancy Service, and has been assisted by 3 Advisers representing the nationalised industries, the Irish accountants and the Government Statistical Service. The author served in the latter capacity until June 1977. On 30 November 1976 the Accounting Standards Committee published an "Exposure Draft"—a draft, issued for consultation, of an accounting standard [2]. It was accompanied by a brief guide [15], a collection of background papers [16], and a manual of guidance [17] on the practical implications.

Following the recommendations of the Sandilands Committee, the Government Statistical Service has been producing regularly since April 1976 its own publication entitled "Price index numbers for current cost accounting". The sixth issue appeared in December 1977 [5]. It includes (a) industry-specific indices for capital expenditure on plant and machinery for 19 industries, by quarters back to 1956 and by months back to 1972, (b) industry-specific indices for stocks (inventories) covering some 75 industries, in many cases distinguishing between stocks held as materials and fuel and stocks of goods on hand for sale, going back by months to 1972, (c) about 100 indices for specific types of fixed assets, (d) an index of the cost of new construction, and (e) lists of over 600 other wholesale price indices which are available for specific commodities produced in, or imported into, the United Kingdom. The Government Statistical Service has also published a booklet [6] describing the indices available for 14 other countries covering about 80 percent by value of the United Kingdom's overseas direct investment. This was done at the request of IASG to assist companies preparing consolidated accounts on the current cost basis including the results for subsidiaries overseas. The information was made available by the generous co-operation of national statistical offices in the countries concerned.

The Exposure Draft proposed a timetable leading to the introduction of CCA for both companies and nationalized industries, in 3 stages, according to the size of company, for all but the smallest companies. The first stage, for listed companies and other large enterprises, would apply to accounting periods beginning on or after July 1, 1978 and the following stages to accounts periods beginning on or after January 1, 1979, and January 1, 1980 respectively.

On November 30, 1976 the Government reaffirmed [14] its support for the system of current cost accounting and its desire that this should become the basis for the preparation of company accounts as soon as practicable. Noting that it had been consulted by the accountancy profession in the course of preparing the Exposure Draft, the Government endorsed the approach which the profession had taken, and agreed that the accounting standard should apply to nationalized industries and other public trading entities, subject to any necessary adjustment to meet their special circumstances. The Government was giving separate consideration to the question of using current cost accounts for purposes of taxation and price control. At a conference in December 1976 the Secretary of State for Trade's speech referred to the desirability of taking account of changes in relative prices, and of producing a more reliable (even if imperfect) indicator of the real return on assets. He also expressed the view that CCA would encourage the reduction of costs and would lead to better investment decisions.

In January 1977, the Auditing Practices Committee (another sub-committee of the Accounting Standards Committee) issued its preliminary views on the auditing implications of ED 18 [4], asking for comments so that it could put considered views on behalf of auditors to IASG.

A press release by the Accounting Standards Committee on May 31, 1977 indicated that the comments on the Exposure Draft which had been examined so far pointed towards the desirability of deferring the implementation date from July 1, 1978 to January 1, 1979, of considering the possibility that all companies except small ones should introduce CCA at the same time, and of introducing CCA initially as an audited supplementary statement to the historical cost accounts for (say) two years and having a further period when the historical accounts were supplementary.

However, on July, 6 1977, a special general meeting of the Institute of Chartered Accountants in England and Wales (the largest of the 6 professional accountancy bodies sponsoring the Accounting Standards Committee) passed a resolution opposing the compulsory introduction of any form of current cost accounting. This resolution owed much to support from small practitioners. Following this the Accounting Standards Committee decided (i) to set up a small committee under Mr William Hyde to draw up simple interim guidelines for large companies wishing to introduce a form of CCA as a supplement to their main accounts on the historical cost basis, and (ii) that IASG should continue its studies of the shape of an eventual definitive system of CCA, including careful assessment of the comments received, with a view to proposing a revised draft standard as soon as possible.

The Hyde Report was published by the Accounting Standards Committee on November 4, 1977 [3]. It recommended that the published financial statements of companies listed on the Stock Exchange should include a prominent separate statement showing the financial results as amended by adjustments for depreciation, cost of sales and gearing, for all accounting periods *ending* on 31 December 1977 or later. The adjustments are described below. These guidelines were welcomed by the Stock Exchange and the Confederation of British Industry.

## 2. MAIN FEATURES OF CURRENT COST ACCOUNTING

### 2.1. *As in the Sandilands Report*

This summary of features refers to the recommendations of the Sandilands Committee; the main differences between these and the recommendations of the Exposure Draft are in the following section.

- (a) The system should replace historical cost accounts as the basis of the accounts in company reports.
- (b) The unit of measurement should remain the unit of currency (£s of the day), without revaluation to the relative prices of a common period.
- (c) It is a current value system of accounting as well as being a current cost system. (The term “value” is more appropriate when considering the balance-sheet; “cost” is appropriate when referring to the operating account).
- (d) The basis of valuing assets—called “value to the business” in the report—is “deprival value” rather than economic value (i.e. the present value of expected net revenue). Deprival value—a concept elaborated by Professor Bonbright (1937)—is the loss to the business in being deprived of the asset.<sup>1</sup> In principle it is calculated by reference to 3 possible bases of valuation—replacement cost, economic value, and net realisable value. In the usual case where economic value exceeds written down replacement cost, deprival value is taken as equal to written down replacement cost, since the loss which the company would suffer if deprived of the asset is no more than the cost of replacement. Otherwise it is the *higher* of economic value and net realisable value. Sandilands recommended that in practice the deprival value concept should be applied only to physical assets—fixed assets, land and stocks—and not to financial assets or liabilities.
- (e) The concept of income is related to gain after providing for the maintenance of assets at their value to the business (deprival value). The committee quoted Hicks’ definition [12] and adapted it to read “the maximum value which a company can distribute during the year, and still expect to be as well off at the end of the year as at the beginning”. Sandilands interpreted this by regarding the business as an *entity*—a going concern—rather than primarily looking at the value to the shareholder of his stake in the business. It therefore did not consider the “well-offness” of the shareholder except by relation to the marketable value of his shareholding and to the purchasing power of his present and expected future income stream; it rejected the notion that the change in the purchasing power of the assets held by the business attributable to the shareholders’ equity should be regarded as relevant to the calculation of periodic gain. The entity view, in effect, implies that the business has an independent net worth consisting of the excess of the value of its assets

<sup>1</sup>I am indebted to Professor Edey for the point that the concept can be traced back to early origins in the form of the term “reserve value”: the price at which the seller in an auction buys the good he is selling.

(less liabilities to third parties) over the value to the shareholder of his shareholding.

- (f) Sandilands considered that it was sufficient, and also adequate, to confine measurement of the maintenance of assets to physical assets, and its interpretation of the “well-offness” of the business is affected by this.
- (g) The total gain between opening and closing assets valued at their deprival value exceeds historical cost profit by the amount of revaluations to assets still held at the end of the period.
- (h) This total gain has 3 main elements—operating profit, which is the surplus of revenue over costs incurred in the period, valuing these when they involve the consumption of physical assets (fixed assets and stocks) at the deprival value of the assets; holding gains; and extraordinary gains. Holding gains have 2 elements (in effect Sandilands did not make much of this): the element which is realized in the sense that the gain is on an asset which is then “consumed” by being treated as a charge against sales revenue—this gain is the difference between historical cost and deprival value at the time of consumption (whether as stock or in the calculation of depreciation)—and the element which is not so realized.<sup>2</sup> Operating profit and the realized element of holding gain are in total broadly equivalent to profit on the historical cost basis.
- (i) In the case of plant and machinery (equipment), deprival value should be measured by adjusting historical cost by use of an official index of price changes relating to the industry in which the company is situated. The index would be constructed to reflect the average composition of purchases of plant and machinery by companies in the industry. The charge for depreciation in each year should still be based on the process of writing-down the value of the asset over its expected life, but using deprival value in each year. The accumulated depreciation charge, however, might not equal the asset’s replacement cost at the end of the write-down period because it excludes “backlog” depreciation—which is the difference between accumulated depreciation at the replacement cost of the end of the latest period and the sum of the depreciation charges at the replacement costs appropriate to past years. Backlog depreciation should not be a charge against current revenue.
- (j) In the case of stocks, Sandilands believed that companies would be well placed to make adjustments using data specific to them but, if not, adjustment could be made using the official industry-specific indices to adjust the historical cost of assets; where the accounting system does not permit the direct calculation of the current cost of materials consumed, an “averaging” method should be used to adjust in aggregate the historical cost of stock carry-in and stock carry-out approximately to current cost. It would be unnecessary to revalue stocks in the balance sheet, where they might still be shown at historical cost.

<sup>2</sup>Realization can be regarded, perhaps more precisely, as arising when a paper gain, plus the historical cost of the asset on which it is made, is transformed into cash, or into an asset—such as a book debt—the transformation of which into cash can be expected with “reasonable certainty”.

- (k) Land and buildings should be valued on the existing use basis, by an independent valuer when they form a material element of the company's assets, at three or five yearly intervals for non-property companies and annually for property companies. The use of indices was not regarded as a fruitful approach.

## 2.2. *As in the Exposure Draft*

The Exposure Draft (ED 18) adapted Sandilands in the following ways. In addition it formulated detailed rules for asset valuation and put forward proposals for dealing with a number of special cases. The Manual contained detailed suggestions on the accounting techniques which might be employed.

- (a) The profit and loss account—showing operating profit, interest, taxation, extraordinary items—should be closed by a balance called the “current cost profit or loss for the year” and should be followed by an appropriation account. This would open with the current cost profit and would then show (i) the amount of revaluation surpluses or deficits for the year (this term replacing “holding gains”), (ii) the amount appropriated by the directors to revaluation reserve, the net total of (i) and (ii), dividends, and the closing balance being a transfer to or from general reserve.
- (b) Directors should explain the basis of their reasons for the amounts appropriated to and from the revaluation reserve. To aid their decision the directors were given guidelines—in an appendix, not part of the proposed Accounting Standard—which were paraphrased as follows in the Brief Guide:

### *Group 1 leading to an increase in the amount appropriated*

- (i) Does the company need to finance a higher level of trade debtors?
- (ii) (For banks, in particular)—does the company need to finance a higher level of net monetary assets?
- (iii) Does the company need to provide for backlog depreciation, e.g. when operating a limited number of major assets with an irregular replacement cycle?
- (iv) Does the company wish to retain funds so as to maintain within the business a growth of the value of assets attributable to shareholders equivalent to maintaining their opening purchasing power?

### *Group 2 leading to a decrease in the amount appropriated*

- (i) Is the company's increased stock financed in whole or in part by an increase in trade creditors?
- (ii) Will the company finance the increased cost of replacing its fixed assets by increasing its borrowing while maintaining a reasonable debt/equity ratio?

In addition, if directors decided on an overall contraction of the business it might be appropriate to transfer from the amounts previously accumulated in the revaluation reserve to the appropriation account, thus increasing the amount available for distribution or added to general reserve. Per contra, the amount added to general reserve would be

available to finance growth of the productive capacity of the business from internal sources, as opposed to external sources such as new borrowing or new equity capital.

- (c) More refined methods of valuing physical assets were recommended, in preference to the use of official indices to adjust figures at original (historical) costs. Where indices are used to adjust the historical cost of plant and machinery, indices appropriate to asset type should be preferred to indices related to holding industries. Methods were proposed having the effect of defining replacement cost as the cost of replacing existing capacity, rather than as “reproduction cost”—the cost of reproducing the original asset.
- (d) There should be a supplementary statement showing the growth in the shareholders’ net equity interest (reflecting, of course, the current value of assets) during the year, by comparison with the growth which would be needed during the year in order to compensate for the “change in the value of money” during the year. The resulting “gain for the year after allowing for the change in the value of money” would be followed by the dividend and the gain after dividend. The gain before dividend would also be accompanied by an analysis of its counterpart in terms of monetary assets and liabilities. For these calculations the index of retail prices should be used. This proposal, which derived from current purchasing power accounting, was in effect an attempt to restate the “total gain” at current values, stemming from the CCA methods of asset valuation, into terms of a common unit of value, using for this purpose the general price level at the end of the accounting period.

Comments on ED 18 took two main forms:

- (a) It was too ambitious and should be simplified. These comments related both to methods of asset valuation (including the extent of choice that was permitted) and to elements of innovation in accounting practice which are occasioned by CCA but might well be needed also under the historical cost system—e.g. the treatment of deferred taxation and of leased assets. However, much of the apparent complexity of the Exposure Draft resulted from the need to establish procedures to deal with special cases (e.g. contract work in progress) which only affect a few companies. These elements might need to remain.
- (b) The appropriation account was too “subjective” (whatever that word may mean). There is a real difficulty here—the amount available for distribution, in the sense of the amount which should either be distributed or applied to internal finance of expansion of the scale of the business, is a figure of real interest but must depend on a number of factors which are difficult to accommodate within a straight-jacket of auditing and accounting rules; on the other hand, if the figure is allowed to depend on directors’ judgement using the guidelines, and probably giving differing weights to the various factors, there is too little uniformity in the figure for it to be useful as a basis for comparing performance between companies, or for one company over time, and for the

calculation by the stock market of earnings per share. Much depends on the contrast between economic valuation and replacement cost as the basis for valuing assets, the question of gearing (or leverage)—the proportion of assets financed by debt and by equity—and the adequacy of any distinction which is drawn between monetary working capital and other monetary liabilities. These are examined and their interrelationship demonstrated in section 5.

### 3. THE RELATIONSHIP TO NATIONAL ACCOUNTS STATISTICS

There is a close relationship between current cost operating profit and the contribution to net national product of the factor income of the enterprise sector. However, current cost operating profit for a company *group* including overseas subsidiaries would still be presented in consolidated form; the separation of the results of their overseas activities would be a matter for separate (optional) sub-division of the figures<sup>3</sup> and, without this, the figures in company accounts would have a different coverage from the estimates, derived from the production account, of the contribution of the enterprise sector to net domestic product. Similarly, the adjustment to historical cost profit to reach current cost profit, as it will appear in the accounts of an individual company, is closely parallel to the adjustments made at present in the national accounts by most countries which compile an income-based estimate of GDP.

#### 3.1. *Stocks*

The change in the book value of stocks, when on the FIFO convention, is at present adjusted to separate stock-building from stock appreciation.<sup>4</sup> The conceptual basis is just the same for the cost of sales adjustment, and the methods are similar. ED 18 defined operating profit (paragraph 129) as the surplus of revenue over current expenses, including in those expenses the cost of physical assets consumed at the time of their consumption, and defined (paragraph 118) “date of consumption” as the date at which stock or work in progress becomes specific to the requirements of a particular customer as a result of a contract, which is usually the date of delivery to a customer. In some cases it may be possible to value the various elements of the value of a product (materials, direct labour and overheads) at the rates appropriate to the time of delivery, and this procedure is of course valuable in constructing management accounts and in deciding what profit margins are, in a budget or price-setting context.

<sup>3</sup>Another discussion paper issued by the U.K. accountancy profession in 1975, “The Corporate Report” [1], envisaged amongst other things the “segmentation” of consolidated figures to cover industries and some overseas activities separately, but not on a standard basis of classification.

<sup>4</sup>Where the reported book value of stocks depends on some other convention, e.g. standard costs, the estimates of stock appreciation and stockbuilding, in combination, in effect reconstruct the change in book value at historical cost as it would be on the FIFO convention; there is little experience in the U.K. of stocks reported on the LIFO system, but it seems likely that the same point would still hold in respect of the combination of the estimates of stock-building and stock appreciation in the national accounts, when these are derived from commercial records using LIFO.

It will be apparent that CCA offers the prospect of a substantial improvement in the quality of the estimates of stock-building and of stock appreciation in the national accounts, which are at present done by estimation in aggregate, on uncertain presumptions about the movement in the value of stock and about the length of stock pipelines. The published company accounts would show the cost of sales adjustment for company accounting years, and CCA would also encourage companies to keep more sophisticated stock records. Some of the practical implications are examined in the next section. The effect will either be to establish stock records which will enable the current cost of stock consumed to be valued directly at the date of its consumption, or to enable adjustments to be applied to a system in which the basic records remain in terms of historical cost; in the latter case, however, it was envisaged that companies, in applying the averaging method for estimating the “cost of sales adjustment”, should value their stock more frequently than annually, e.g. quarterly, and in effect should estimate the length of the stock pipeline. It should become possible, therefore, to develop existing statistical inquiries so as to tap directly the estimates made by companies compiling CCA accounts.

### *3.2. Capital Consumption and Capital Stock*

The measurement of depreciation at replacement cost is also quite consistent with the concepts used by economic statisticians in estimating aggregate capital consumption at current prices [11] and [24]. Indeed the term current cost is already used to describe the basis of these estimates. The methods used for the aggregate estimates and for CCA are also substantially identical. The process of estimating, for an individual asset, its gross replacement cost, and of charging the appropriate proportion of its estimated service life as current cost depreciation, is the same as that employed in aggregate in the “perpetual inventory model” used in the national accounts [11]. Of course the estimates will still differ if the average asset life assumptions for the perpetual inventory model are not the same as the weighted average of the assumptions used by companies.

In the case of land and buildings, the deprival value basis of valuation was taken in ED 18 as the open market value for existing use plus acquisition costs (equal to net replacement cost); but when this could be ascertained, deprival value was taken as the open market value of the land plus the written down replacement cost of buildings. This seems consistent with the basis suggested by the U.N. guidelines for national and sector balance sheets [22]. Clearly the quality of information available would improve vastly.

As with inventories, the process by which the quality of the estimates of aggregate capital stock will be improved is through the availability of more suitable basic records. The estimates in published company accounts of the written down replacement cost of fixed assets will relate to a variety of accounting dates and may not distinguish assets held overseas, or provide a break-down by industry of assets held at home. The assumption used in commercial accounts about the apportionment of depreciation over an asset’s life, and about the expected life of the asset, may vary between companies, and may be set on the low side as a gesture towards “prudence”. Therefore the estimates in published

company accounts will perhaps be of only limited use to provide directly a benchmark for aggregate estimates, which would be used to check those derived from a perpetual inventory model—in just the same way as the estimates derived from a perpetual inventory model expressed at historical cost cannot easily be matched with those in published company accounts. (In the case of land and buildings, however, the estimates in published company accounts will provide completely new information in covering land as well as buildings, at least in total.)

To adjust its figures for the consumption of stock and of fixed assets from historical to current cost, a company could in principle collect the necessary information itself, but may prefer to use published price indices. The potential improvement in the quality of the basic records available to the national accounts compiler should therefore be set against the need to develop official price indices for use in CCA. The work would include an increase in the number of indicators, improvement of methods of allowing for specification change, and perhaps the estimation of weighting patterns appropriate on average to all firms in the industries holding the fixed assets or stocks. In the United Kingdom, where there is a system of detailed wholesale price indices, it has been possible to accommodate the effort without greatly adding to the numbers of staff needed.

#### 3.4. *Treatment of Revaluations*

The relationship between CCA and the national accounts is more complex once one leaves the production account. It is generally accepted that operating profit, even after deducting interest, is not always adequate as a proxy for the distributable surplus of a company; in effect this means that the distributable surplus must take account of the needs of the *individual enterprise* to maintain the monetary elements of its working capital (which are financial claims and as such do not much affect economy-wide aggregates), and should also take account of the possibilities of obtaining additional loan finance (which again would be a financial liability).

The revaluations of physical assets, which are part of the total gain during the year which emerges from the valuation process, may therefore be regarded to a greater or lesser degree as part of corporate “income”; they will be viewed in the light of other requirements for capital maintenance (in this sense including the maintenance of claims) and of other possibilities of financing the total of capital maintenance requirements through borrowing. There is no reason to suppose that any additional capital maintenance provisions of this kind, which would be added to or subtracted from operating surplus, whether determined by directors’ judgement or by accounting rules, would disappear in *aggregate for the whole of the enterprise sector*, since the aggregate of the adjustments made by the individual enterprises in respect of claims on other enterprises would not necessarily cancel out; nor is there any reason to suppose that the views of corporate entities on their needs to provide for the maintenance of claims outside the sector will in aggregate coincide with the views of those in the other sectors who own these claims or incur these liabilities.

This leads to the question whether there can be any common view as to the conceptual basis for determining to what extent capital gains should be regarded

as part of income. The question is interlinked with the methods used for asset valuation (see section 5), but for the moment I will consider it in relation to the deprival value basis for valuing physical assets, and the market value basis for valuing other assets. The U.N. guidelines for national and sector balance-sheets start with the existing production account and appropriation account—i.e. they accept the concept of net corporate saving as being after provision for the maintenance of physical assets at their replacement cost—and go on to use the familiar capital account (relating to physical assets) and financial transactions account. The link between the opening and closing balance-sheets, in which assets are valued at replacement cost (for physical assets) and market values (for marketable claims), is made possible by adding a reconciliation account to the flows shown in the capital and financial transactions accounts. The reconciliation account shows revaluations and also other differences between opening and closing balances (eg those due to migration of economic entities or to changes in the definitions of sector boundaries). This system is silent about the extent to which revaluations might be regarded as part of income and saving; it perpetuates the existing treatment in the national accounts which regards consumption financed by realised capital gains as part of dissaving.

One refinement to this classification question, using figures at the macro-economic level, is that put forward by Professor Eisner [9]. The capacity to consume is regarded as being influenced by a comprehensive measure of income, defined to include the excess of money capital gains over the amount needed to maintain, for the consumer, the command over goods and services (the purchasing power) of the assets which he owns. These amounts are called “net revaluations”. It is evident that these estimates, while following a practicable system of measurement using the consumer price index or other general price index, are related to the “equity” concept of income. The “equity” concept looks at the purchasing power of the assets, as valued, attributable to the shareholders, and regards any gain in excess of the amount which maintains purchasing power as income; it evidently assumes that assets are appropriately valued for this purpose. It is distinct from a measure of corporate distributable surplus based on the “entity” concept, which regards corporate income as the surplus available after provision for maintenance of the “substance of the business” as a going concern, irrespective of whether this measure of distributable surplus is or is not consistent with retaining within the business shareholders’ funds sufficient to maintain the purchasing power of the shareholders’ stake in the business. Possible measures following the “entity” concept are described in section 5.

Quite independently of the question how far revaluation surpluses should be treated as part of income, it may be useful to be able to express the complete set of accounts (the operating or production account through to the balance-sheet) as a time series in which figures are expressed at a constant price level. This question arises whether the accounts relate to economic aggregates or to individual enterprises. Such a set of revalued accounts would obviously differ from accounts for individual enterprises compiled on the current purchasing power system of accounting, because the figures are first expressed in terms of current values and current costs, allowing for changes in the relative prices of assets since their initial cost. The current purchasing power system, on the other hand, is a system of

adjusting figures initially expressed at historical cost to the general prices of a common period, using the consumer price index. This distinction was made in an article which drew on the CSO's evidence to the Sandilands Committee [7]. Once there is an operating account and a balance-sheet expressed at current values and at current costs, one can look for a second stage of adjustment to a common price level—e.g., in order to construct a time series of figures. Probably, for this second stage of adjustment of accounts on the current value basis, it will be sufficient to use a numeraire based on aggregate consumption levels. The consumer price index (in the UK called the retail prices index) was suggested in [7]; other authors have suggested use of the deflator for gross national product or for total final expenditure.

#### 4. SPECIAL SITUATIONS AND PROBLEMS OF IMPLEMENTATION

##### 4.1. *Banks*

The banks take the view that they—and presumably other financial institutions—have a need to maintain funds in their business out of their revenue in order to finance their assets, which are largely monetary. This is necessary so that the equity base can remain adequate in relation to the excess of assets over other liabilities. There is I think no dispute with the deprival value basis for assessing gain—this will lead to revaluations only in the case of certain assets—physical assets and marketable securities. The question is whether against the total gain—CCA operating profit plus any revaluation surpluses on physical assets—there should be set a provision, automatically regarded as a cost, for maintaining a suitable equity base; on one argument this should be treated analogously to the cost of sales adjustment on physical stock (and thus should be charged to operating profit rather than to revaluation surplus) on the basis that “money is the stock in trade”. The question therefore was should this provision be treated as a cost in arriving at profit or as appropriation of profit. A report of a special working group was published by the Steering Group in March 1977, so that the matter could be considered further in a wider forum. It set out the two opposing points of view without making a recommendation. Clearly banks are only an example of one end of the spectrum of bodies having different balance sheet structures, and there seem to be few grounds for according special treatment to the banks as such rather than on the basis of a generally applicable principle which takes account of a balance sheet structure. In the Hyde guidelines, when monetary assets exceed liabilities (other than the equity), the adjustment for gearing will become negative, so that “adjusted” profit will be smaller than operating profit.

##### 4.2. *Contract Work in Progress*

In essence the question is: what physical assets (inventories and work in progress) are needed to fulfill business which is specific to the requirements of a particular customer? The view taken in the Exposure Draft is that where a contract exists to produce for a particular customer, and the work in progress is not of the kind which would be embodied in a standard product, the date of

consumption of the stock and work in progress should be taken not as the date of delivery to the customer, but as the time when the material becomes specific to the contract—which is usually before completion and delivery. The effect is to treat such contract work in progress as a monetary asset, and to calculate operating profit on the costs ruling not at the date of delivery but at the dates when the material became specific to the requirements of the customer. This is an attempt to draw a distinction in a spectrum leading from construction work of a very long term, and a highly specific, nature (e.g. construction of a passenger ship or of a suspension bridge) to the production of standard items. A body representing contractors engaged in Government contracts would prefer a modification under which only the contract work in progress regarded as being financed by cash received in advance should be treated in this way—i.e. as a monetary asset; but this is subject to the difficulty that the flow of advance payments is not necessarily directly related to the added value as work progresses. This modification has been adopted, however, in the Hyde guidelines.

#### 4.3. *Technological Change*

ED 18 defined the gross current replacement cost of a fixed asset (and hence its net replacement cost) as the *lower* of (a) the cost that would have to be incurred to obtain and install at the date of valuation a substantially identical replacement asset in new condition (otherwise known as reproduction cost), and (b) the cost of a modern equivalent asset (paragraph 102). The cost of a “modern equivalent asset” is the gross current cost of a modern piece of plant and machinery (“modern alternative asset”) adjusted by any material differences, compared with an identical replacement, in (i) operating costs over its whole life, (ii) output capacity, provided that the additional output is usable by the company, and (iii) total expected useful life (paragraph 103); and it is regarded as appropriate in certain circumstances to consider the cost of a modern piece of machinery which has similar capacity to that of a group of existing assets or, more unusually, to consider the cost of a group of modern machines which would replace the capacity of one existing machine (paragraph 278).

This was a fairly sophisticated interpretation of how to implement the principle that replacement cost should be defined in relation to the existing productive capacity—e.g. as put forward by the Securities and Exchange Commission in the U.S.A. It was, however, criticized as difficult to apply in practice. Of course, there will be substantial practical problems in applying the prudential test of paragraph 102 in certain circumstances—e.g. a telecommunications network. It involves to some extent looking into the future—and this is frequently said to be impracticable for accounting purposes; e.g. it is not regarded as practicable in usual circumstances to assess the future revenue so as to value an asset according to its economic value. But to assess differences in likely operating costs, between existing machines and modern alternative machines, is perhaps less fraught with difficulty.

Where official price indices are used to estimate gross current replacement cost, they will provide in principle an estimate of the cost of the identical replacement, i.e. reproduction cost—and indeed may often provide the only

practicable means of obtaining such an estimate. Official price indices set out to measure changes in the average or total price of a collection of goods of unchanged specification. A description of the methods used in seeking to achieve this aim is set out in the Background Papers to ED 18 [16]. No. 3.

#### 4.4. *Asset Lives*

ED 18 was criticized for its alleged subjectivity or approximation. But depreciation has always been an approximate process. Even if the aim is regarded as only to recoup the historical cost of an asset, the matching of this cost by instalments against revenue depends on the assumptions being realistic on the asset's life and on the apportionment of the cost over its life. On grounds of commercial prudence, the assumed asset lives have tended to be shorter than actual service lives. With the onset of inflation, this tendency has been accentuated—perhaps beyond the bounds of “prudence”—becoming in effect a kind of proxy correction for failure to take into account increases in replacement costs. In the estimates of aggregate capital stock compiled in the United Kingdom [11] account is taken of information—admittedly fragmentary—on the actual lives of assets when they are retired. They are about twice those commonly used for commercial depreciation. For instance, the Ryder Report on British Leyland [20] reported that about half of the machines in use, even valued at gross historical cost, had been fully written off.

Of course, the expected lives of assets can only be estimated, and it is no doubt correct for an individual enterprise to err on the side of prudence. ED 18 recommended, however, that a review of asset lives should be regularly undertaken on a consistent basis so that the depreciation charge is realistic in relation to the expected life of the asset (paragraph 10). The effect would almost certainly be to limit the amount of additional depreciation, particularly where the volume of assets has been expanding.

The Manual accompanying ED 18 [17] gives some guidance on how to set up a plant register (Chapter 15). This is often a big task—an initial investment in CCA—and will pose problems on how assets should be classified (a) into groups with common technical characteristics affecting the replacement cost, and (b) into groups or separate elements with common expected service lives. Once the register or inventory of plant is set up, it will generate information on the ages of plant being retired, which will provide some clues as to the likely eventual lives of plant being installed or at present in use.

The compilation of plant registers would of course do much to improve the “infrastructure” of the basic information on which estimates in aggregate of capital stock can be based for the national accounts.

The process of compiling accounting entries for the revaluation reserve in effect involves making a distinction between historical cost depreciation and replacement cost depreciation (see the analysis of the equity on the liabilities side of the balance sheets set out in Appendix 1 of this paper). On the approach in the Hyde guidelines to the question of measuring distributable surplus, the additional depreciation would be shown separately and prominently, since this element of the revaluation surplus is “realized”. If the assumed asset lives are extended, the

extended life presumably has to apply also to the calculation of historical cost depreciation which underlies any figure of additional depreciation.

#### 4.5. *Stock Records and Stock Valuation*

The valuing of materials used at the date of their consumption—if it is to be done directly—makes it necessary to have records of stock which are organized in terms of units of quantity; and it is this process which the author understands to underlie a system of “standard costing”. CCA should therefore give an impetus to standard costing [18]. (However, when the usage at current cost of materials is estimated directly, an estimate of the cost of wastage in stock must be added—see ED 18, paragraph 181.) The traditional system, on the other hand, uses the value of stock, as determined by a periodic physical count or check, as the basis for determining the historical cost of stock consumed, using the equation that the amount of consumption (including the amount of wastage) equals carry-in plus purchases less carry-out. In the United Kingdom “historical cost” almost always means following the “first in, first out” convention, under which the latest purchases are those assumed to be in stock; and of course stock is marked down to current market value when this falls short of FIFO costs. Both these processes seem to necessitate having some degree of detail about the composition of purchases in the period leading up to the date of the stock count, even for historical cost accounts.

When the basic records remain at historical cost, the “averaging method” can be used. This is explained in Appendix 3 to ED 18, and in Chapter 8 of the Manual. It is usually (but not necessarily) combined with use of an official price index to revalue the stock. It can be applied to all the stock, or to the total of materials, of work in progress, and of finished goods taken separately, or to subdivisions of these categories. It involves determining the length of the stock pipeline at the date of the stock count. ED 18 was not very specific about how this is to be done, but in the case of materials, whenever separate quarterly figures of purchases are available, it will usually be sufficient to divide the historical cost of stock by the historical cost of purchases to obtain an estimate of the number of months in stock. The date (on average) of the “index appropriate to the FIFO value” can then be determined by taking half of the length of the stock pipeline. Usually this can be taken to the nearest half-month. The index appropriate to the period for which the current cost of consumption is being estimated is then calculated either by averaging the opening and closing indices, or by calculating a simple average of the monthly values during the period. On the revalued basis, the closing less opening stock provides an estimate of the value of the physical increase of stock expressed at the values appropriate to the period, i.e. of stock-building at current values. Beyond estimation of the length of the pipeline covered by the FIFO values of stock, the only problems with this method are (a) possible inaccuracy when stock volumes have not changed at a steady rate in the period—probably not serious when quarterly figures of stock are available—and (b) the possibility that the official index is unrepresentative of the pattern of stock held by a particular company—perhaps serious when there is a major commodity with volatile price movements which is held as a main item of stock—and (c) the

need, at least in principle, to allow for order/delivery lags when using indices which relate to the prices at which orders are placed—see paragraph 57 of the introduction to PINCCA [5].

There is however a problem with the revaluation to current cost of figures for work in progress compiled on the historical cost basis. There are no separate price indices for work in progress. PINCCA suggests using a simple average of the indices for finished goods and for raw materials.

#### 4.6. *The entrepreneurial element of purchases*

Profit is affected by “good buying” in the sense of timing purchases skilfully but the Sandilands version of CCA operating profit is not, leaving the effects of “good buying” as part of holding gain. If the provision for maintenance of the cost of a constant volume of stock is to be appropriated, in whole or in part, to a revaluation reserve, it seems incorrect to include in this provision the effects of successful (or unsuccessful) buying decisions, viz. purchasing at specially favourable prices, lengthening the stock pipeline in correct anticipation of a price rise, or shortening it in correct anticipation of a price fall. ED 18 attempted to cover this under the heading “inclusion of certain revaluation surpluses and deficits in the profit and loss account” (paragraphs 299 to 302). Not surprisingly the representatives of the auditors were worried about this, in particular the proposal for dealing with purchases representing a significant departure from the normal buying pattern. They regarded it as essential for the auditor to arrange with his client a suitably unambiguous procedure which identifies all purchases which qualify for the proposed special treatment; this would include the need for records showing that purchases were regarded as being in the category *before* the outcome was known. It nevertheless seems important that these provisions should remain, since in many cases incentive payments to management are based on profit on the basis that profit is affected by “good buying”.

#### 4.7. *Historical Summary*

The Sandilands Committee envisaged that the ten-year summary of figures, which usually accompanies accounts for the latest year, having been expressed in terms of current values or current cost, should not be further adjusted into terms of a common price level (apart from dividends). The Report pointed out that many of these figures could however be accompanied by ratios, e.g. the rate of return (operating profit to capital employed) which would abstract from the effects of inflation. ED 18 (paragraph 98) also proposed that the ten-year summary (and the corresponding figures for the previous year which are given throughout the accounts) should be those shown in the annual accounts for the years in question; any adjustments for changes in prices should be shown separately. The problem of the transition from historical cost to current cost should be dealt with by showing figures on both bases for the first year for which current cost figures were shown.

Paper No. 19 in the Background Papers to ED 18 [16] surveys the problems and concludes that the updating of figures in the historical summary for changes in the purchasing power of the pound is not generally recommended. (The term “update”—deriving from “current purchasing power” accounting, which

envisages use of a general price index—means expressing figures at the price level of the end of the latest accounting period.) This conclusion is therefore compatible with that of Cowley [7]. It is undeniable that use of a general price index as numeraire for expressing current value figures at a common price level will have its problems—e.g. it will probably be inappropriate for turnover and generally the revalued figures will not express the operating account in volume terms. Moreover, there would be difficulties with consolidated figures covering the results of overseas subsidiaries, given that conventionally these are “translated” into the currency of the parent company using the exchange rates ruling at the time of undertaking the transactions or of striking the balances.

## 5. CAPITAL MAINTENANCE AND THE DEFINITION OF DISTRIBUTABLE PROFIT<sup>5</sup>

### 5.1. *Corporate Income Viewed as the Increment to Wealth*

The Hicksian concept of income—being as “well off” at the end of the period as at the beginning—is not foreign to the accounting concept of income, which has always viewed corporate income as the growth of assets attributable to the owners of a business. The essence of the problem is how do you measure “well offness”, and from whose point of view. Sandilands considered it primarily from the point of view of a business as a going concern and adopted “deprival value” as the basis of valuation for physical assets.

“Deprival value” takes the supply price of a material or of a machine (its replacement cost) whenever—as is usual— it falls short of the demand price, which is related to its earning capacity. It is therefore a “prudent” method of valuation. The surplus on operations is therefore measured after providing for the use of materials and for the using up of depreciating assets valued at their deprival value; and the surpluses generated in the balance sheet by revaluing the unused portion of the assets, and by revaluing non-depreciating assets, are regarded as part of the “substance of the business” and not as current revenue available for distribution.

This can be compared with the effect of historical cost accounting in a period of generally stable prices. The system sets aside funds to allow for the using up of depreciating assets valued at their cost. It thus protects the money value of the shareholders’ investment, provided that a profit is made and that the profit sets the limit to what is distributed. If we consider the possibility of technical advance combined with generally stable prices, this system is “prudent”, because the capital cost of the revenue earning capacity of replacement assets will tend to fall. In addition “prudence” has led to expected asset lives being set if anything on the short side. The system does nothing, however, to provide for the possible effects of changes in *relative* prices on replacement costs, as may happen even if the general price level is stable.

<sup>5</sup>This section is an updated version of a talk given in February 1977 to the London branch of the Society of Business Economists. The original version was published in [23].

If general prices are stable but the replacement cost of a depreciating asset increases, the historical cost system of accounting could well protect the money value of shareholders' capital, but would not necessarily provide funds for maintaining the business as a going concern. Therefore, only if both general and relative prices are stable can the historical accounting system protect shareholders' capital and also provide for the maintenance of the business as a going concern. The requirement that both general and relative prices should be stable has led to the divergence between the current purchasing power (CPP) and current cost accounting (CCA) schools of thought, in their views about how to adapt the accounting system to allow for changing prices.

The CPP man believes that relative price changes are unimportant so an index of changes in the general price level will achieve rough justice in providing for capital maintenance; it is most important to have a measure of the maintenance of the shareholders' "well offness". The CPP system obviously provides a useful yardstick of this—which can be regarded as setting one objective of performance. Equally it plainly fails to ensure achievement of this objective, when relative price changes are important, because it would then fail to achieve adequate provision from current revenue for the maintenance of the business as a going concern. It is however argued that the accounting system need not seek to compensate for the effect of relative price changes, for the sake of simplicity and to aid the mobility of capital—see, for instance, Fabricant [10].

In providing for the maintenance of the *physical assets* of the business, the CCA system as in Sandilands treats the maintenance of physical assets wholly as a charge on revenue, at the expense of possible distributions to shareholders, irrespective of the possibility of additional borrowing. Moreover, the interest charge is treated wholly as a deduction from operating profit, even though in money terms the assets in which borrowed funds are invested generate realized or unrealized holding gains as well as operating profit. The effect might therefore be to reduce gearing, by increasing the proportion of assets—as valued according to the deprival value criterion—which is financed by shareholders' funds, as opposed to borrowing.

On the other hand the Sandilands system does not resolve the problem of monetary working capital; the typical manufacturing company will probably have an excess of monetary assets (e.g. trade debtors) over short term monetary liabilities (e.g. trade creditors) and in considering distribution policy there will be a need to provide for maintaining the monetary working capital which is associated with a given volume of business, at a time when selling prices are increasing. In the Sandilands system, this is something to be taken into account in considering distributions, but not to be *measured* as a cost.

It seems undeniable that unless economic valuation is adopted the *asset* side of the balance sheet should be valued as CCA has it—that is taking physical assets and marketable securities at their deprival value and other assets at their money value. If there is a *need* to provide from internal funds for a future increase in the money value of other assets such as trade debtors, stemming from inflation rather than from an increase in the volume of business, it is a matter to be taken into account when deciding how much of the operating profit can be distributed. Equally, there may be a *possibility* of additional borrowing, given that the

proportion of physical assets financed by borrowing rather than by shareholders' capital might otherwise decline. This can also be taken into account in deciding distributions.

The critical question is whether these needs and possibilities can be *measured*. After taking account of the need to provide for an increase in monetary working capital and for the possibility of increases in debt, can a distributable surplus be determined and measured in a manner which is verifiable and subject to audit? Note again that the historical cost system only provides a measure of this kind when both general and relative prices are stable. The question of measuring distributable surplus is of course bound up with the question of capital maintenance, but before going on to that I will consider whether assets should be valued at their "economic" value, since this bears critically on capital maintenance through consideration of debt capacity.

## 5.2. *Assets at Economic or at Deprival Value*

"Deprival value" as defined by Sandilands only differs from money value in the case of physical assets and marketable securities. In contrast, economic value, which looks ahead to the expected future stream of receipts and payments, would differ from money value right across the balance sheet. For a thorough discussion of this subject, see Edey [8] and Perrin [19]. On a system of valuation using economic value, therefore, all monetary assets and liabilities will change in value from year to year. CCA does take account of changes in the value of certain monetary assets, such as marketable securities, which are influenced by changes in the market's expectations.

However, a full economic value system would take account of changes in management's own expectations of the future stream of receipts or of payments, which affect the present value of other monetary assets and liabilities, e.g. borrowing from banks. Such a system would therefore regard distributable surplus on this basis. Thus gains generated from holding stocks or on the undepreciated portion of fixed assets (at their present value) would be part of the pool of revenue available for distribution. The pool would also include changes in the present value of monetary liabilities, which might differ from face value particularly in the case of long-term liabilities. In this sense, therefore, there may well be a "gain" on monetary liabilities.

However, as Perrin has pointed out, the economic value system is not suitable for the measurement and audit of periodic income (as opposed to income taken over the lifetime of an asset), because of a different depreciation model and absence of foreknowledge of future cash flows. The question is whether there is some surrogate of economic valuation which is? There are four variants of the CCA system which claim to recognize a gain or loss on monetary items—but all four look at a valuation system for assets based on the deprival value concept, and extend it by adding an assessment of debt capacity which is *capital* based (not income based, as under the economic valuation system).

It may be worth digressing to consider why the economic value of a collection of assets will usually exceed the sum of their deprival values. One obvious reason is imperfect competition. Even if competition does operate to bring the supply

price of an individual asset (e.g. plant or equipment) into relation to the demand price at the margin, there may well be an excess (as Perrin has pointed out) of the economic value of a collection of physical assets, combined with the input of managerial techniques, over the sum of their deprival values; the collection of assets can generate gains (when measurement is by economic value) in excess of the cost of servicing the capital associated with the sum of the costs of replacing the machines individually. This is an increment of “goodwill”—which is usually only measured in the market place and which is classified as an intangible asset. Since increments of goodwill are not regularly measured, they cannot be regarded as part of periodic income.

On the other hand, there is another point which may support the opposite view and which will become important when we consider the possible distribution of holding gains. How far should such gains be regarded as “income”? Using the deprival concept of value, the unrealized holding gain on the undepreciated portion of fixed assets in any particular year will be associated with a change in the supply price (replacement cost) in the same year. On the economic valuation system, the gains would I think be associated with changes in *expectations* regarding the future supply price of the assets. The deprival value criterion may therefore generate unrealized “holding” gains or losses in a particular year which are not really associated with changes in earning capacity taken over a longer period of time. Plainly this is applicable to property companies.

### 5.3. *Capital Maintenance and Debt Capacity*

There is a detailed survey of capital maintenance in relation to debt capacity in Background Paper No. 18 to ED 18 [16]. There are two things to consider: what are the *possibilities* of raising additional debt, and what are the *needs* to retain earned surpluses to finance trade debtors and other monetary assets. Clearly the CCAB “ideal” system, the Gibbs system and the Godley system (referred to in [16]) are all concerned with the distribution of holding gains and with the question whether a measure of debt capacity should be taken into the computation of periodic income. All, I think, accept deprival value as the concept which will determine the increment to the value of assets. However, in their approach to monetary liabilities they differ both in philosophy and in measurement.

The CCAB “ideal” system, which derives from CPP, continues to recognize a gain on monetary liabilities. It uses a capital based approach to the measurement of debt capacity, and assesses the “gain” by relation to movements in a general price index. Let us suppose that the general price index has moved in the same way as the average of the increases in the values of physical assets. In these circumstances, the *needs* for retention and the *possibilities* for additional borrowing would all be swept into the same calculation. It can be shown that the effect of using the same index, both to revalue monetary assets and liabilities and to calculate the holding gains on physical assets, is to produce a distributable surplus, which if fully distributed, leaves the opening gearing ratio unchanged in the closing balance sheet. However, when the average of the deprival values moves in

a different proportion to the general price index, this situation no longer holds, and the gearing ratio will be affected in an unsystematic manner. The outcome will depend on the opening gearing and on the difference between the price changes of physical assets and general price changes.

Godley concentrates on the gearing ratio and says in effect: look at the total holding gains and adjust their sources of finance so that, when you have made your distribution, the accumulated fund of holding gains at the closing date is financed (by borrowing and by shareholders' funds) in the same proportions as at the opening date. This is equivalent to transferring into distributable surplus what might be called a "gain" on opening monetary liabilities, which has been calculated by reference to the price change appropriate to the physical assets, rather than by reference to the change in the general price index. The system deals in this way with the *possibilities* of additional borrowing, by assuming that a neutral position is one in which the opening gearing ratio is unchanged at the end of the accounting period. It does not however deduct anything from the distributable surplus to take account of the need to maintain monetary working capital at a time when prices are increasing.

In my view the Gibbs system is the most promising of the three; it is certainly the most sophisticated. But there are still problems with it. I think that Gibbs first of all addresses himself to the "needs" question—monetary working capital, in particular trade debtors less trade creditors, will *need* to increase when there is inflation, leading to increases of selling prices and of costs. He says that this should be regarded as a charge on operating profits—just as the maintenance of physical stock at current cost is a charge, so is the increase in trade debtors less creditors. The charge is therefore calculated using specific price indices—probably these would reflect selling prices for debtors and buying prices (as for stock) for creditors. This is the Gibbs adjusted version of operating profit, which will be smaller than Sandilands operating profit when trade debtors exceed trade creditors, but larger when (as in the famous supermarket case) trade creditors exceed trade debtors.

On *possibilities* for borrowing, Gibbs looks at other monetary liabilities including evidently long term borrowing but also including all bank overdrafts. He follows Godley in applying the opening gearing ratio criterion, which is equivalent to calculating a gain on these monetary liabilities by reference to the average of the change in the prices of physical assets and of the price changes appropriate to trade debtors etc. The gain is measured by applying this price change to the opening level of the monetary liabilities. This leads Gibbs to a new figure which he calls "combined" profit and regards as the appropriate *measure* of distributable surplus. It will of course usually be larger than operating profit.

Now for the difficulties. There seem to me to be two important ones. The first, set out in Background Paper No. 18, is how do you distinguish between *monetary working capital* considered as part of the "substance of the business" (the needs element) and the *sources of finance* of the substance of the business (the "possibilities of borrowing" element). The Gibbs proposal puts all bank overdrafts into the latter element, even though usually bank overdrafts are often set against monetary assets and other liabilities.

The second difficulty does not appear to be recognized as such in Background Paper No. 18, but nevertheless it seems to me the fundamental difficulty. The Background Paper describes combined profit as an indicator of the “maximum distribution possible without reducing the assets employed in the business or increasing the balance sheet gearing”, and says that this involves the assumption that the net revenue contribution of assets will rise in proportion to the rise in the value of the assets to the business in the Sandilands sense and thus will be available to service additional borrowing at least up to the former gearing ratio.

The Background Paper indicates that this seems a reasonable assumption in view of the fact that “value to the business” must not exceed economic value (or net realisable value if higher). I am not sure that the assumption is reasonable. It seems to me to involve looking into the *future* income and cost streams associated with additional borrowing—after all it amounts to “borrowing in order to pay the dividend”—and hence it seems to be taking us straight into the question of the use of economic value as the basis of valuation. I am not sure that it is sufficient to rest on the assumption (which will not be tested in most cases) that economic value will exceed deprival value. This has to be true incrementally as well as on average. Another way of putting this is that one looks at income gearing after first looking at capital gearing. But I ask—how does one measure income gearing, in an incremental sense, i.e. the increment of future receipts associated with the increment of future payments?

Let us remember that on this system we are willing to borrow in order to pay our dividend up to the point where capital gearing remains unchanged. If we add income gearing as a further constraint, we presumably take incremental revenue of the borrowed funds as being associated with the average revenue obtained from all existing assets—for the borrowing is used to finance the dividend and will not by itself lead to any addition to assets. The cost of the borrowing may, however, exceed the average cost of existing long term debt.

A fourth possibility, a variant of the Godley and Gibbs systems, would be to restrict the amount of the revaluation surplus, regarded as ranking for apportionment between a part needed within the business (i.e. the part assumed to be financed by equity) and a part available for distribution (because financed by borrowing), to what has been “realized” as part of sales revenue. The realized element of the revaluation surplus is the total of additional depreciation, i.e. the excess of replacement cost depreciation over historical cost depreciation, and of the cost of sales adjustment. All unrealized revaluation surpluses would then be excluded from any figure of the surplus in the year regarded as distributable, and these unrealized revaluation surpluses would be taken en bloc to revaluation reserve within shareholders’ equity on the liabilities side of the balance sheet. This treatment would deal with the problem mentioned above of erratic changes in the value given to certain assets such as property; but it can be held that if the valuations given to assets are adequate there is no reason to regard an unrealized surplus as being of lower quality than a realized one.

This variant has been adopted in the Hyde guidelines [3]. Since the revaluation surpluses, or holding gains, arise on non-monetary assets, the measure of gearing used relates to the financing of the total of the non-monetary assets,

rather than of all assets. The gearing ratio is therefore the proportion of *net* monetary liabilities to the total of these and of the equity (or—what is the same thing—to the total of non-monetary assets). This treatment enables the situation where there are net monetary liabilities to be distinguished from the situation where there are net monetary assets (as in the case of banks and some other financial institutions). Where there are net monetary liabilities the gearing ratio as thus defined is smaller than if it were taken as the ratio of total external liabilities to the total of all assets. The realized revaluation surpluses are apportioned into distributable and non-distributable elements according to the average of the opening and closing gearing ratios, taking this definition. The distributable element is the part of the realized revaluation surpluses which is regarded as being externally financed.

Where there are net monetary assets, the guidelines propose that an additional charge against profit should be calculated by applying an appropriate index to the average of the opening and closing balances of the net monetary assets. This can perhaps be regarded as a proxy capital maintenance provision, reflecting the need to retain funds within the business when there is inflation.

The various proposals are illustrated in Appendix 2 on the basis of a hypothetical set of figures. The comparisons between the different methods of calculating distributable surplus, as they emerge from these hypothetical figures, are not necessarily typical; much depends on balance sheet structures and in particular on the gearing. An illustration does however make the points concrete.

#### 5.4. *Conclusion*

The questions considered in this section can be stated quite simply. Profits available for distribution or for expansion can be regarded as the gain after providing for maintenance of the “substance of the business”. The latter phrase—an accountants’ phrase—recognizes that provisions need to be made for the maintenance of physical assets needed to sustain the existing level of operations—but goes on to say a. that provisions may also be needed for increases in the value of monetary assets (e.g. cash and trade debtors) associated, in times of changing prices and costs, with the existing scale of operations; and b. that the financing of these provisions for the maintenance of physical and monetary assets need not be wholly out of revenue—i.e. at the expense of distributions to the equity of shareholders—since non-equity sources of finance are habitually used as well as equity.

One solution to the problem is a system of economic valuation of all assets and liabilities. If this cannot be adopted—and company accounts must also serve the reporting and stewardship functions, as well as aiding decision-making by management—decisions about financing have to be taken in the context of the system of asset valuation that is adopted, and should, in my view, err on the “prudent” side when new borrowing is in prospect. There is a continuing debate on the question to what extent techniques of measurement can aid these decisions and how far these techniques should be grafted onto a system of current cost accounts; the adjustment for gearing set out in the Hyde guidelines is the nearest so far to commanding general assent.

## 6. TAXATION, PRICE CONTROL AND PRICE SETTING

### 6.1. *Taxation*

It is beyond the scope of this paper to consider the theory of corporate taxation. In the United Kingdom the imputation system of corporation tax is followed, under which a company pays tax at a single rate on all its profits whether distributed or undistributed. In addition a company making a distribution has to make an advance payment of corporation tax (ACT), which is calculated by reference to the personal tax rate. ACT paid in respect of distributions in an accounting period is set off against the company's corporation tax bill on its income for that accounting period. However, the profit base on which tax is chargeable differs from profit as defined in company accounts in two main respects; first, as an incentive to investment, allowances are made in arriving at taxable profit for the full cost of new investment expenditure on plant and machinery in the year in which it is made—known as 100 percent first year capital allowances. As can be seen from Appendix 1 these allowances—which of course exceed historical cost depreciation—usually also exceed replacement cost depreciation. They will do so if the volume of plant and equipment is expanding, and conversely if it is contracting. Secondly, a system of “stock relief” was introduced in November 1974 which gives relief against the base for tax purposes for funds tied up in maintaining stock. The calculation is based on the increase in book value of stock (usually on the FIFO basis) less a deduction. It can be seen therefore that in practice profit for tax purposes is usually much less than profit as shown in company accounts, particularly in the case of manufacturing companies.

The Sandilands report recommended a review of taxation but in the meantime envisaged retention of the present system under which certain investment expenditure is fully written off for tax in the first year (100 percent capital allowances). It preferred, however, substitution of a calculation based on the cost of sales adjustment for the present system of stock relief; accepting, however, the principle that the relief was a deferral of tax (i.e. so long as the funds remained invested in stock) which should be “clawed-back” if a company is wound up or if the volume of its stock is reduced—because in these circumstances the funds are released and are converted into cash. The Government is now considering what form the stock relief scheme should take in the future in the light of the proposals for CCA.

### 6.2. *Price Control*

There is a system of price control in the United Kingdom and the Government put forward for consultation proposals for revision of the Price Code. The proposals envisaged retaining the existing power (one amongst others) to control the net profit margins of manufacturing and service firms and the gross and net margins of distributors, in relation to reference levels determined on the basis of accounting figures for the past. The consultative document stated: “consideration will be given to providing for current cost accounting to be used for the margin control, once an accounting standard has been issued, by those firms which adopt it in their accounts”.

### 6.3. *Price Setting*

Price control is of course quite separate from the price setting policies of individual firms. To the extent that prices are demand determined, the effect of CCA would be small and indirect—mainly through its effect on decisions whether or not to stay in business or to enter a new field of business. When prices are to some extent supply determined, e.g. by a price leader, calculation of prices in relation to production levels would be affected by the costing conventions used. Probably firms already take more account of standard costing systems and cash flow projections than of their financial accounts in considering their prices, and the advent of CCA would then serve to make the signals indicated by the financial accounts close to those indicated by the costing techniques and cash flow projections; and CCA may of course encourage additional use of standard costing systems with standards set close to replacement costs (and therefore frequently revised). Its impact on the control of costs is therefore likely to accompany its impact on the determination of prices on a cost plus basis; and of course in the long run cash flow of itself will require that revenue should be sufficient to cover that part of the maintenance of inventories which needs to be financed by the equity. By bringing this to the forefront, CCA should help to prevent firms running unwittingly into cash flow difficulties.

CCA might have a greater impact on prices when a major raw material without substitutes increases sharply in cost—as, for instance, the 1973–74 oil price explosion. In these circumstances if a company raises its selling prices before its pipeline of stock at the earlier (lower) cost is exhausted it achieves a once-for-all boost to its historical cost profits which is sometimes described as a “stock profit”. It should be noted that this “stock profit” will only rarely be equal to the cost of sales adjustment that the company has to make in arriving at its CCA profit. In fact the two will only be equal if selling prices are raised immediately to match the increased costs. The cost of sales adjustment will, however, reduce or eliminate the benefit of the “stock profit” from the company’s CCA results and to this extent firms might be encouraged to put up prices earlier.

## 7. PRESENT SITUATION AND THE FUTURE

The situation at the end of 1977 can be reviewed in the light of the report in 1975 of the Sandilands Committee and the Government’s reaction to it (see sections 1 and 2). In the United Kingdom there now seems to be a fair degree of consensus that allowances for the effects of inflation should at least accompany company accounts and that these allowances should be based, conceptually, on the current cost or current value system of accounting. Disagreement remains as to whether these allowances should be elaborated into a complete accounting system to include a current value balance sheet and, if so, how quickly current value accounts should become the basic accounting system and, indeed, whether they should altogether supersede historical cost accounts, as was envisaged originally.

Full current value accounts are seen as having, in principle, substantial advantages over historical cost accounts or current purchasing power accounts in

bringing the financial accounts closer to the management accounts providing forward looking information needed for day-to-day decisions, and hence in facilitating control of cash flow, the measurement of the accounting rate of return and thus improving investment decisions.

The presentation, proposed by the Hyde guidelines [3], of a figure of “adjusted” profit and “adjusted” retained profit—which is after an adjustment bringing in (positively or negatively) an allowance for the effect of gearing—may well turn out to be a practical way of assessing the distributability of realised revaluation surpluses (which are part of historical cost profit). It may even assist with the presentational problem of provisions made by financial institutions to preserve a suitable equity base (i.e. whether they should be regarded as cost or as appropriation of profit). But the gearing adjustment has been received with some reservations and it is too early to see how far it will be incorporated in the supplementary current cost statements to be prepared by large companies.

The Hyde guidelines go a long way to meet the desire of the Stock Exchange to have available information on earnings on the current cost basis. It was reported in *The Times* of November 4, 1977 that a leading firm of stockbrokers had calculated that after tax profits for 1977, on the conventional historical cost basis, would be reduced by between 35 and 40 percent, including the gearing adjustment, compared with 48 percent on the basis of ED 18 before allowing for any appropriation of profits to reserve in the appropriation account.

The IASG under Mr Douglas Morpeth is continuing with the development of proposals for a full current value system of accounts. Let it not be supposed that the inclusion, in such a system, of the current value balance sheet will be a major additional complication by comparison to the Hyde guidelines. If the gearing adjustment is to be calculated, it requires a calculation of the current value of non-monetary assets. No doubt many of the complexities of ED 18 will be simplified—but it should be noted that many of the provisions of ED 18 were to provide uniform valuation rules and treatments in situations not generally encountered. Any accounting system must present a conflict between the need for simplicity and verifiability on the one hand and for relevance, uniformity and usefulness on the other. Depreciation is a good example of this conflict, even within the historical cost conventions. Current value accounting seeks to raise the threshold of relevance and usefulness and to preserve uniformity of treatment; but the further it moves in this direction the more complex it tends to become, and the more difficult to verify. Many of the difficulties have been exaggerated and there is a need for even more consultation than was possible before ED 18 appeared. The author hopes and expects that his former colleagues on the Morpeth Group will be able to strike the right balance.

## APPENDIX 1

### REVALUATIONS AND BACKLOG DEPRECIATION—ACCOUNTING ENTRIES

Consider a machine costing 100 with an expected service life of 10 years, whose gross replacement cost (GRC) increases by 20 percent a year. Depreciation provisions are initially assumed to be held in cash; and net revenue is assumed to be fully distributed.

	End- year 0	Average year 1	End- year 1	Average year 2	End- year 2	Average year 3	End- year 3
Gross Replacement Cost (GRC)	100	110	120	132	144	158.4	172.8
Less Accumulation of total in-year depreciation =			12		28.8		51.8
Net replacement cost (NRC)			108		115.2		121.0
Analysis of Depreciation:							
(a) <i>In-year</i>							
Provision (1)			11		13.2		15.8
Prior-year backlog (2)			—		2.4		5.8
Same-year backlog (3)			1		1.2		1.4
Total			<u>12</u>		<u>16.8</u>		<u>23.0</u>
(b) <i>Accumulated In-year</i>							
Provision					24.2		40.0
Prior-year backlog					2.4		8.2
Same-year backlog					2.2		3.6
Total					<u>28.8</u>		<u>51.8</u>

(1) 1 year's usage ( $\frac{1}{10}$ ) at year average value.

(2) Sum of previous years' usage ( $x/10$ ) at difference between value at end of year and value at end of previous year.

(3) Usage in current year ( $\frac{1}{10}$ ) at difference between end year and year average value.

		<i>Balance Sheets</i>			
		<i>End-year 1</i>		<i>End-year 3</i>	
<i>Assets</i>			<i>Assets</i>		
<i>Fixed:</i>			<i>Fixed:</i>		
GRC		120	GRC		172.8
Less Depreciation provision		11	Less Accumulated Depreciation provision		40.0
Less Backlog Depreciation		1	Less Accumulated Backlog Depreciation		11.8
		<u>119</u>			<u>161.0</u>
NRC		108	NRC		121.0
Cash		11	Cash		40
		<u>119</u>			<u>161.0</u>
<i>Liabilities</i>			<i>Liabilities</i>		
<i>Equity:</i>			<i>Equity:</i>		
Original Cost		100	Original Cost		100
Revaluation Surplus:			Revaluation Surplus:		
On GRC	20		On GRC	72.8	
Less Backlog Depreciation	1	19	Less Accumulated Backlog Depreciation	11.8	61.0
		<u>119</u>		<u>11.8</u>	<u>61.0</u>
					<u>161.0</u>

Now suppose that the depreciation provisions can be “invested” (rather than being held in cash) in such a way that the accumulated value of the depreciation fund keeps pace with the increase in the replacement cost of the machine. (If the net revenue of the machine itself remains constant through the machine’s life, both principal and accumulated interest would be available to the notionally invested depreciation fund; but this condition need not hold.) Then, at the end of year 1 in place of cash of 11 there would be investments valued at 12, and at the end of year 3 investments valued at 51.8 (the total of the cash value of depreciation provisions—40, and of the accretion of value—11.8), and the total value of assets would be equal to the gross replacement cost of the machine. No addition to the depreciation provisions set against revenue would be necessary on account of backlog depreciation.

An example of maintaining the gross replacement cost of assets without additional provision for backlog depreciation is the case of the steady-state business with a revolving stock of fixed assets. Suppose that there are 10 machines, and one is replaced each year. Then, a new machine bought in the middle of year 3 for 158.4 would be financed by the depreciation provisions of 15.8 on each of the 10 machines bought in years  $-7$  to  $2$  (that having been bought in year  $-7$  being the machine which is retired and replaced by the new machine). Considering the machine bought in year  $-7$ , its depreciation provision in the next year would be “invested” in the machine bought in that year, and so on. It is largely for this reason that separate provision against revenue for backlog depreciation is only considered necessary, at directors’ discretion, when a company is operating a limited number of major assets with an irregular replacement cycle (see [2], guideline (iii)—section 2.2(b)).

This highly simplified example leaves aside the complication arising from, say, 11 machines being replaced over a ten year cycle in the sequence of 2, 1, 1 . . . . It indicates, however, that current cost depreciation, excluding backlog depreciation, is broadly the same as the cost of purchasing fixed assets when (a) asset replacement is regular, and (b) the physical volume of assets remains stationary. If the physical volume of assets is expanding, an allowance for tax purposes of 100 percent in the first year will exceed current cost depreciation (see Section 6.1 of this paper) and conversely if it is contracting.

## APPENDIX 2

### ILLUSTRATION OF ALTERNATIVE METHODS OF CALCULATING DISTRIBUTABLE SURPLUS

Suppose that a manufacturing company has completed its accounts for a year in which there has been no increase in the scale of its activities (e.g. the units of product sold have remained constant); that the company is not affected by technological development and fixed assets are replaced evenly rather than in lumps; that the Directors have adopted the policy of financing from earnings any expenditure on fixed capital assets which exceeds depreciation charges; but that the Directors’ policy has been to finance increments to the net funds applied as working capital (stock, trade debtors less trade creditors) entirely by bank

borrowing. The surplus of revenue over historical costs is, say, 300 (400 before depreciation, less depreciation of 100), and capital expenditure is 200 which exceeds depreciation because of an increase in the unit cost of replacement equipment. For this year the unit value of the company's products has increased by some 20 percent and in consequence the value of outstanding trade creditors and debtors has increased by 20 percent even though the units of product sold have not increased.

On the *historical cost* basis, the balance sheets might look as follows:

	Opening Balance Sheet	Change in Year	Closing Before Dividend	Balance Sheet After Maximum Dividend
<i>Assets</i>				
<i>Fixed assets:</i>				
Original cost of opening assets	1,500	—	1,500	1,500
Less accumulated depreciation	-500	-(+100)	-600	-600
Plus acquisitions in year		+200	+200	+200
<i>Equals:</i>				
Written down value	1,000	+100	1,100	1,100
Stock (inventories)	500	+100	600	600
Total non-monetary assets	1,500	+200	1,700	1,700
Trade debtors	500	+100	600	600
Cash	100	+200	300	100
Total assets	2,100	+500	2,600	2,400
Less trade creditors	-300	-(+60)	-360	-360
bank overdraft	-800	-(+140)	-940	-940
<i>Equals:</i>				
Shareholders' equity (subscribed capital and general reserve)	1,000	+300	1,300	1,100
<i>Net monetary liabilities</i>	500	-100	400	600
<i>Gearing:</i>				
		<i>Gross</i>	<i>Net</i>	
Opening		52%	33%	
Closing (after dividend)		54%	35%	

*Gross Gearing* is non-equity liabilities as a proportion of total assets.

*Net Gearing* is net monetary liabilities as a proportion of total non-monetary assets.

Looking at the "change in year" column, note that for fixed assets the net change consists of depreciation -100, expenditure +200; because of the Directors' policy, referred to above, the change in stock plus trade debtors less trade creditors is counterbalanced by the change in the bank overdraft; the increase in the shareholders' equity before dividend equals the historical cost profit; and the increase in cash, before payment of dividend, is equal to the historical cost profit before depreciation (400) less expenditure on fixed assets (200). If the Directors decide to distribute all of the "profit" on the historical cost convention (except for the amount they know to have been reinvested in fixed assets in excess of depreciation provisions), they will distribute 200, and the closing balance sheet will, by comparison with the opening balance sheet, reflect (in the fixed assets and

equity items) the reinvestment of 100 in fixed assets, valued at their historical cost. The reinvestment of funds tends to reduce gearing, but the financing of all working capital by borrowing tends to increase it, and overall the gearing increases over the year.

On the *current cost* basis, the balance sheets might look as follows:

	Opening Balance Sheet	Change in Year	Closing Before Dividend	Balance Sheet After Maximum Dividend
<i>Assets</i>				
Fixed Assets:				
Gross replacement cost	2,750	+500	3,250	3,250
<i>Less</i> accumulated:				
depreciation	-670	-(+200)	-870	-870
backlog depreciation	-250	-(+180)	-430	-430
<i>Plus</i> acquisitions		+200	200	200
<i>Equals</i>				
Written down value	1,830	+320	2,150	2,150
Stock:				
Cost	500	+100	600	600
Revaluation of stock in hand to current cost at balance sheet date	20	0	20	20
Total:	520	+100	620	620
Total non-monetary assets	2,350	+420	2,770	2,770
Trade debtors	500	+100	600	600
Cash	100	+100	200	100
Total Assets:	2,950	+620	3,570	3,470
<i>Less</i> trade creditors				
bank overdraft	-300	-(+60)	-360	-360
	-800	-(+40)	-840	-840
<i>Equals</i>				
Shareholders' equity	1,850	+520	2,370	2,270
of which:				
Revaluation reserve	1,020	+420	1,440	1,440
Subscribed capital and general reserve	830	+100	930	830
<i>Net monetary liabilities</i>	500	-100	400	500
<i>Gearing:</i>				
		<i>Gross</i>	<i>Net</i>	
Opening		37%	23%	
Closing (after dividend)		35%	18%	

*Gross Gearing* is non-equity liabilities as a proportion of total assets.

*Net Gearing* is net monetary liabilities as a proportion of total non-monetary assets.

The opening total equity reflects the higher values given to fixed assets and stock; it is assumed for convenience of exposition that the Directors have in previous years maintained the practice of financing stock by borrowing but that in the year being considered they finance further increments to the value of stock internally. On these assumptions, the "subscribed capital and general reserve" element of the equity falls short of the corresponding element under the historical cost basis

by 170, the difference between accumulated replacement cost depreciation and accumulated historical cost depreciation.

Looking at the “change in year” column, note that the operating profit of 100 is equivalent to the historical cost profit of 300 less the “cost of sales adjustment” of 100 and additional depreciation of 100. On the assumption of constant volume, the holding gain on stock of 100 is equivalent to the additional outlay on inventories; and since this is now regarded as a cost, one can reasonably assume—for the purpose of this illustration—that in this year bank borrowing is not (at least initially) used as the source of finance for the incremental value of stock, which is therefore financed out of revenue.

Comparing the figures on the current cost and historical cost bases, one sees that the rise in the current value of total assets (before dividend) exceeds the equivalent figure on the historical cost basis by 120. On the one hand, fixed assets are recorded as increasing in value by 220 more than on the historical cost basis, consisting of 320 (the addition to revaluation reserve on account of fixed assets) less the extra depreciation of 100; on the other hand, since there is 100 less of bank borrowing, the increase in cash is 100 less. As in the illustration on the historical cost basis, the increase of debtors less creditors (40) is assumed to be financed by increased bank borrowing, so that the increase in cash (100) matches the current cost operating profit.

As on the historical cost basis, cash outlays on fixed assets are assumed to be covered by revenue. In this case the increase in the current value of stock is also financed directly from sales proceeds. The increase in the revaluation reserve (holding gain) is 420, in all, of which 320 in fixed assets and 100 in stock. Gearing appears generally lower than under the historical cost basis because assets are given higher values—but the effect of financing internally the maintenance of all physical assets (stock, as well as fixed assets) is to *reduce* gearing during the year, in contrast to the situation under the historical cost basis when stock is assumed to have been financed externally so that gearing is increased.

On the proposals of Martin Gibbs operating profit would additionally be charged with the increase in trade debtors less the increase in trade creditors, so that it would be reduced from 100 to 60 and—if distributions were also limited to operating profit defined in this way—the bank overdraft would not increase at all and cash would stand at 160 at the end of the year, before the dividend of 60 is paid. However, Gibbs proposes that the total holding gain (whether realized or not) should be apportioned into distributable and non-distributable elements according to the opening gearing. If this is defined in terms of the financing of the total of the assets for which capital maintenance provisions are made (non-monetary plus debtors less creditors), it is  $27\frac{1}{2}$  percent: 700 (overdraft less cash) as a proportion of 2,550 (non-monetary assets plus debtors less creditors).

Since the total holding gain is now regarded as 460—including the provision of 40 for trade debtors less creditors which was charged to operating profit<sup>6</sup>—the distributable gain would be regarded as 170: operating profit of 60 plus 110 ( $27\frac{1}{2}$  percent of 460). Gibbs calls this the “combined profit”. Note that (in this example)

<sup>6</sup>There is however an awkwardness in regarding this as a gain, rather than merely as an offset to a charge.

the “combined profit” falls short of historical cost profit—but if the gearing were different, and/or the unrealized element of the revaluation surplus (holding gain) were large, “combined profit” could well exceed historical cost profit. If Directors were to follow these calculations in determining their maximum distributions, they would evidently need to borrow 110, by comparison with 40 on the unadjusted current cost basis; in other words non-equity finance would increase by 70, the remaining 40 of borrowing being matched by net monetary assets.

On the modified system of restricting the revaluation surpluses that are regarded as distributable to those that are realized, the operating profit might, or might not, be defined to include provisions for debtors and creditors; but the simplest form is not to make this alteration to the definition of operating profit and hence to exclude such provisions. In addition, therefore, to the operating profit of 100, the distributable surplus would take into account those elements of the holding gain which had been “realized”—the cost of sales adjustment of 100 and the additional depreciation of 100—and this total realized gain would be apportioned according to the opening gearing.

It is uncertain how the opening gearing should be defined for this purpose, but if it were defined gross, as the ratio of gross monetary liabilities to total assets (including monetary assets), an additional 74 (37 percent of 200) would be regarded as distributable. By comparison with the unadjusted current cost basis, non-equity finance would be increased by a further 74, external financing being used for part of the cost of sales adjustment and additional depreciation, in proportion to the degree of external financing of the corresponding opening amounts.

If the gearing is defined net, as the ratio of monetary liabilities after deducting monetary assets to the total of non-monetary assets (which equals net monetary liabilities plus the equity including reserves), and if the average of the opening and closing ratios is taken, an additional 39 (19½ percent of 200) would be regarded as distributable, and non-equity finance would be increased by 39. This is what is proposed in the Hyde guidelines.

On the basis of this example, the effect of the various possibilities is as shown in the Table opposite.

It can be seen that while calculations of this kind may well assist Directors in deciding on the amount which they wish to distribute, the calculations are heavily influenced by the balance sheet structure and complicate the accounts. The Hyde guidelines propose a method that is prudent and excludes all unrealized holding gains from profit. It is a simple method and is regarded as preferable, but the guidelines accept that other methods may be used. The situation is therefore not all that different from the purely qualitative guidelines proposed in ED 18.

	Maximum Distributable	Net Gearing (defined as for 4b)		Additional Net Non-equity Finance For Non-monetary Assets
		Opening	Closing	
1. Historical cost:				
version a.	300	33.0%		200
version b.	200*	33.0%	35.0%	100
2. Unadjusted CCA	100	21.2%	18.0%	—
3. M. Gibbs' proposals	170	21.2%	20.5%	70
4. Only realized gains are distributable;				
a. Gross gearing	174	21.2%	20.7%	74
b. Net gearing	139	21.2%	19.5%	39

\*Maximum", given a decision (not required by the accounting system) to finance internally the replacement of fixed assets.

#### Notes to Table

- Line 1: Version a. uses external finance for the additional cost of replacing fixed assets; version b. finances all replacements of fixed assets internally.
- Line 2: Uses revenue to finance the replacement of both fixed assets and stocks.
- Line 3: The capital maintenance concept is widened to include debtors and creditors; unrealized holding gains on other assets rank as distributable on the basis of opening gearing of the finance of these assets.
- Line 4: Capital maintenance concept—as line 2. Only realized holding gains rank as distributable, using average gearing defined as:
- (gross) total liabilities other than equity to total assets;
- (net) total liabilities less monetary assets to non-monetary assets.

## REFERENCES

- [1] Accounting Standards Committee, "The Corporate Report", Discussion Paper, ASC, 1975.
- [2] Accounting Standards Committee, "Current Cost Accounting—Exposure Draft Number 18", ASC, 30 November 1976.
- [3] Accounting Standards Committee, "Inflation Accounting—An Interim Recommendation by the Accounting Standards Committee", 4 November 1977.
- [4] Auditing Practices Committee of the ASC, "The Audit Implications of Current Cost Accounting, Review" ASC, January 1977.
- [5] Central Statistical Office, "Price Index Numbers for Current Cost Accounting", Number 6, Her Majesty's Stationery Office, December 1977.
- [6] Central Statistical Office, "Current Cost Accounting: Guide to Price Indices for Overseas Countries", Her Majesty's Stationery Office, June 1977.
- [7] Cowley, A. H., "Accounting for Inflation", Central Statistical Office—*Economic Trends*, August 1974.
- [8] Edey, H. C., "The Nature of Profit", *Accounting and Business Research*, Winter 1970.
- [9] Eisner, Robert, "TISA: Total Incomes System of Accounts", IARIW, 14th General Conference, 1975; and "Capital Gains and Income: Real Changes in the Value of Capital in the United States, 1946–75", presented to the Conference on Research in Income and Wealth, NBER, Toronto, October 1976.
- [10] Fabricant, Solomon, "Towards Rational Accounting in an Era of Unstable Money, 1936–1976", National Bureau Report, December 1976; and "Accounts for Business Income under Inflation: Current issues and views in the United States", *Review of Income and Wealth*, Series 24, No. 1 (March 1978).
- [11] Griffin, Tom, "Revised Estimates of the Consumption and Stock of Fixed Capital", CSO—*Economic Trends*, October 1975; and "The Stock of Fixed Assets in the United Kingdom: how to make best Use of the Statistics", CSO—*Economic Trends*, October 1976.
- [12] Hicks, J. R., "Value and Capital", second edition, 1946, page 170.
- [13] House of Commons, Official report (Hansard), 25 November 1975, Columns 851–2.
- [14] House of Commons, Official report (Hansard), 1 December 1976 (continuation from 30 November 1976), Columns 1–8 and 1–9.
- [15] Inflation Accounting Steering Group, "Brief Guide to the Exposure Draft on Current Cost Accounting", Tolley, 1976.

- [16] Inflation Accounting Steering Group, "Background Papers to the Exposure Draft on Current Cost Accounting", Tolley, 1976.
- [17] Inflation Accounting Steering Group, "Guidance Manual on Current Cost Accounting", Tolley, 1976.
- [18] O'Connor, Moira, Department of Industry, "Developments in Methods of Estimating Manufacturers' Stock Changes", CSO—*Economic Trends*, January 1976.
- [19] Perrin, J. R., "Inflation Accounting is not Economic Valuation", Editorial to *Journal of Business Finance and Accounting*, Spring 1976.
- [20] Ryder Report (Synopsis), "British Leyland: the next Ten Years", Her Majesty's Stationery Office, April 1976.
- [21] Sandilands, Sir Francis (Committee), "Inflation Accounting", Report of the Committee of Enquiry into Inflation Accounting, Her Majesty's Stationery Office, Cmnd 6225, September 1975.
- [22] United Nations, Statistical Commission, 18th Session, "System of National Accounts (SNA): Draft International Guidelines on the National and Sector Balance Sheet and Reconciliation Account of the SNA", E/CN. 3/460, 24 July 1974.
- [23] Walton, John, "Current Cost Accounting and the Concept of Corporate Income", *The Business Economist*, Volume 9, No. 1, Summer 1977, Society of Business Economists.
- [24] Young, Allen H., and Musgrave, John C., BEA, U.S. Department of Commerce, "Estimation of Capital Stock in the United States", presented to the Conference of Research in Income and Wealth, NBER, Toronto, October 1976.