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AN APPROACH TO INFLATION ACCOUNTING  
IN THE CONTEXT OF DEVELOPING ECONOMIES

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Doctor of Philosophy

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Abstract

Conventional financial statements are prepared following historic cost accounting system. The continuing and high rate of inflation has reduced the usefulness of accounts to users of accounts to such an extent that it is necessary to make a major change in the existing accounting practice. The nature of the necessary change has been debated for many years and a number of solutions have been put forward. The purpose of this study is to propose an approach to account for inflation that would be most useful and appropriate in the context of developing economies. It has been stressed that accounting is a product of its environment and an inflation accounting system should suit the environment present in developing countries to function properly.

Economic forces generating inflation, development of accounting profession, requirement of accounting information in micro and macro level of operations and economic decision making have been reviewed to follow and assess the particular requirement and importance of accounting for inflation in developing economies. This review and analysis served us to formulate the basic framework within which an inflation accounting system has to operate. The evaluation process of various inflation accounting methods began with consideration of fundamentals in economics and accounting theory. Critical evaluation of inflation accounting methods widely debated as best alternatives to historic cost accounting were made on the basis of pre-determined criteria. This evaluation process helped us to isolate and appraise the key factors both of theoretical and practical nature of such inflation accounting methods. This was followed by a closer look at the inflation accounting systems developed in high inflationary situation in Latin America.

A synthesis of ideas and informations derived from the evaluation process led us to recommend an inflation accounting system based on the basic principles and concepts of Current Cost Accounting (CCA). We were convinced that the utility which would be presented by some form of CCA should be recognised in developing economies. Particular problems confronting the implementation of a CCA based accounting system have been critically considered. The theoretical and practical aspects of implementing such an accounting system have been formulated in a detailed recommendation.

## Chapter 1: Introduction

Inflation is a universal problem in recent years. With world-wide acceleration of inflation, particularly since the late 1960's, the time-honoured conventional historic cost basis of accounting is deemed to be incapable of adequately meeting the information requirement of users of accounts. There is widespread agreement that something needs to be done, but up to now there has not been universal agreement on how existing accounting practices should be modified. Various alternatives to historic cost accounting have been widely discussed and debated to find out the best approach to account for inflation. This study is concerned with selection or development of an inflation accounting method best suited in the context of developing economies.

### Need for inflation accounting:

Inflation means a persistent rise in the prices of goods and services or conversely a persistent fall in the purchasing power of money. Inflation accounting is an attempt to present accounts in a form which allows for the change in the value of money or change in costs and prices. Historic cost accounts are derived from the book-keeping records of original entry. So, changes in price levels over a period of years would not result in accounts showing current conditions. By only reflecting historic cost, information required by users on the current value and changes in value of assets, will never be shown in historic cost accounts. When the prices of a company's assets are changing, historic cost accounts will continue to indicate the original price (i. e. , the historic cost) paid for the assets, but will no longer indicate their realistic value when this is higher than historic cost. In historic cost accounts, economic and business reality is suppressed.

It is argued that accounts should reveal and not conceal the true financial position of an economic entity - which happens when conventional historic cost accounts fail to provide adequate information as to the impact of changes in costs and prices in business operation. Accounts prepared following historic cost convention, during a period of persistent high inflation, is not only inaccurate and inappropriate but may also be misleading for vital decision making purposes both in the micro level of an organ-

isation and macro level of the corporate economy. In the following paragraphs, we would attempt to highlight the characteristics and inadequacies of historic cost information in particular spheres of asset structure, financial reporting and decision making.

1. Over-statement of profit: In historic cost account, profit and loss account shows as profit, the amounts realised from a company's output less the costs incurred in generating those amounts. For this purpose, the accountants follow the process of 'matching' costs against revenues. The costs which are matched in the income statements are the original cost at which the transaction were recorded in the items where the benefit is received and utilised by the enterprise at virtually the same time that the cost is incurred (e.g. wages and many other current expenses) historic cost is very close to current cost. But, wherever there is a time lag between acquisition and utilisation - historic cost may well differ from current cost at the point of 'realisation'. In cases when there is a significant time lag between acquisition and utilisation, unexpired costs are stored in assets accounts and would appear as such in a balance sheet. All of the various rules which have been developed by the accountant for the valuation of stock, depreciation of fixed assets, amortisation of pre-paid expenses and deferred charges etc., are measurement rules for re-allocating unexpired assets cost into expense accounts as the asset's services are utilised and expiration occurs.

The matching process, so far as it relates to the cost side of the equation, involves the direct charging of current items (such as wages) to expense accounts as well as the allocation of expired costs to expense account. It is the second element i.e., the allocation of expired costs which gives rise to many of the difficulties and shortcomings in historic cost accounting, when there is a price change between acquisition and utilisation of asset items. This is particularly significant in relation to depreciation charges and stock adjustment, which we discuss in more detail.

- (i) Depreciation charges: For many years, depreciation is a major issue in inflation accounting discussions. It is generally considered that in most business organisations, depreciation is one of the major causes of inaccurate profit measurement in a period of inflation. The primary importance of depreciation accounting stems from the dual effect it has got on income measurement and capital recovery process in any accounting system. To the accountant, an investment in plant or equipment is a pre-paid cost, to be charged to operations and recovered in cash over the serviceable life of the asset. Thus an appropriate proportion of the total depreciation relating to a fixed asset is charged against the profit and loss account for each year of the estimated useful life of the asset; in order to match revenue earned in a particular year against that part of the cost of fixed assets assumed to be related to the generation of that revenue.

Under historic cost accounting, depreciation is calculated with the aim of spreading the cost of an asset over its useful life. This is not affected by inflation, since the amount paid by a company for an asset cannot be affected by inflation subsequent to the purchase. Owing to inflation, when the value of the asset increases subsequent to its purchase, historic cost depreciation will not fully reflect the value of the asset consumed during the accounting year. This produces a situation where depreciation based, say, on 1971 costs are matched against 1978 revenue and thus reflect inadequate charge for appropriate value of the asset consumed.

Another important purpose of depreciation accounting is to measure the amount that must be recovered from revenue to compensate for the portion of fixed assets that has been used up. This idea is embodied in the phrase 'maintaining capital intact' which is so often used in relation to income measurement. Ordinarily, historic cost depreciation method recovers only the numbers of pounds originally committed to the asset, regardless



of difference in the price to be paid in acquiring an alternative replacement asset. Recovery of original number of pounds may be satisfactory in period of stable prices, but it would be seriously inadequate during periods of inflation.

To highlight the short-fall of capital recovery following conventional depreciation accounting process, let us take an example of a machine which cost £10,000 and has a life for depreciation purposes of 10 years. The short fall in end of life accumulated depreciation to equivalent replacement asset price would be as below in different price level situations.

Table - 1  
Depreciation and capital recovery

	Rate of price increase per year		
	10%	15%	20%
Price of equivalent asset after 10 years	£ 25,900	£ 40,550	£ 61,900
Accumulated depreciation on historic cost basis	10,000	10,000	10,000
Shortfall in capital recovery	15,900	30,500	51,900

- (ii) Stock adjustment: A major objective of accounting for stocks is determination of income through the process of matching appropriate costs for stock and work in progress against revenue earned through further processing or direct sales. If stock prices remained constant, stock accounting problems would be minimum, because only variation in values of stock item would be attributable solely to changes in quantities. But in present day inflationary environment, the major problem in stock accounting arises from the fluctuation over time in the unit acquisition costs of stock items. During a period of inflation, the money value of stocks increases significantly

while they are held or processed in the business. The conventions of historic cost accounting lead to the realised part of this holding gains, commonly known as 'stock appreciation' being included in reported profit of the period.

To remain in business, companies must replace their stock and so it is obvious that, the amount of profit represented by stock appreciation is unlikely to be available for distribution. Stock appreciation should not be regarded as part of the distributable profit, as a company to maintain as a going concern, will have to invest it in purchase of replacement stock at higher prices, unless the volume and scale of the business is to be reduced. As the price of stock items has been increasing rapidly in recent years, reporting of stock appreciation as a part of distributable profit should be major concern in order to maintain the scale of the business. If tax is paid on such reported stock profit, it would further aggravate the liquidity situation of an enterprise. The following table would show the exceeding prevalence of stock appreciation element in U.K. corporate profit figure in recent years. Particular attention should be paid to the fact that in 1974 nearly half the declared profits of companies were due to stock appreciation alone

TABLE - 2

Profits, stock appreciation and prices in U.K.  
(In million pounds)

Year	Gross Trading Profit (1) (2)	Stock appreciation	Stock app. as per cent of trading profit	Percentage change in retail price
1965	4,741	256	5.4%	4.8%
1966	4,610	302	6.6	3.9
1967	4,663	149	3.2	2.5
1968	5,275	475	9.0	4.7
1969	5,159	600	11.6	5.4
1970	5,447	909	16.7	6.4
1971	6,092	868	14.2	9.4
1972	6,928	1,088	15.7	7.1
1973	8,714	2,595	29.8	9.2
1974	9,706	4,884	50.3	15.9
1975	9,677	4,140	42.7	20.7
1976	12,445	5,300	42.5	17.2

(1) Before providing for depreciation and stock appreciation.

(2) Including U.K. branches and subsidiaries of non-resident parent companies.

Source: CSO, National Incomes and Expenditure 1966-76, London, HMSO, 1977, Table 5.1 P. 39.

From the above analysis, it is evident that, over-statement of profit in a period of inflation results from the practice of charging only the historic cost of physical assets consumed. When prices are rising, the historic cost accounting method fails to make adequate charge against revenue for the current cost of resources consumed during the period. So, in historic cost accounting when the real cost of physical asset consumption is under-charged, the shortfall is accounted as profit, which is fictitious, representing under-statement of costs.

Any over-statement of reported profit has adverse repercussions for the individual enterprise as well as the macro economic resource allocation

process; as the latter is moulded by the collective cumulative figures of all individual firms. Over-statement of profit following historic cost accounting would lead a company to declare dividend to such an extent, that is inconsistent with its 'well-being' and ability to maintain its productives capacity. When accounting profit is not entirely real, it includes a capital element in it, which, if distributed, would leave the company in a weaker position to operate or to maintain the existing scale of business. The following table would highlight the inadequacy of historic cost accounting in a period of inflation from a wide angle of view of a nation.

TABLE -3

Profits after taxes of non-financial corporations in U. S. A.  
(Billions of Dollars)

Year	Profit as reported	Understatement of cost (1)	Adjusted Profit	In 1965 prices	
				Adjusted profit	Retained earnings
1965	38.2	2.1	36.1	36.1	19.2
1966	41.2	3.2	38.0	37.3	19.2
1967	37.8	3.8	34.0	32.1	14.2
1968	38.3	6.9	31.4	28.8	9.6
1969	34.3	9.7	24.6	21.6	3.4
1970	28.2	11.4	16.8	14.0	(2.7)
1971	34.2	12.5	21.9	17.5	1.3
1972	39.2	14.5	24.9	19.5	2.9
1973	49.9	26.4	23.5	17.4	0.9

(1) Under-statement in depreciation charge and inventory valuation adjustment.

( ) Denotes negative figure.

Source: George Terborgh, "Inflation and profits", Financial Analysts Journal, May/June 1974, P.21.

It is obvious from the above table that between 1965 and 1973, while reported profit have gone up by 30% current value corrections shows a downward trend of 30%. General price level corrections toward the base year halve the profit and retained earnings. Another feature is that corporations have been distributing practically all of their adjusted earnings, and reported savings

representing little more than the amount to cover the understatement of costs.

The failure to recognise in the accounts, the effect of price level changes, can mislead management when making decisions and can lead to:-

- (1) unrealistic pricing as a result of unsound costing policies;
- (2) faulty investment decisions as a result of failure to distinguish fictional from real gains;
- (3) agreeing to pay additional bonus or settle demand for increased wages and salaries;
- (4) overlook the need to deal with excessive costs.

In each case, there are many factors which contribute to decisions, but to the extent that costs are used as a basis for pricing or for profitability analysis, the historic cost figures will be too low when price levels are rising. The directors, when making resource allocation decision in different departments, operations or segments -- may be influenced by the achieved profitability. Those with a good record, measured in historic cost terms will tend to be favoured, although on a current cost basis the relative profitability of divisions, department or operations might indicate a different preference pattern. There is the danger, too, that divisions showing high returns on investment will find it difficult to justify new investment, because rates of return on new investment will tend to be less than those 'achieved' in the past, which was actually accomplished through under-statement of real cost.<sup>1</sup>

"... a pre-requisite for any criteria applied to the allocation of capital resources is comparable accounting information on the past performance and current position of companies, presented in a way that provides a basis for assessment of future prospects" -- observed the Sandilands Committee.<sup>2</sup> The apparent picture of a company's performance given by existing accounting conventions based on original costs are often misleading. This leads to an inefficient and possibly faulty allocation of capital resources. In resource allocation process, normally

- 
1. Clearly managers and directors will attempt in their decisions, to correct for the distorting effects, but it is difficult to be sure about the extent to which accounting information is 'corrected' by management in reaching decisions, but they would obviously be greatly helped if the adjustments could be incorporated in the routine accounting statements.
  2. Report of the Inflation Accounting Committee, F. E. P. Sandilands (chairman), London, HMSO, Cmnd Paper 6225, 1975, Para-737.

made through an evaluation of competing opportunities, investors generally look to the profitability patterns as implied by successive accounting reports, in a company over time or among different industries. While inaccurate profits are continued to be reported, the community's resources are not necessarily channelled into the most efficient and productive areas.

"...it makes the ownership of productive assets relatively less attractive in times of rising prices than the ownership of non-productive assets, and may well make the hoarding of goods a better hedge against inflation than a share in the ownership of a productive enterprise."<sup>1</sup> The high inflationary situation in Latin American countries has shown that, new investments were mostly attracted towards the speculative, real estate and construction industries, as these showed healthy profitability following conventional accounting practices -- whereas manufacturing industries failed to attract sufficient investment with lower normal operating profit.<sup>2</sup>

2. Deterioration of Operating Capacity: Historic cost profit as a measure of business surplus fails to maintain the real value of the capital of the enterprise in the sense of its operating capacity to produce goods and / or services, during a period of rising prices. In historic cost accounting, the capital of a company for the purpose of calculating profit of the year, is the amount subscribed by its shareholders plus the additional amount which have accrued as gains in past years and have been retained by the company as reserve. The process of charging costs against revenue earned is that of recovering the resources used up in terms of their historic money value. The logic is that, if the whole of accounting profit so calculated is distributed, still the original money value of proprietorship capital is maintained intact. Shareholders thus have the same number of pounds invested in the business at the end of the period as at the beginning.

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1. F.W. Paish, "The estimation of business profits in periods of changing prices" in Readings in the Concept and Measurement of Income, R.H. Parker and G.C. Harcourt (Edited), Cambridge University Press, 1969, P.198.
  2. H. Simonsen, Management Under Inflation: The Brazilian Experience, London, Economist Intelligence Unit, 1974, pp-4-6.

Adherence to historic money costs means that money capital contributed by shareholders is preserved as a result of the profit measurement process; but in times of inflation this original money capital will not command the same volume of stocks and fixed assets. This is the 'capital erosion' effect of conventional historic cost accounting procedures in times of rising prices. It may be possible to augment shareholders funds by retaining part of the profit in the company, but this will not be easy when taxation, dividends and indirectly wages and salaries are all related to the level of accounting profits.

The objective of a business organisation is to maintain the continuity of production and business without eroding its operating capacity and thereby the long term viability of the organisation. So, it is important to consider as profit only that portion of the surplus, that can be consumed or distributed without impairing the productive capacity of the enterprise. Any major deviation from this standard will impair the delicate capital structure and thereby the continuity of a company.

Unless profits can be retained, the enterprise will become short of liquid funds or undercapitalized, and fresh capital will have to be raised to maintain the same volume of physical assets. Because this undercapitalisation occurs as a result of conventional accounting procedures, management may not become aware of its existence until the financial position of the enterprise has been seriously weakened. In the initial stages of inflation many firms finance the replacement of stocks and fixed assets at higher prices by increasing short term indebtedness. As a result their financial stability is undermined.

The impact of capital erosion is greater particularly in these days of rapid technological changes. As technical improvement is always taking place, the new equivalent asset which incorporates improved technology is certainly going to cost more. When the existing assets have to be replaced eventually - replacement by improved technology would raise further financial problems, as to carry on in the same business it would need more capital.

3. Liquidity crisis: The most immediate problem which inflation gives rise for most companies is a chronic shortage of cash as the price of raw materials, labour and other inputs rise, along with the need to pay taxes and dividends. Inappropriate calculation of profit and its subsequent distribution leads to inadequate level of recovery of liquid resources and thus creates liquidity crisis. Cash generated by the sale of processed goods and/or services must be used to re-purchase stocks and other inputs at higher prices. This becomes difficult, as the same cash must also be used to pay taxes to government, higher dividends to shareholders and increased wages to employees.

Following historic cost accounting and the attendant liquidity crisis; there is a real possibility that a company may be showing healthy profit but run into financial difficulties or even have to liquidate for lack of cash. In recent years, many enterprises have reported profit up to the day when a liquidator was appointed. All the spectacular company crashes in recent years in U.K., like Rolls-Royce, Pergamon Press, Court Line, Country and General Insurance, reported substantial profit while not generating enough cash to remain solvent.

High inflationary pressure on management to meet the day to day cash requirement may lead them to borrow at a high interest from outside. The payment of interest and principal of borrowed funds would also subsequently add to the liquidity crisis in the enterprise. The deteriorating liquidity situation may force management to reduce the volume of operation and business in a period of high inflation. In the context of a nation, the cumulative deterioration of liquidity of business enterprises may lead to contraction of the economy. The Sandilands committee re-calls that - "In 1974, a severe shortage of cash affected a considerable number of companies and many failed or were forced to reduce their operations drastically".<sup>1</sup>

The distribution of inflationary profit threatens the long term viability of many enterprises and employment prospect that they represent. Kirkman<sup>2</sup> observed that "In recent years governments in

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1. Sandilands report, Op., cit, para. 2.

2. Patrick R.A. Kirkman, Accounting under Inflationary Conditions, London, George Allen and Unwin, 1974, p.128.



many different parts of the World have complained about the inadequate level of new investment. Expansion in this area has obviously been hit by deteriorating liquidity, which is at least partly due to the effects of inflation on capital and revenue expenditure and profit measurement. More accurate profit measurement would almost certainly have produced a more adequate level of profit retention, which in turn would probable have meant that more funds were made available for capital projects".

4. Inadequate information dissemination:- Accounting is a means towards an end and not an end in itself. It is essentially an information system designed to produce relevant and useful information about the enterprise and the economic reality. A great deal of research has been done into the objectives of accounting statements in recent years. The AICPA report on 'The Objectives of Financial Statements'<sup>1</sup> and 'The Corporate Report'<sup>2</sup> published by the U.K. ASSC has much stressed that:

"The basic objective of financial statements is to provide information useful for making economic decisions".

As we have followed earlier, the distortion and anomalies of historic cost accounting in internal affairs of a company is very serious. So also it is for the users of accounts external to the company - like investment - adviser group, creditors and lenders, prospective share and credit holders, stock exchange, other companies, Government official bodies etc. It could be argued that management may use realistic criteria in arriving at important decisions; as they are aware of the extent and effect of inflation in crucial areas in internal management decision. The external user groups and organisations have little

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1. AICPA, Study Group on the Objectives of Financial Statements - Objectives of Financial Statements, Robert M. Trueblood (Chairman), New York, 1973 (popularly known as the Trueblood Report)
  2. ASSC, The Corporate Report, London, ICAEW, 1975.

or no alternative but to base decisions on historic cost reports.

There is a real risk that users of accounts are misled as unadjusted historic cost becomes distorted and the higher the rate of inflation, the greater the distortion. The potential serious consequences of using unadjusted historic cost information cannot be ignored. Indeed, users of accounts, if they believe, what the accounts mean what they indicate, will be misled. The faults in unadjusted historic cost accounts are fundamental and extensive:-

- (a) Historic cost accounts in most cases give poor reflections of the 'real' entity they are supposed to represent. The assets are shown at original monetary cost and when prices are changing, they will still indicate their value in terms of historic cost, which is a false representation of the company's worth. Property and other long lived assets expressed in money terms of many years ago, will give a very poor reflection of the current money equivalent of the underlying reality. Thus two companies holding very similar assets may be represented in their accounts in such a way that one appears to be twice the size of the other and thus conveying a totally inaccurate message.
- (b) Important ratios would be seriously distorted following historic cost accounting in a period of inflation. The profit margin and return on investment figures would be unrealistically high. This happens, as when prices are rising, the conventional historic cost system of accounting tends to overstate profit following unconservative income measurement practice along with the understatement of assets figure through conservative valuation. Thus the numerator is overstated and the denominator is under-stated, giving a wrong reading in both ways. Other significant ratios for comparison and decision making purposes based on earnings, liquidity, asset coverage, profitability would be inaccurate and may be misleading.

- (c) Long term trend of profitability or growth following historic cost accounting may not be showing realistic growth or decline in the business. A company may show rising sales, adequate investment, profitability trend on money unit; might well show no growth or even decline in 'real' (physical) terms.
- (d) In historic cost accounting gains arising from price changes (holding gains) is added together with gains resulting from current operation and production of goods and/or services. Thus the users of accounts, do not get an adequate indication of the presence or the extent of these two different types of gains in the combined profit figure.
- (e) Comparison of accounting figures and ratios of one period with previous accounting periods is one of the most important yardsticks used by investors and others in assessing the performance of an individual enterprise and different enterprises. The comparison of performance between periods and between firms becomes very difficult and often misleading, following historic cost accounting; because the accounting figures and ratios fail to recognise the effects of inflation over time. A comparison of the results of two companies will be valid only when they are based on the same cost structure. A firm which has bought its assets more earlier (and therefore more cheaply) will tend to show higher profitability and growth. A comparison with another firm of newer origin and reflecting different cost structure would not be a valid one. Similarly, inflation distorts comparison of the results of an individual enterprise over time, as profit measurement involves bringing together in measurement process; monetary amounts for transactions which have taken place at different times and reflecting various types of cost.

5. Trade cycle exaggeration:- The use of historic cost profit measurement intensifies trade cycle ups and downs of business activity in an economy. <sup>1</sup>

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1. W. T. Baxter, Accounting Values and Inflation, London, McGraw-Hill, 1975, chapter 11 and R. J. Chambers, Accounting for Inflation - Methods and Problems, University of Sydney, 1975 - p. 7.

This happens as the accountants tend to overstate profits in a boom period and understate profit in recession. Alternate over and understatement of reported profit following historic cost accounting system affects the size and timing of the cycle - through the influence of reported profit on business confidence, supply of credit and on policies of consumption and investment. In boom period, investors are ready to invest and companies are willing to expand to sustain the apparent healthy profitability. On the other hand, in recession, when prices are falling, the historic cost accounts tend to understate reported profit and thus builds up pessimism in business community. Publication of apparent losses causes excessive cutbacks in production and employment and prevents profitable investment from being undertaken, thereby further aggravating recession which may culminate into depression.

The serious distortion and inadequacies of historic cost accounting has alerted accounting profession all over the World to do something to account for inflation. Various discussion papers, exposure drafts, provisional standards, standards etc., have been put forward by professional official bodies as their recommended approach to account for price level changes, commonly known as 'inflation accounting'. The approach suggested is varied, following different bases of measurement and valuation. Thinking on inflation accounting is changing very quickly, which would be evident from superseding recommendations in many countries, different from earlier ones. We have traced inflation accounting development all over the World since 1971, exhibited in Appendix A to this chapter.

The Case for developing economies:

"Accounting is a product of its environment".<sup>1</sup> Accounting is influenced and shaped by the economic environment within which it operates. Various individual, economic, social, political and legal influences have affected accounting evolution in different directions of accounting development. Proper understanding of the accounting environment is of utmost importance in any endeavour to improve the accounting structure in any economic system. "Accounting conventions to have authority must be well conceived in relation to the use of accounts, to the social and economic concepts of the time and space and to the modes of thought of the day".<sup>2</sup>

Chambers states that, "Difference in the economic endowment and development of countries may be expected to produce differences in the style and quality of accounting, in a country which is largely agricultural or in which commerce and industry is largely in the hands of small firms run by owner-manager, much less and much less sophisticated accounting may be expected than in a country the commerce and industry of which is dominated by large corporations."<sup>3</sup> In advanced countries following an environment of industrial development; accounting has reached much sophistication and maturity which is yet to materialize in developing countries. Following Gill - "What unites poorer countries of the World in a group and makes the notion of 'developing countries' a meaningful one, is that all these countries have just began to experience, or have yet to experience the phenomenon of rapid industrial development which has become so characteristic in the economically advanced nations".<sup>4</sup>

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1. George M. Scott, Accounting and Developing Economies, University of Washington, 1970, p. 85.
  2. Frederico Riesco, "Financial statements and economic development" The Australian Accountant, January 1964, p.46.
  3. R.J. Chambers, "Accounting in an international economic community" Journal UEC, January 1972, p.52.
  4. Richard T. Gill, Economic Development - Past and Present, New Jersey, Prentice Hall, 1963, p. 80.

On the basis and extent of industrialisation and accounting development, we postulate to distinguish accounting practices in the context of developed and developing economies - though we are aware that, it is not possible to draw a precise line which delineates exactly the accounting practice of developed and developing countries. Though we would be discussing in terms of developed and developing countries, nevertheless it is assumed that accounting practice would be all alike or uniform in every country under the broad economic context of developed and developing economy.

Similar to the case of differences in economic development pattern, accounting concepts may be alike or similar between two nations or completely unlike or dissimilar between two other nations. But by and large, there are certain factors which have influenced the growth and development to a more or less similar pattern of accounting practices over a large number of countries. As an example of such unitary force, we can point towards the influence of the British accounting practices over a wide range of countries. Great Britain through domination, trade, investment and professional accounting practices has much influenced the growth and development of accounting in Middle and South East Asia, Africa and Old Commonwealth countries, and these regions more or less follow the same philosophical approach to accounting and as such could be taken together to have constituted a distinct group. Mueller observes that "Political boundaries are not necessarily good clues to differences in accounting concepts and practices. Although international differences in accounting concepts exist they are not as numerous as the number of countries or national political entities now recognised as independent in the family of nations. By and large one can discriminate Anglo-North American, Scandinavian and Dutch accounting practices".<sup>1</sup>

Another factor which unites the structure of accounting in different developing countries is the process of industrialisation. As nations become industrialised, certain company organisation patterns evolve and create

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1. Gerhard G. Mueller, International Accounting, New York, Macmillan, 1967, p.224.

similarities of business environment in different nations. This means that similar functions of accounting are emerging in response to the similar information needs in different developing countries. Scott is of opinion that "Similar accounting functions, seem likely to encourage similarities in other accounting characteristics among developing nations and there are suggestions that these similarities are gradually beginning to occur"<sup>1</sup>.

The description of a 'developing country' is difficult and no single criterion could be fruitfully employed to describe them.<sup>2</sup>

Throughout this study, the composition of the developing countries corresponds to that of "Economic Class II" in the foreign trade statistics of United Nations publications -- these being all of the Western Hemisphere except the U.S.A. and Canada, all of Africa except Union of South Africa, The Middle East except Israel, South and Far East except Japan, Oceania except Australia and New Zealand.

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1. Scott, op.cit., P.85.
  2. In United Nations, Measures for the Economic Development of Under-developed Countries, New York 1951, developing countries have been defined as "Countries in which per capita real income is low when compared with the per capita real incomes of the U.S.A., Canada, Australia and Western Europe" (P.3). But in modern thinking, higher per capita income cannot be the only criterion to judge the level of development. Rather development is thought to imply a complex combination of social, cultural and economic facets of well-being. "Kuwait floating on oil, had in 1973-74 double the U.S. income level about \$10,000 per capita as compared with the U.S. \$5,000. But we usually do not and sensibly do not call such countries 'developed'-- states Morgan (Theodore Morgan, Economic Development -- Concept and Strategy, New York, Harper and Row, 1975 --P.1). Apart from per capita income -- characteristics like level of industrialisation, average life expectancy, high school enrollment, electricity consumption, composition of foreign trade, etc., have been suggested to demarcate developed and developing economies.

In a period of inflation, the distortion and inadequacies of historic cost accounting are alike in both sets of economies. It is also urgent for developing countries to account for inflation. Various comprehensive and practicable inflation accounting methods have been formulated in recent years mostly in developed countries and for that reason to best suit environment there. Developing countries who aspire to implement inflation accounting, has the advantage that various comprehensive and practicable inflation accounting methods are already developed and can be drawn from elsewhere. They need not start from the scratch. This would be an easy way but as there are many competing models and the need to best suit environment makes the choice difficult. There is also possibility that none of the competing models may be best suited to the particular needs of developing countries and they need to develop new inflation accounting method. An uncritical acceptance of an inflation method would not best suit the requirement and environment of a developing country.

This study is also needed to safeguard one unfortunate aspect of accounting practice in developing countries, as followed by Scott -- "The accounting professions of developing nations do not have sufficiently broad perspectives of accounting to choose the characteristics of accounting best suited to their needs from among those characteristics present in advanced nations. Instead they tend to accept whatever is most conveniently at hand. When integrated into the environment of a developing nation, the negative aspects of these borrowed characteristics may become amplified because borrowed accounting conventions often tend to be applied more dogmatically than in the nation of their origin. This may help to explain why accounting in developing nations so often tends to be procedurally oriented."<sup>1</sup>

The requirement of inflation adjustment in the economic sets of developed and developing economies may be similar but the particular economic environment, growth and sophistication of accounting profession, economy of practice, practicability etc., may make the choice different. It is important to remember

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1. Scott, op.cit., P.12.



in this regard that -- "We accountants must not assume that what might have been good for developed country, will be automatically good for emerging nations"<sup>1</sup> -- and "what many people and even government fail to understand is that one cannot place a modern complex system in the midst of a primitive country and expect it to blossom immediately. Most people in emerging nations may have neither the experience nor the understanding to make it work"<sup>2</sup> .

In this study it is emphasised that development of inflation accounting should not be in isolation from the main stream of thought, on the other hand, there should not be an uncritical acceptance of the pattern of inflation accounting methods of advanced nations or a random amalgamation of patterns of several nations, whose accounting for one reason or other happens to be conveniently available to a developing nation. Rather, developing nations need an orderly and carefully considered approach to inflation accounting. To stress the point, there are, we see, many competing models of inflation accounting with underlying ideas of capital maintenance and profit measurement -- should they look for one which reflects adjustment through general price level to show the effect of inflation on shareholders interest, a device to safeguard assets and operating capacity or do away with all these and go for straight inflow and outflow of cash. The developing countries need to critically examine the inflation accounting methods and their underlying concepts and framework to find out the best approach which satisfy their need and environment and at the same time sound in principle.

In selection or development of an inflation accounting method - the developing countries possess, in a way, the same advantage of being late comers in the field of industrialisation and economic development. Observation of the United Nations<sup>3</sup> that "Notwithstanding the many difficulties they face, underdeveloped countries today have one notable advantage over those that were

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1. Adolf J. H. Enthoven, "The changing role of accounting" Finance and Development, June - 1969, P.22.
  2. John W. Ross, "Accounting in newly developed nations" Cost and Management, July/August-1967, P.43.
  3. United Nations, Process and Problems of Industrialization in Underdeveloped Countries, New York, 1955 P.2.

industrialised during the 18th and 19th centuries; there is a vast fund of knowledge and experience to draw on and for the most part the experiments and mistakes of European countries need not be repeated". While it took many of the economically advanced countries, decades of discussion, persuasion and experimentation to reach present state of inflation accounting development, the developing countries are in a position of being able to draw upon immense accumulation of knowledge in developed countries. They need not set up long enquiry committees, go through the trial and error process of evaluating a recommended approach or build up the vast literature but they need to be careful not to select the wrong ingredients unsuitable for their own purposes.

Inflation accounting can no longer be discussed on a national basis. Improvements or innovations in one country influences the accounting practice elsewhere. Nowadays there is an international involvement in accounting development. The establishment of International Accounting Standards Committee (IASC) in mid 1973 is an example of such awareness.<sup>1</sup> IASC has promptly taken up the issue of inflation accounting on development of international accounting standards. International accounting ED-6 "Accounting for Changes in Prices" issued January 1976 will have major influence on inflation accounting thinking all over the World as the standards are binding on the professional accountants of the individual professional bodies and any deviation from such standards has to be reported. The IASC exposure draft proposes showing the effect of inflation on financial reports through either general or specific price level or both. In this situation of international awareness on inflation accounting, developing countries have to make a careful appraisal of different types of inflation accounting model available to them in the context of environment, need, practicability etc., to make the best choice.

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1. IASC now comprises of 44 professional bodies in 32 countries. Total membership is over 400,000 in addition to trainee accountants.

Particular importance of inflation accounting to developing economies:

As conventional historic cost accounting has deteriorating effect on operating capacity of business enterprises, maintaining capital intact in the sense of physical operating capacity in scarce capital situation of developing countries is very urgent in a period of high inflation. Maintenance of capital is a major endeavour of every nation, whatever limited capital they may have, developing countries must maintain physical capital to ensure that the same level of output and services could be produced out of it. Accounting in such a situation should delineate properly the part of profit distributable without impairing the capital of the entity. Accurate information for replacement of assets and determination of correct distributable profit should be the major criteria of a useful accounting system in a developing country.

A particular feature of historic cost accounting is that, it gives rise to liquidity crisis in a period of inflation -- which would be much more accentuated in developing countries. Due to under-developed money and capital market, short and long term credit and loan would be hard to get in developing countries. Reynolds<sup>1</sup> points out that "...the network of financial institutions to which we are accustomed -- commercial banks, savings banks, investment banks, insurance companies, stock exchange -- is imperfectly developed ... and is almost absent in many of the developing countries". Thus distribution of inflationary profit aggravates liquidity situation in developing countries and companies are forced to reduce their operation and volume of business drastically.

Developing countries are in short supply of productive resources. There can be little prospect of real economic growth in developing economies until economic resources are utilised more efficiently and effectively. Their development depends upon the proper utilisation of resources in most judicious and useful way. The resource allocation decisions of investors,

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1. Lloyd G. Reynolds, Economics -- a General Introduction, Illinois, Richard D. Irwin. 1969, 3rd edition P. 762

management and government are all affected by accounting information and therefore allocation of capital resources both in the micro and macro level of economic decision has important implication for financial reporting. If investment decisions are based on historic cost alone, resources are unlikely to be attracted to their most effective areas of use and need. We see inflation accounting as an important device to enable superior resource allocation media in the context of developing economies.

Accurate economic information is necessary for every nation, developed and developing alike. Accurate and informative accounts creates an atmosphere of confidence for the flow of investment and in developing countries, capital formation for productive use most needs to be enhanced. Accounting information credibility is the basis of investors confidence which is the essential link between savings and investment -- the two basic components of capital formation. It is our conviction that historic cost accounting information has led to underestimation and under-utilisation of accounting information as an effective instrument in the socio-economic process of advancement, particularly in the dynamic process of economic growth and development.

The lack of adequate information plays a negative role on the part of investors who demand adequate information along with confidence and assurance that funds will be properly used. Timely, accurate, informative and readable financial reports could enlighten the general public, enhance their understanding of the operations of business and industry and engender their confidence and trust in their country's business enterprises. The accounting profession in developing countries can thus do much to stimulate confidence in the industrial sector and to help to mobilise sterile savings. It is not that there is little savings, the sterile savings which may be in the form of jewellery, real estate or put just under the bed could be profitably employed in expanding business enterprises in developing economies. It is interesting to quote Qureshi<sup>1</sup> "The fact about hoarded savings came to light in 1971 when the State Bank of Pakistan demonetized (called up for cancellation) the

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1. Mahmood A. Qureshi, "Economic development, Social justice and financial reporting: Pakistan's experience with private enterprise" Management International Review, Vol. 15 - No. 6 - 1975 - P.79.

denominations of Rs.100 and Rs. 50 notes. There were long lines of people waiting outside commercial banks to exchange their notes which they carried in bags and sacks".

"High inflation in developing countries makes accounting difficult and forces entrepreneurs to give excessive attention to the financial side of the business and less to production. Minimizing real costs of production becomes less important than financial programming and the economy can become progressively less efficient as a consequence".<sup>1</sup> Adoption of inflation accounting would make management cautious about the need of increased working capital, replacement of fixed assets and cashflow consequences of important decisions. Inflation accounting would also be important in project analysis, where historic cost and guesswork is inadequate for cost-benefit analysis. "A \$26 million chemical fertilizer plant was constructed in a Latin American country, only to find that cost of importing fertilizer was less than its production cost. The plant was shut down and most of the resources embodied in it were lost"<sup>2</sup> -- should not happen in cost-benefit analysis based on current cost rather than on historic cost basis.

The developing nations depend for a high proportion of their capital formation on the inflow of foreign investment. The following table shows the extent of investment by market economies to developing countries in a single year.

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1. Maynard and Ryckeghem, op. cit. , P.248.
  2. Robert E. Seiler, "Accounting, information systems, and under-developed nations" The Accounting Review, October 1966, P.653.

TABLE - 4

Flow of resources - 1975

(Millions of U.S. Dollars)

Country of origin	Total	Official development assistance	Other official flows	Private capital
Austria	158	40	5	113 (71%)
Belgium	450	233	6	211 (46%)
Canada	978	510	34	434 (44%)
France	2,766	1,487	93	1,186 (43%)
Germany	1,366	965	150	251 (18%)
Japan	5,726	988	1,216	3,522 (62%)
Netherlands	534	312	9	213 (40%)
Switzerland	257	65	6	186 (72%)
U.K.	983	588	41	354 (36%)
U.S. A.	7,044	2,993	318	3,733 (53%)

Source: United Nations, Statistical Yearbook 1975, New York, 1976, Volume III, Table-199, PP.774-75.

Necessary loan and investment capital is not likely to be forth-coming from foreign sources unless investors or lenders have a good idea of the status and prospects of the enterprise. Foreign investors normally want the same kind of significant, accurate and informative financial statements that they are accustomed to obtain in their own countries. Certainly, with initiation of inflation accounting in their own countries, the investors would also like to see such improvement in the accounting system of the country they are going to make investment. Accounting being the "language of the business" must be well understood in the international financial market.

A modest degree of inflation has been widely held to be a stimulant to economic activity as ready access to money sustains the demand for goods and services remain willing to engage in new investment in the means of production. In economic analysis, it is emphasised that the economic growth process in developing economies is much eased through the money illusion and inflation is a necessary evil for rapid economic development. Though the

truth is that, it is not the accountant who are to generate or cure inflation, but nevertheless they should kindle it through their calculations. An ideal accounting system should be neutral to any economic effect -- but historic cost accounting in a period of inflation fails to do so. The 'cause and effect' relationship of historic cost accounting and inflation could be followed much clearer by their effect on affairs of state controlled or nationalised industries.

A losing company, whether or not its accounting system correctly reflects its losses will eventually require additional capital and if this is not forthcoming from the finite resources available to such an enterprise, it will eventually go out of the business. On the other hand, the government as an owner of productive facilities, has capital resources which are, relative to any individual enterprise, almost limitless. An inefficient or losing state enterprise may continue in operation indefinitely by printing more money -- unless an accounting system introduces realistic pricing for its goods and/or services and thus lead to adequate recovery for capital maintenance.

Government being big business in developing countries -- the inadequacies of historic cost accounting becoming an automatic discipline to ensure profitable running of state enterprises need to be well considered in favouring inflation accounting.

A study carried out by the National Economic Council of Applied Economic Research in India found that in Jute, Cement, Sugar and Chemical fertilizer industries where replacement of machineries were imminent, the internal source of finance could only cover 20% to 25% of total requirement.<sup>1</sup> This study was carried out in 1960s in a period of moderate inflation in comparison to present rate. The fact that developing countries has to import most of their plant and machineries from advanced countries where due to inflation as well the export price is going up as evident from Table - 7 coupled with the fact that due to abundance of low cost of labour, scarcity of capital,

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1. National Economic Council of Applied Economic Research, Replacement Cost in Industry, New Delhi, Government of India, 1960, P.17.

"companies usually postpone replacement even after the expiry of their assets economic life"<sup>1</sup> would create serious problem of asset replacement in developing economies'.

Organisation and methodology of the Study: Since the basic premise of this study is to follow and analyse the impact of environmental factors affecting the choice or development of an inflation accounting model -- the first phase of the study would be to specify and describe the inflation generating factors in developing economies. The particular need and objective of accounting reporting would be the focus of attention in next stage of discussion. This process would enable us to know the prospective role inflation accounting has to play as an effective instrument in economic information dissemination process. The particular need of accounting information in developing economies would suggest an answer to the question -- is there any need of differing from inflation accounting models developed in advanced nations? If yes, which way and what particular needs inflation accounting has to serve in that context.

The object of the second phase of the study would be to evaluate various inflation accounting methods developed and widely debated as best alternative to historic cost-accounting to account for inflation. The effort would be to isolate and analyse key points of disagreement underlying in such basic issues as maintenance of capital, determination of profit, valuation of assets and liabilities etc. This evaluation would highlight the particular aspects of inflation accounting models most suited to the needs of developing countries.

The third phase of the study would be a closure look at the development of inflation accounting practices in Latin American countries. Here we would adhere to a 'system approach' in the sense that accounting is a system within the broad framework of the whole economy. So a wider look at the economic system would reveal the development, characteristics, advantages, dis-advantages of inflation accounting models developed there. The experience of Latin American countries would be of much interest in this study, as inflation accounting methods have been developed there to cope with a high rate of inflation. Particular stress would be given to justify the appropriateness

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1. M. A. Mondal, A Suggested Approach to the Solution of the Problems of Profit Measurement and Asset Valuation With Reference to the Developing Economies of India and Pakistan, Unpublished M. Phil Thesis, Southampton University, 1968, P.36.



and usefulness of such inflation accounting models for other developing countries in Asia and Africa.

A synthesis of information and evidence gathered in the preceding stages would help us to formulate definite ideas to suggest an approach to inflation accounting in the context of developing economies. Through the assimilation of bits and pieces of information in regard to economic and accounting environment in developing countries, objectives and requirement of accounting information, examination of inflation accounting practice in Latin American countries -- an approach to inflation accounting could be recommended to function properly within the environment of developing economies. There is possibility that a particular inflation accounting method evaluated earlier may have the right ingredients and proper framework though needs adaptations or changes in certain aspects to be practicable and useful in developing countries situations -- such moderation and alteration would be undertaken. If the study suggests that an approach, altogether different from the methods evaluated earlier needs to be formulated, in the last stage of the study it would be given proper shape.

APPENDIX-A

International Proposals on Inflation Accounting since 1971

Argentina:

Exposure Draft - Accounting for Inflation

The Argentine Institute of Accountants

Issued - June 1971

Australia:

(i) Preliminary Exposure Draft - A Method of Accounting for Changes in the Purchasing Power of Money

Australian Accounting Research Foundation

Issued - December 1974

(ii) Report of the Committee of Inquiry into Inflation and Taxation in Australia

Professor R.L. Mathews (Chairman)

Published - May 1975

(iii) Preliminary Exposure Draft - A Method of Current Value Accounting

Australian Accounting Research Foundation

Issued - June 1975

(iv) Provisional Accounting Standards - Current Cost Accounting

The Institute of Chartered Accountants in Australia and  
Australian Society of Accountants

Issued - October 1976

Belgium:

Royal Decree on Financial Statements of Enterprises

Issued - October 1976

Canada:

(i) Exposure Draft - Accounting for Changes in the General Purchasing Power of Money

Canadian Institute of Chartered Accountants

Issued - December 1974

- (ii) Discussion Paper - Current Value Accounting  
Canadian Institute of Chartered Accountants  
Issued - August 1976

France:

Report of the National Planning Organisation - Inflation Accounting  
M. Jacques Delmas Marsalet (Chairman)  
Published - November 1976

Germany:

Accounting Standard - Accounting for the Purpose of Maintaining the 'substantialistic value' of an Enterprise  
Institut der Wirtschaftsprüfer in Deutschland  
Issued - October 1975

Israel:

Report of the Committee for Proposing Financial Reporting in Times of Inflation  
Institute of Certified Public Accountants in Israel  
Published - May 1976

Mexico:

- (i) Exposure Draft - Proposal for Restatement of Financial Statements for Changes in the General Price Level  
Instituto Mexicano de Contadores Publicos  
Issued - May 1975
- (ii) Recommendation - Peso Devaluation and Inflation  
Instituto de Contadores Publicos  
Issued - November 1976

Netherlands:

- (i) Exposure Draft - Considerations on the act on annual accounts, part 3, chapter IVa.1 : Methods for the determination of results  
Tripartite Committee of the Netherlands Institut van Registeraccountants, Federation of Enterprises and Trade Unions.  
Issued - December 1975

- (ii) Inflation - Neutral Taxation  
Professor H.J. Hofstra (Chairman)  
Published - March 1978

New Zealand:

- (i) Exposure Draft - SSAP No. 10: Accounting for Changes in Purchasing Power of Money  
New Zealand Society of Accountants  
Issued - March 1975
- (ii) Exposure Draft - SSAP No. 14: Accounting in Terms of Current Costs and Values  
New Zealand Society of Accountants  
Issued - August 1976
- (iii) Report of the Committee of Inquiry into Inflation Accounting  
I.L.M. Richardson (Chairman)  
Published - September 1976

South Africa:

- Discussion Paper - Accounting for Inflation and Other Changes in Price Level  
The National Council of Chartered Accountants (S.A.)  
Issued - January 1975

U.K. and Ireland:

- (i) Discussion Paper - Inflation and Accounts  
Accounting Standards Steering Committee (ASSC)  
Issued - July 1971
- (ii) Exposure Draft - ED-8: Accounting for Changes in the Purchasing Power of Money  
ASSC  
Issued - January 1973
- (iii) Provisional Statement - SSAP-7: Accounting for Changes in

the Purchasing Power of Money

ASSC

Issued - May 1974

(iv) Report of the Inflation Accounting Committee

F. E. P. Sandilands, (Chairman)

Published - September 1975.

(v) Exposure Draft - ED-18: Current Cost Accounting

Accounting Standards Committee (ASC)

Issued - November 1976.

(vi) Interim Recommendation - Inflation Accounting - An

Interim Recommendation

ASC

Issued - November 1977.

U.S.A:

(i) Exposure Draft - Financial Reporting in Units of General  
Purchasing Power

Financial Accounting Standards Board (FASB)

Issued - December 1974.

(ii) Regulation - Amendments to Regulation S-X Requiring Disclosure  
of Certain Replacement Cost Data

Securities and Exchange Commission (SEC)

Issued - March 1976.

International:

Exposure Draft - E6: Accounting Treatment of Changing Prices

International Accounting Standards Committee (IASC)

Issued - January 1976.

Chapter 2: Inflation in developing countries

Inflation accounting is an outcome of persistent high inflation in the context of developing economies. In the following paragraphs, we would try to follow the inflationary process and inflationary environment present there. This discussion would also highlight the underlying forces generating inflation, the inflationary characteristics prevailing in developing economies, and their similarities and peculiarities in comparison to advanced economies.

The imbalance between limited resources and large needs is the major factor of inflation in developing economies.<sup>1</sup> Cost push through wage pressure is lower, because un-employment both disguised and actual, tends to be a good deal higher in a typical developing country, and government is not committed to any full employment policy. Moreover, as high proportion of labour is employed in agriculture and primary production, trade union organisations are less strong and efficient.

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1. Geoffrey Maynard and W. Van Ryckeghem, A World of Inflation, London, B. T. Batsford, 1976, p.182.

The following table shows the rate of inflation in both sets of economies in recent years.

**TABLE - 5**  
**Rates of inflation in developed and developing countries 1965-75**  
**(annual percentage changes)**

Developed	1965 to 1972	1973	1974	1975	Developing	1965 to 1972	1973	1974	1975
Belgium	4.33	7.0	12.6	12.7	Argentina	37.3	62.3	23.3	82.8
Canada	3.89	7.6	10.9	10.8	Brazil	22.0	12.7	27.4	30.5
Denmark	6.39	9.3	15.3	9.6	Bolivia	5.3	31.6	64.0	3.9
France	5.14	6.0	7.4	11.8	Chile	39.3	319.5	585.9	374.7
Germany	4.37	7.0	7.0	6.0	Colombia	11.1	22.8	22.8	5.7
Italy	4.50	10.8	19.1	18.0	Equador	7.0	12.9	23.4	7.7
Japan	5.53	11.7	22.7	11.8	Guatemala	0.6	13.8	16.4	-
Netherlands	6.77	8.1	9.6	10.2	Ghana	6.6	10.5	24.2	11.1
Norway	6.13	7.5	9.4	11.7	Honduras	3.1	4.5	13.3	5.4
Sweden	5.70	6.8	9.8	9.8	India	5.4	17.0	28.5	5.4
Switzerland	5.55	8.8	9.8	6.7	Iran	4.0	9.8	14.1	12.9
U.K.	7.06	9.2	15.9	24.3	Indonesia	5.5	31.0	41.1	19.0
U.S.A.	3.97	6.2	11.0	8.5	Jamaica	5.9	19.0	27.4	7.4
Group Average	5.33	8.2	12.4	11.7	Kenya	3.8	9.2	18.0	18.5
					Korea	11.7	3.1	23.6	25.1
					Morocco	2.9	4.1	17.9	8.0
					Mexico	4.8	11.2	22.4	15.0
					Nigeria	8.2	6.3	12.4	31.9
					Peru	8.0	9.5	16.9	23.9
					Pakistan	6.2	22.0	28.6	20.7
					Phillipines	10.3	11.0	34.5	9.3
					Sri Lanka	4.3	9.6	12.4	7.4
					Thailand	2.9	11.7	23.3	4.1
					U. A. R.	3.2	5.1	10.1	9.8
					Uraquay	52.9	99.0	76.0	81.3
					Venezuela	2.5	4.2	8.5	10.0
					Zambia	5.9	6.4	8.4	10.0
					Zaire	15.5	5.8	29.5	27.4
					Group Average	10.6	28.4	44.9	31.3

Source:

United Nations Statistical  
Yearbook, various issues.

Nature and causes of inflationary pressures in developing countries possess certain characteristics peculiar to themselves. A proper understanding of such factors are necessary to formulate inflation accounting methods to operate in such an environment. These inflationary forces are:-

Government and credit creation:

Governments play a dominant role in the economic growth of developing nations.<sup>1</sup> The private enterprise sectors of most developing countries are very much weaker and governments have to play a leading role in provision of physical infra-structure and social overhead capital<sup>2</sup> to usher faster economic growth. United Nations<sup>3</sup> observes that "In view of the fact that the social and economic environment that exists in most under-developed countries has many features which are unfavourable to industrial growth ...

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1. In all countries, of course, the adoption of full employment, growth objectives and Keynesian type economic policies generally has led to growing intervention by government in economic spheres.
  2. These include public transport, power, communication and social services like improved medical care, education and public facilities which spread benefits socially and a pre-requisite to economic growth.
  3. UN, Process and problems of industrialisation in under-developed countries, New York, 1955, p.2.



governments will have to play a more positive role in guiding investment, preparing the factors for more productive employment and assisting in the mutually beneficial adjustment of human and industrial needs than was the case in most European countries -- especially if the rate of industrialisation is to be accelerated".

The demand creating impact of government expenditure falls directly on goods and services and little on transfer payments on social security and other welfare assistance. This heavy expenditure if financed through taxation and borrowing would off-set the demand expansion impact of government expenditure, but due to lower revenue through taxation, government cannot meet the deficit and as such creates demand pull type of inflation. Normally a developing country can collect about 10% to 15% of its national income in taxes in comparison to 30% to 40% in advanced nations.<sup>1</sup>

The following table shows the relative proportion of tax component in gross domestic product in both sets of economies.

TABLE - 6  
Taxes as percentages of gross domestic product

Developed Countries	Recent Average Tax	Developing Countries	Recent Average Tax
Sweden	43%	Burma	21%
France	38%	Jamaica	17%
Germany	35%	Colombia	16%
U.K.	35%	India	15%
Canada	32%	Phillipines	11%
U.S.A.	32%	Nigeria	10%
Switzerland	23%	Mexico	7%
Japan	21%	Afghanistan	6%

Source: Paul A. Samuelson, Economics, Tokyo, McGraw-Hill Kogakusha, 9th edition 1973, table 8-1, p.149.

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1. Walter Heller, "Fiscal policies for under-developed economies" in Leading Issues in Economic Development, Gerald M. Meir (Edited), New York, Oxford University Press, 1964, p.115.

Governments in developing countries have less chance of meeting any deficit in their fiscal amount by borrowing from private capital markets. Capital markets are much less developed, and apart from commercial banks, there are few lending institutions which can take up government debt on the basis of deposit and other liabilities with the general public. Thus in so far as government of these countries cannot finance their expenditure by taxation or borrowing the deficit is made up by printing money or by borrowing from the central bank. Hence the money supply is expanded at too fast a rate. Too much currency and demand deposits are spent first by the government and then by successive rounds of private recipients - and price rises.<sup>1</sup>

Chronic deficit financing of developing plans in many Latin American countries resulted in higher inflation. In Argentina in the years 1955 to 1965, the government budget deficit averaged about one-fourth of the total government expenditure and about 3.5% of the countries GNP; 50% of this deficit was on an average financed by re-course to the banking system.<sup>2</sup> Inflation in Argentina in the last decade average 29%, it seldom rose less than 15% in any years and in one year it rose by as much as 100%.<sup>3</sup>

#### Economic development

"It is probably not possible to have rapid economic development without some inflation" -- observed United Nations,<sup>4</sup> continuing on that, "Since it is hard to increase voluntary savings very much in countries where the standard of living is very low and since a compulsory reduction of consumption by means of taxation is also unpopular, it is sometimes suggested that these countries should pursue the path of inflation. This actually gives the illusion that the

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1. Though there are considerable room for financing government expenditure through the creation of money, as the monetization of the economy proceeds, but excessive creation of money leads to inflation. The pressure for increased government expenditure to satisfy the social and development needs are very severe, while on the other hand the elasticity of tax revenue is rather low and hence government has to continue on deficit financing.
  2. Maynard and Ryckeghem, Op, cit, p.199.
  3. Ibid, p.199.
  4. UN, Process and problem of industrialisation, Op, cit, p.42

standard of living is rising, because it raises money incomes. By the time the public realises that prices are rising even faster, the creation of new capital is already taking place".<sup>1</sup>

An increase in investment can come about in the form of 'forced savings' --- resulting from inflation and shift of income distribution in favour of the productive sectors of the economy. The mechanism of such forced savings takes the form of driving up the prices of scarce resources by deliberate attempts of government, so as to induce the consumers to curtail consumption because of rising prices and thus release productive resources for investment purposes. The second mechanism takes the form of a shift in the distribution of income away from sectors with a low propensity to save towards sectors with high propensity to save; usually in favour of mercantile and industrialist class.<sup>2</sup> As such increased profit encourages the industrialist and mercantile class for further investment.

If prices are rising, business activity will be stimulated; as production is carried on in anticipation of demand and as all costs do not increase immediately as prices begin to rise, profit margins will be greater which will lead to further future investment. . J.R. Hicks<sup>3</sup> observes that "In inflation where

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1. Though the above statement is true, the problem is that once inflation begins, it becomes difficult to limit it to a moderate amount. Instead of allowing only a mild inflation, government is more likely to be tempted into deliberately using inflation as an easy way of financing increased expenditures. The process becomes cumulative and it becomes extremely difficult to halt it because of payments disequilibrium or else have to depreciate its currency continuously as inflation becomes cumulative. In an advanced stage, inflation may even become a cause of capital consumption in a country's economy as did happen in Germany during 1920-'23 hyper-inflation.
  2. It is obvious that a very considerable inflation could be generated by such re-distribution of income for capital formation process, if it provokes a serious wage-price spiral. If such a situation develops and if wages re-act quickly and fully to the rise in prices, it may become difficult to attract and mobilise the real resources required for capital formation. Moreover, it is not only a socially painful process but also an unstable and unreliable source of capital formation. Continuous higher rate of inflation will induce industrialists to hold stock of commodities and invest in real estates, whose price goes up with general price rises and thus generate capital gains.
  3. "What is wrong with monetarism", Lloyds Bank Review, October 1975 p.1.

demand pull is dominant the receipts of business rise faster or more quickly than their costs, so a demand inflation is a condition of high profits, high activity and high employment''.

Certain conditions are necessary if the method of forced savings and investment have to be successful. The first is that the government should not aim at raising the rate of capital formation too quickly or too much, and the second condition is that the investment carried out should be of quick gestation and yield output in the form of wage goods.<sup>1</sup> The third condition is that, inflation should re-distribute income to entrepreneurs who use it to finance further productive investment or to the government in the form of increased taxation. The fourth and final condition is that, government should have sufficient control over the economy to prevent flights of capital abroad, import of luxury types of goods, speculative real estate contracts and so on.

Inflation in Brazil during the 1950s is an example of inflation forcing savings and thereby stimulating economic growth. Throughout this period wages lagged behind prices and the share of profits tended to rise. A high rate of capital formation averaging about 15% of GDP was maintained; this was financed by domestic savings which never provided less than 80% of total capital formation. During the early part of the period it was the private sector that benefitted mainly from the lags inherent in the process, while towards the end of 1950s and early '60s it was mainly government that succeeded in financing increased investment expenditure through inflationary process.<sup>2</sup>

#### Foreign Trade:

In modern times, inflation is not wholly 'home produced'; but synchronized with transmission from abroad.<sup>3</sup> One country's exports are another

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1. Whilst it may be necessary to reduce the ratio of consumption to national output, to achieve faster economic growth, this is easier if the total output of consumption goods is rising in absolute terms.
  2. Maynard and Ryckeghem, Op. cit., p.204.
  3. In a world of fixed exchange rates and more or less free trade, some synchronisation of price development throughout the world is to be expected - observed Maynard and Ryckeghem, Op., cit. p.182.

country's imports, and a rise in the price level of exports of one country will mean a rise in the import prices of another country; which in turn will feed through into a rise in the general price level of the importing country.

The following table shows the relative increase in consumer prices and import and export unit values of industrial countries for recent years:

**TABLE - 7**  
Consumer prices and import and export unit values of industrial countries\*  
(Annual percentage changes)

Country	Consumer prices			Import unit values			Export unit values		
	1972	1973	1974	1972	1973	1974	1972	1973	1974
Austria	6.3	7.5	9.5	0.0	2.9	16.8	(1.0)	3.0	16.5
Belgium	5.5	7.0	12.7	(1.0)	7.9	31.2	2.1	9.1	25.9
Canada	4.8	7.6	10.9	2.9	11.0	31.2	2.8	15.0	35.3
Denmark	6.6	9.3	15.0	0.0	11.0	34.7	4.9	12.0	18.2
France	5.9	7.3	13.6	0.9	7.6	50.7	1.0	10.1	25.6
Germany	5.5	6.9	7.0	(2.5)	6.4	25.3	0.7	3.5	15.0
Finland	7.5	10.5	17.0	8.4	11.2	43.4	7.5	12.3	41.4
Ireland	8.7	11.3	16.9	4.6	12.9	46.0	13.5	22.3	23.7
Italy	5.7	10.8	19.1	2.8	28.2	73.4	3.0	16.9	41.9
Japan (a)	4.5	11.7	24.5	(4.3)	21.0	66.3	(2.9)	9.0	33.7
Netherlands	7.8	8.0	9.6	(1.0)	7.8	38.7	1.0	6.8	28.2
Norway	7.3	7.5	9.5	1.9	5.6	26.5	(1.0)	9.7	31.9
Sweden (b)	6.5	7.0	10.1	0.9	13.1	36.4	3.8	10.1	27.5
Switzerland	6.7	8.7	9.8	2.0	6.8	19.0	4.8	3.0	13.1
U.K.	7.1	9.2	16.0	4.0	26.6	52.3	5.1	13.1	29.1
U.S.A	3.3	6.2	11.0	7.4	18.8	48.0	3.4	16.0	28.0

\*) Based on data in national currency.

a) Import and export prices

b) Excluding ships.

Source: GATT, International Trade 1974/75, Geneva 1975, Table-19 p. 77.

For developing countries as a whole the ratio of exports to gross domestic product appears to be not much less than 20% in recent years as shown in the United Nation's Yearbook of National Accounts Statistics. As these countries are more open in the sense that they have large foreign trade sector relative to GDP, the more likely and the more quickly their domestic price levels are affected by rises in foreign trade prices.

In many cases the export of only one or two staple commodities may account for a large part of foreign earnings. In 1973 <sup>1</sup> the following developing countries obtained more than half of export proceeds from their sale of a single primary product:

<u>Materials for beverage:</u>	<u>Agricultural raw materials:</u>	<u>Other Foods:</u>
Angola	Bangladesh	Cuba
Brazil	Egypt	Ecuador
Cameroon	Liberia	Honduras
Colombia	Sudan	Mauritius
Ethiopia	Uruguay	Nigeria
Guatemala		Panama
Ghana		Taiwan
Haiti		Thailand
El Salvador		
	<u>Minerals</u>	
	Bahrain	
	Bolivia	
	Chile	
	Iran	
	Iraq	
	Kuwait	
	Qatar	
	Saudi Arabia	
	Venezuela	

A major problem connected with this heavy reliance on exports of only one or two commodities is that the country is particularly susceptible to the transmission of the trade cycle from overseas. A depression abroad reduce the demand for the primary products and these exports suffer large price and value declines. Overseas prosperity raises the demand for the developing countries exports and total proceeds increases; reverse is the case when there is slump and depression.

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1 IMF, International Financial Statistics, December 1974, p.21.

Developing countries have to depend heavily on export earning to import machinery, industrial raw materials and other requisites of industrial growth. Their capacity to import capital goods and semi manufactures is of great importance to economic growth. To attain the goal of 6% annual growth rate by the end of 1970s as set out in International Development Strategy (IDS) for Second Development Decade; developing countries will have to increase their imports of capital goods by 7% to 8% annually.<sup>1</sup>

A policy of import substitution, if pursued behind high tariff walls and pressed forward with scant regard for dynamic comparative costs, can be a potent source of inflationary pressure in developing countries. A United Nation's study<sup>2</sup> observes that "where embargoes or very high duties are required for the protection of a local industry, the burden on the economy as a whole requires careful scrutiny, for if the industry is an important one, its excess costs may constitute an appreciable handicap to all these activities, including other manufacturing establishments, which directly or indirectly purchases its high priced product".

A high rate of domestic inflation leads to devaluation of domestic currency. Frequent devaluation in high inflationary Latin American countries corroborates to this assertion. Brazil with long history of accelerated inflation practise a system of periodic 'mini devaluation' of exchange rate at uncertain intervals and in mini steps, several times a year to avoid speculation in foreign currency.<sup>3</sup> As the exchange rate falls, the cost of import prices in domestic currency rise sharply and thus imposes cost raising pressure on domestic producer and imparts upward twist to the inflationary spiral. On the other hand, devaluation and inflation, raising domestic prices relative to foreign prices, tends both to divert to the domestic market some output formerly exported and encourage imports.<sup>4</sup> The threat of further devaluation both repels foreign capital and causes a flight of domestic capital where it is free to do so. The higher cost of

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1. IDS was adopted by the General Assembly on October 1970 for the Second Development Decade of 1971-'80.
  2. UN, Process and Problems of Industrialisation, Op., cit, p.27.
  3. Roberto de Oliveria Campos "Inflation the Brazilian experience and Ireland", Management, March 1975, p.40.
  4. Everett E. Hagen, The Economics of Development, Illinois, Richard D. Irwin, 1975, p.366.

imports and flight of domestic capital in a period of accelerating inflation tend to feed itself and becomes self-generating.<sup>1</sup>

Structural factors:

Structural inflation in developing countries is associated with bottlenecks or in-elasticities in supply in particular crucial sectors of the economy. The most important form of supply in-elasticity that can cause considerable inflationary pressure in developing countries lies in agriculture; particularly in food production. If economic growth is taking place, demand for food will also be rising, although probably at a slower rate, but if food supply fails to increase to match the increase in demand, food prices will rise, causing repercussions elsewhere and generalised inflation may result. In other words, inflation results because agricultural price rise over time and since other prices do not fall; the overall price level increases.<sup>2</sup>

Though agriculture is a major factor, other structural factors can also lead to inflation. Economic growth produces an expansion of demand for many public utility services such as power and transport, which are not quickly or easily met, prices therefore rise sharply in these sectors of the economy and given the vital nature of these services, inflationary pressures are transmitted into the whole economy. Governments in many developing countries generally provide public utility services as social overhead capital and Maynard and Ryckeghem observes that "if to restrain inflation, government does not increase the price when costs are rising, these services may be supplied at below cost and become a charge in the fiscal budget, contribution to an overall deficit which may have to be financed by money creation."<sup>3</sup>

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1. James A. Morrall and Raymond Ashton, Inflation and Business Management, London, Economic Forecasters - 1974 - P.57.
  2. Not only disequilibrium in growth in different sectors of the economy is a source of inflation in developing country, it is also a source of inflation in developed countries as well. Wachter (Susan M. Wachter, "The impact of agricultural prices in inflation", Business Economics, September 1975, p. 87) follows that, though agricultural sector in U.S.A. is small, making up less than 5% of GNP, the 1972-'74 inflationary acceleration demonstrates that a rise in the relative price of food can result in a sharpe increase in the overall inflation rate.
  3. Maynard and Ryckeghem, Op., cit, p.195.



Expectations:

Expectational inflation depends on a general set of expectations of price and wage increases and such expectations may have been generated by a continuing demand inflation. Wage contracts may typically include escalator clauses and price contracts may be made on a cost-plus basis such as present practised in Brazil in its 'monetary correction' policy to live with inflation. Inflation may persist long after the initial excess demand causes are removed, as each set of price increases led with a lag to a set of wage increase that followed with a further lag to more price increases.

When people anticipate further price increases, they try not to hold money whose real value is falling but rather spent it promptly. As such velocity of money rises and price increases faster. Rising prices resulting from an expansion of money supply without concomitant rise in production encourages speculation and discourages production for a small normal profit. People try to hold stock of commodities, foreign currency, real estate, gold, etc., which gives protection against inflation by yielding capital gain. By reducing the real value of small savings, it also discourages the lower and middle income groups from continuing to save. So, once it has started, inflation generates forces which re-inforce it and makes cumulatively more difficult to end.

Inflationary expectations are built into the economy and it is extremely difficult to reverse them without producing severe industrial recession which is politically unacceptable, as is the inflation. Once inflation becomes anticipated and these expectations are invalidated by monetary and fiscal policy, inflation tends to feed itself and become automatic. The Brazilian experience demonstrates that, it is extremely difficult to halt a rapid and prolonged inflation within a short period of time even if a country has a strong military government.

If allowed to continue, inflation will tend to produce a variety of bottleneck conditions which serve thereafter as propagating or self-reinforcing mechanisms for the process; e.g., flight of capital, diversion of investible funds into less productive uses such as stock hoarding, luxury house building and a drop in the propensity to save. On account of these

several bottlenecks, prices will tend to rise long before resources are generally fully employed and inflation is thus accepted as an inevitable by-product of growth until such time as structural change may affect the conditions of supply elasticity.<sup>1</sup>

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1. William P. Glade, "Prices in Mexico: From stabilized to de-establized growth" in Inflation: Long term problems, Lowell C. Harriss (edited), New York, Praeger publishers, 1975, p.189.

### Chapter 3: Accounting in Developing Countries

Accounting structure in developing countries has emerged as a conglomeration of ideas, conceptions, practices and influences which arose at different times and in response to different problems in their way of development. The modern system of double entry and accrual basis of accounting were developed during the period of industrialisation, or brought through foreign domination.

Accounting in developing countries has been strongly influenced by the accounting practice of at least one advanced nation and generally that nation with which the developing nation has had a colonial relationship. French accounting prevails in former French territories in Africa and the Middle East; British accounting influences has been extremely strong in the former British interests in Middle and South East Asia and other Commonwealth countries. The dominating countries took their business and accounting philosophies to their colonies and instituted similar systems.

One way of accounting influence has been through trading relationship. Wherever there is business association between nations, there will be some interchange of accounting practices. Accounting principles in such a situation is transmitted from one country to another. When large amounts of capital is invested in another country, it enables the investor to impose their own accounting principles to the other. Seiler and Dilbeck<sup>1</sup> observes that, "Since much of the original investment in the U.S. A. came from England (in early part of industrial development) it may be significant to note that much of the early development of public accounting in U.S. may be attributed to imported talent and the requirement that standards of investor nation be met." In recent years, United States has tended to influence accounting practices in many developing countries through foreign direct investment.

Foreign accounting and auditing influences has been strong in many developing countries through foreign operated firms e.g., banks, insurance companies, international firms. In Egypt, for example, the accounting practice had been monopolised in the past by foreigners who owned a large part of the economy; presently a mixture of French, English and Russian influence is felt in it s

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1. R.E. Seiler and H. Dilbeck, "Latin America -- a challenge in development assistance", Journal of Accountancy, October 1967, P.47.

accounting system and practices.<sup>1</sup> Firms in advanced nations often require that certain conditions of doing business be met by associated companies in developing nations. One such requirement may be that, accounting conform in certain respects to that present in advanced nation. Once entrenched, these accounting practices often spread in the developing nations, perhaps because the practice have stature by virtue of being from an advanced nation.<sup>2</sup>

The outside influence may result from a nation's intention to adopt, more or less the accounting practices of a particular advanced nation. This appears to have been the case in Japanese and Mexican accounting development.

Japan first adopted the German accounting ideas, but since the end of Second World War, U.S. concepts have dominated.<sup>3</sup> Mexico, due to its Spanish heritage, originally reflected the Spanish accounting practices but due to more involvement in trade and industrialisation with U.S.A., Presently it has almost completely adopted the American conceptions of accounting.<sup>4</sup>

Historically, the most effective vehicle for the international transfer of accounting skills has been the international accounting firms. The American accounting profession, for example, was in great measure developed by representatives of British firms sent to U.S. Still today, the international accounting firms are probably the most effective vehicle for the transfer of Anglo-American accounting skills to other countries. Wherever their work takes them into developing nations, these prestigious firms influences the accounting practices, to the firms to which they extend services. Their principal influence are exerted when they hire, train and utilise local nationals as to practice the Anglo-American accounting skills.

In the past and still today, accounting publications are the most important source of transmission of accounting thinking. Seidler<sup>5</sup> observes that,

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1. Adolf J.H. Enthoven, Accountancy and Economic Development Policy, North-Holland, Amsterdam 1973, P. 278.
  2. George M. Scott, Accounting and Developing Economies, University of Washington, 1970. P. 11
  3. Enthoven, Op. cit., p. 278
  4. Ibid, P. 278.
  5. Lee J. Seidler, "The Function of Accounting in Economic Development - Turkey as a Case Study", New York, Frederick A. Prager, 1967, P. 215.

"...in the former English colonies in Africa, tradition in the Universities and the influence of the Companies Act dictate the choice of English accounting model". International matters of accounting get more attention in the accounting literature. Accounting journals all over the world carry regular international departments. Frequency and attendance of international accounting conventions are on upward trend. Most institutional accounting organisations have active committees dealing with international accounting matters. Many Universities<sup>1</sup> have commenced offering formal courses in international dimensions in accounting.

The formation of International Accounting Standards Committee in Mid 1973 stress the international involvement in the way towards more understanding and unity of international accounting. The IASC would in future exert most influence in the thinking of international accounting bodies. The objective of the IASC as set out in paragraph 1 of the agreement, "is to formulate and publish in the public interest, basic standards to be observed in the presentation of audited accounts and financial statements and to promote their world wide acceptance and observation." At present there are 32 founder and associated members, and the international accounts standards are obligatory for the auditors of the member professional bodies comprising the IASC.

Nature of accounting practice in developing countries: In developing countries, accounting is still mainly custodianship and tax oriented. The former to account for the funds and to prevent fraud by setting controls and checks in the system, the latter is a legally required obligation. Local accounting systems and procedures in developing countries may be largely fiscal oriented, often influenced by the government to comply with tax and commercial codes and other regulations. Enthoven<sup>2</sup> observes "the requirements of the commercial and tax code, for example in Turkey, are liable to cause accountants essentially to be legal experts and their expertise in real accounting may be consequently limited".

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1. For example, Lancaster in U.K; Washington and Illinois Universities in U. S. A. has "International Accounting Centres" to carry out research in International accounting spheres.
  2. Enthoven, op. cit., P. 279

One particular evolutionary pattern, which is common in most developed and developing countries, is the emphasis on external financial reporting. This orientation is still present, though to a diminished degree in advanced countries. The emphasis of external reporting is the outcome of dominant position of auditors in shaping accounting principles and education in many countries.<sup>1</sup>

Auditors usually have a higher degree of professional organisation and professional status than private accountants. Since auditors focus primarily on external reporting and on auditing, and since they are generally more influential in shaping attitude towards accounting principles and in determining the nature of all accountant's education; it seems natural that auditors' influence would tend to further the cause of external reporting. The amount of economically useful information generated by the enterprise accounting system for the micro and macro decision making are often scanty, unrealistic and incomplete. To a large extent the whole debate on inflation accounting has been around 'objectivity' and 'subjectivity' of generated information. The official pronouncement by professional accounting institutions have until very recently favoured objective rather than more fruitful less objective value based accounting methods.

Many weaknesses in the accounting system of developing countries may be as basic as simple book-keeping.<sup>2</sup> Modern accounting innovation permitting internal accounting system to assume a high degree of sophistication and enabling these systems to provide cost control and decision making for management have not yet been incorporated in the accounting system widely in developing countries. Extensive internal reporting has much wider role to play in the accounting system of developing countries which has not yet been realised there. Elliot<sup>3</sup> observes - "for all legal purposes the balance sheet is the primary financial statement. Income statements are very rarely published in Latin America. Explanatory foot notes and disclosures are the except rather than the rule and the

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1. Scott, Op. cit p. 89.

2. Enthoven, Op. cit p. 286.

3. Edward L. Elliott, The Nature and Stages of Accounting Development in Latin America, Center for International Education and Research in Accounting, Monograph 4, University of Illinois, 1966, PP. 177-79.

published financial statements are highly condensed. More emphasis is needed throughout Latin America in the analysis of the fact behind the accounting totals and statements" --- this observation is equally valid for other developing regions.

Financial statements of business entities frequently do not properly segregate accounts. Income statements are either totally lacking or contain much irrelevant data. It is sometimes impossible to obtain an accurate idea of the status and performance of a particular business activity. Records are often kept solely on a cash basis instead of the more useful accrual basis. Small companies often find themselves unable to obtain the needed cash credit at reasonable rates, partly due to inadequate enterprise accounting. Geiger and Armstrong<sup>1</sup> estimated, "...more than 90% of small African enterprises keep inadequate records or none at all and cannot determine whether they are operating at a net profit, or which are the profitable and unprofitable parts of their business."

Management and cost accounting are highly under-rated and their importance not adequately recognised. The costing system, if adhered at all, is often based upon a vaguely classified breakdown or allocation of historic costs without proper price adjustments and standard. A realistic comparative cost figure might be hard to obtain; consequently company and economic policies have been at times based on historic cost - benefit measurement.

Valuation and measurement facilities for fixed assets and properties are not adequately available. So also is the adequacy and coverage of economic statistics. The accuracy of the statistical figures, those available, are not up to satisfaction. Statistical figures, vital for any kind of inflation adjustment are not available on time, there is usually a wide time gap.

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1. T. Geiger and W. Armstrong, The Development of African Private Enterprise, National planning association, Washington, 1964 p. 31.

Accounting profession in developing countries:

In most developing countries an actual accounting profession either does not exist or has been barely developed. In Egypt it was not until 1958 that the accounting profession was organised with its guidelines and code of ethics - accounting methods and principles were previously thought to be the responsibility of the firm concerned.<sup>1</sup> In India the real status of the profession was not recognised until 1956, although regulations regarding the accounting profession had been drawn up in 1949.<sup>2</sup> In Nigeria the accounting profession attained legal recognition only in 1965, with the establishment of the Institute of Chartered Accountant or Nigeria by the act of Nigerian Parliament.<sup>3</sup> The Mexican profession, best developed in Latin America was recognised by the law in 1945. In other Latin American countries, the accounting profession developed in the 1960s.<sup>4</sup>

In many developing countries, the private or semi private practice is frequently not legally recognised, and as such auditing does not constitute a separate profession. "The problem in Peru is that, accounting is not recognised as a profession. Because of the relatively low status of the profession, it is very difficult to attract high quality students".<sup>5</sup> In Greece, "Accountants render auditing, book-keeping, accounting, tax and managerial services to clients in their spare time, while holding a regular industrial job in the day time."<sup>6</sup>

Accounting, mainly associated with enterprise accounting, is rarely fully appreciated as a profession. Accountants are often equated with book keepers. The International professional firms have established offices in many developing countries, but these accounting firms may do little to stimulate a

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1. Enthoven, Op. cit., P. 283-84
  2. B. Jaggi, "A review of the accounting profession in India", International Journal of Accounting, education and research, Fall 1970 P.38
  3. A. C. Ejejelue, "The developing profession in Nigeria", The Accountant, 15th January 1976 P. 72
  4. Enthoven, Op. cit P. 283.
  5. Lee H. Radebough, "Environmental factors influencing the development of accounting, objectives, standards and practices in Peru" The International Journal of accounting, education and research, Fall 1975, p. 45.
  6. Ibid, p. 284.



local accounting profession. Sy Cip<sup>1</sup> observes "... too often, however, the services of these [international] accounting firms have been limited to their international clients and the type of services is offered have been more suitable for New York and London than more for developing countries".

In most developing countries, if there exists an accounting profession, the number of qualified accountants is about one in several million.<sup>2</sup> "In Iraq there are very few qualified accountants. The number of people holding Master's degree in Accountancy is 15, about 25 persons hold the C.A. degree, and there is no holder of Ph.D in accounting".<sup>3</sup> Briston<sup>4</sup> observing the development of accounting profession in Indonesia states that "it is very difficult to measure either the number of qualified accountants in Indonesia at present or the number which are required to service the current level of economic activity. However, the bare fact that the Ikatan Akuntan Indonesia (The Indonesian Accountant's Association) has a mere 800 members compared with a population of 125 million suggests that there is an acute shortage of qualified accountants. On the other hand the figure of 800 overstates the number of accountants available for the financial sector, for the majority of them work for the government, generally in administrative though sometimes publicly owned sector of industry."

Few governments in developing countries express public concern for or protect the status of the profession or encourage establishment of sound accounting standards. The absence of such standards, and the lack of uniform practices, limit not only the safe guards and controls over credits and investments, but also curtail the usefulness of accounting for managerial and decision making purposes. There is too little constancy and uniformity in the methodology of accounting. Too often, it is found that the professional rules and standards specify ways for allocating expenses, cost and revenue - which are directed exclusively only to the demands of stewardship.

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1. Washington Sy Cip "Professional practice in developing economies" Journal of Accountancy, January 1967. p.42.
  2. John W. Ross, "Accounting in newly developed nations" Cost and Management, July/August 1967 p. 67.
  3. Dhia D. Alhashim and Paul S. Garner, "Postulates for localized uniformity in accounting", Abacus, June 1973, p. 65.
  4. Richard J. Briston, "Accountant profession in a developing country: an Indonesian case study", Accountants Magazine, August 1974, p. 314.

Professional accountants in many developing countries often do not possess necessary qualifications. Seiler and Dilbeck<sup>1</sup> observed that, "...although almost every Latin American country has an organisation of public accountants, receipt of the professional title is often automatic upon graduation from one of many public schools and universities offering a course or courses in accounting." "One aspect of the accounting education" - as Enthoven<sup>2</sup> observes, "People who have been graduated from a domestic or foreign University in accounting, business administration or Economics are more interested in policy making and overall operational problem than in devising better accounting system and procedures and giving tangible accounting counselling skills to cater to the needs". Consequently we find that little improvements occur in the system and methods of accounting information measurement, processing and reporting. Development and execution of better accounting procedures are delayed. The training requirement of professional accounts are predominantly of a financial accounting, tax service and auditing nature; the more sophisticated skills required for operational information measurement and reporting are either absent or unsatisfactory.<sup>3</sup>

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1. Seiler and Dilbeck, op. cit. , P.48
  2. Enthoven, op. cit. , P.285
  3. Ibid p. 287.

Chapter 4: Accounting information requirement in developing countries

Accounting is one of the very few disciplines, in the practice of which, information may be transformed into financial or quantitative data, in the form in which it is most useful.<sup>1</sup> The present day thinking on financial reporting objective emphasises the output of useful information rather than the accounting process itself. The Study Group on the Objective of Financial Statement<sup>2</sup> stresses that:

"The basic objective of financial statements is to provide information useful for making economic decisions."

Information need for decision making purpose has been heightened in the developing countries with their desire for accelerated economic growth. A complex information framework is required to plan and control an economy and to strive for better allocation of scarce resources, which is affected by government and private action. Insufficient or inadequate information coupled with the potential misuse or misunderstanding of information could lead to bad investment decisions, and thereby, to inefficient allocations of scarce resources of the economy.

The users of financial information do not have identical views on the information which ought to be provided by an economic entity. In the words of the Sandilands Committee -

"The requirements of users of accounts should be fundamental in deciding the information to be disclosed in company accounts."<sup>3</sup>

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1. George K. Ataise, "Information for proprietors and others" in International Congress of Accountants (10th) 1972 - National Papers, Sydney, P.281.
  2. AICPA, Study Group on the Objectives of Financial Statements - Objectives of Financial Statements, New York, 1973. Popularly known as the Trueblood Report after the chairman of the study group - Mr. Robert Trueblood.
  3. Report of the Inflation Accounting Committee, F.E.P. Sandilands (Chairman), London, H.M.S.O, Gmnd Paper 6225, 1975, para.147.

The following is the list of the main groups of users of company accounts envisaged by the Sandilands committee -

Shareholders  
Investment analysts  
The city (stock exchange etc.)  
Creditors and lenders  
Other companies  
Employees  
Management  
The government and official bodies  
The general public

In the Corporate report groups of users are identified as:

- (a) The equity investor group including existing and potential shareholders and holders of convertible securities, options or warrants.
- (b) The loan creditor group including existing and potential holders of debentures and loan stock and providers of short term secured and unsecured loans and finance.
- (c) The employee group including existing, potential and past employees.
- (d) The analyst-adviser group including financial analysts and journalists, economists, statisticians, researchers, trade unions, stockbrokers and other providers of advisory services such as credit rating agencies.
- (e) The business contact group including customers, trade creditors and suppliers and in a different sense competitors, business rivals and those interested in mergers, amalgamations and takeovers.
- (f) The government including tax authorities, departments and agencies concerned with the supervision of commerce and industries and local authorities.

- (g) The public including tax payers, ratepayers, consumers and other community and special interest groups such as political parties, consumer and environmental protection societies and regional pressure groups.

From the point of view of a developing nation the above lists of user groups far exceeds potential users there. Hereafter we examine the information needs of certain important user groups in the context of developing countries.

Government:

In times past, government action intended to increase economic development and stability has been the exception rather than the rule. Governments of advanced and developing nations alike are now committed to action rather than to remaining primarily passive overseers and arbiters of their economies. Presently, governments of developing nations often participate more deeply and more directly in their economies than do governments of most advanced nations. Maynard and Ryckeghem<sup>1</sup> observes that:

"In all countries, of course, the adoption of full employment and growth objectives and Keynesian type economic policies generally has led to growing intervention of government; but in developed economies, even those such as the U.K. and France in which nationalisation of industry has gone a considerable way, by far the largest part of economic activity is still controlled and financed by private enterprise".

Governments in developing nations may use accounting information in the following broad spheres of activities:-

- (a) Planning: To enhance rapid and balanced growth of the economy, most of the developing nations have some sort of economic planning. Usually a plan covers a specified number of years in the range of three to five or even seven years. The plan may concern only a part of the whole economy, such as the government sector, or the government sector plus a few key private sectors or perhaps the whole cash economy excluding the subsistence sector.

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1. Geoffrey Maynard and W. van Ryckeghem, A World of Inflation, London, B. T. Batsford, 1976, p.188

Planned economic activity directed towards economic development and stability, stated very simply, involves four basic steps. First, government must determine the direction of economic expansion. This calls for evaluation of existing natural and human resources, along with other considerations. Then, government must evaluate the courses of action suitable to the chosen direction. Third, government must ensure that the course of action chosen is followed by appropriate department and agencies. Finally, government must measure and evaluate the results of the actions undertaken and using this information as feedback, must adjust its future policies and activities.

Government's economic development activities needs to be based on relevant and accurate information. Government needs information about labour, consumer, production and capital markets, about economic alternatives, about the efficiency of the various productive agents; about the costs and benefits of its own programmes and about a host of other matters. A significant portion of government's information input is derived from individual firms in the private sector of the economy and is contained in business accounting reports. Morgenstern states, "Business accounts constitute the single most important source of information about the economic activity of a nation."<sup>1</sup>

Planning and economic decisions deal with matters some of which can be measured with precision and with others measurement is subjective. Accounting information in the form of precise measurement is needed in the sphere of cost-benefit analysis,<sup>2</sup> in the choice of alternative use of scarce resources.

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1. Oscar Morgenstern, On the Accuracy of Economic Observation, Princeton, New Jersey, Princeton University press, 1963 p. 70.
  2. The Trueblood committee observes (p.18) that two components of economic decisions can usually be identified and quantified. These are (1) Sacrifices - defined as anything prized or desirable which is given or used up - and (2) Benefits - defined as anything prized or desirable which is received.

A government project to pave a dirt road to increase transport efficiency in a geographic region may be an example of such cost benefit analysis. Expected economic benefits in monetary terms would be calculated from reduced travel time, reduced vehicle repairs, increased size of markets, and other considerations. If these benefits over the anticipated life of the road exceed paving costs then this project should be undertaken. Accounting information from all anticipated recipients of benefits in the area would be collected to aid the calculation of a cost-benefit ratio. This information would include past shipping costs, vehicle repair costs, length of time vehicles were serviceable, as well as other pertinent information. These data would then be compared to forecasted costs, assuming the existence of the new paved road. The difference in cost savings, would be added to increased income from larger markets to calculate total benefits.

Scott<sup>1</sup> envisages the utility of accounting information in cost benefit analysis as "... it would be folly to build rail-road spurs into isolated localities where, due to commerce, they would be idle for a decade while port facilities badly needed elsewhere were not established. An analysis of business activity and profitability of private firms might well indicate that private enterprise was unlikely to expand further in the locality of the proposed rail-road spurs."

Enterprise accounting furnish useful information to government planning activities by indicating the level of operation carried and idle capacity present there. It is within the ability of competent accountants to calculate what would have been produced under ideal conditions (e.g. if the plant were used for three shifts rather than one, or if new machinery were installed, or if there had not been a strike). This when compared to present production, determines the opportunity cost of idle capacity. Thus "if needed, the

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1. George M. Scott, Accounting and Developing Economies, University of Washington, 1970, p. 34.

accounting system could readily encompass information on the percentage of utilization of resources. Expressed differently, accounting could measure the waste of resources".<sup>1</sup>

This kind of measurement of unused capacity could be used by governments; to determine the extent to which particular sectors could expand without further investment allocations. To a developing nation, where efficient resource utilization is critical for economic development and yet resources often are not used effectively, such measurements would be invaluable. This would be one manner in which government could estimate efficiency when considering regulating private enterprise. Private enterprises might also benefit from these calculations since if a firm were fully aware of its idle capacity, it could certainly plan better for future production and capital outlays.

- (b) National accounting and reporting: National accounting and reporting is a governmental activity which requires information inputs from private firms. Accountants in private enterprises provide a high proportion of the information used for national reporting. In U.K., for example, the corporate sector generates about 63% of the gross Domestic product.<sup>2</sup> Sandilands report<sup>3</sup> states that, "...company accounts are an important source of the statistical material on the basis of which much of economic and industrial policy is formed or influenced". Private enterprise wages and salaries account for more than 50% of the national income in most nations and the source for these figures must be private enterprise accounting.<sup>4</sup> Private sector income used as

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1. Gerhard G. Mueller, International Accounting, New York, Macmillan, 1967, P. 20.
  2. Sandilands report, op, cit., Para-197.
  3. Ibid, Para-193.
  4. Scott, Op. cit., P. 53.



part of national income, are directly the result of private enterprise accounts. Stock charges as reported by private firms are used to adjust private enterprise income when determining reported national income. Interest paid and received by firms, asset depreciation and asset sales and purchases; all necessary for the national accounts are derived from private enterprise accounting.

Industrial and Commercial statistics are largely derived from enterprise accounting information. If such information is incomplete or inadequate, the data utilised by state statistical organisations will be distorted at its source. The accounting problem in national statistics system stem from two basic sources: inadequate book-keeping and tax evasion. The tie between these two factors was clearly noted by the Director General of the Pakistani Central Statistical office:-

"With the exception of very large establishments, book-keeping is inadequate. This results in the submission of inaccurate and incomplete returns. This is also a tendency to conceal information which arises from an imaginary fear that these returns may be used to the factory owner's detriment in tax assessments. The Act under which industrial statistics are collected makes it abundantly clear that the information furnished by factory owner is meant to be used only for statistical purposes, but despite this assurance and scrupulous care in protecting the returns themselves, fears persist!"<sup>1</sup>

Scott is of opinion that, "It is reasonable to conclude that the degree of sophistication of a nation's private enterprise accounting techniques and the particular accounting principles adopted in a nation will affect the accuracy and ease of preparation of its national reports. Choosing one accounting treatment rather than another for depletion, depreciation, long term assets, inventories or other items may result in losing information needed for national reporting. Once lost, this information must be

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1. Nazir Ahmed, "Pakistan's experience in the field of industrial statistics" in CENTO Symposium on Industrial Statistics, Teheran, 1964, P. 51.

estimated or inputed".<sup>1</sup>

- (c) Tax collection: "Collection of taxes is the Achilles' heel of development hopes in most developing nations".<sup>2</sup> In an economy with an effective tax system as is the case in most advanced nations, the government is likely to decide how much it will spend and then adjust its taxes accordingly. In developing nations, the government usually must determine how much can be collected in taxes before determining the amount of government expenditures barring inflationary financing.<sup>3</sup>

By helping to overcome some of the difficulties of tax collection, accounting profession in developing nations can make major contribution to economic development. In establishing the requisites of an effective income tax, Kindleberger is of opinion that:-

"Personal and business income taxes require a money economy, high standards of literacy among tax-payers, the prevalence of accounting records honestly and reliably maintained, a large degree of voluntary compliance and an honest and efficient administration."<sup>4</sup>

The prevalence and reliability of accounting records in business firms, both large and small, depends on several conditions. First, there must be an adequate supply of accountants. In general, well trained accountants are scarce in developing nations.

If accountants are lacking, businessmen in developing nations are more inclined to follow their pre-dispositions toward minimal record keeping and to substitute clerks, unschooled in information systems, for accountants.<sup>5</sup>

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1. Scott, Op.cit. , P. 38.

2. Ibid, P. 42.

3. Ibid, P. 42.

4. Charles P. Kindleberger, Economic development, New York, McGraw-Hill, 2nd Edition, 1965, P. 241.

5. Scott, Op.cit. ,P. 43.

Public accountants affects the reliability of accounting information by attesting to financial statements only if a company's financial position and income as determined in accordance with accounting principles considered appropriate by consensus of the business community. Prevalence and reliability of the accounting records are also determined by the attitude of businessmen toward extensive records. The extent of record keeping depends partly on what is demanded by tax officials and partly on how businessmen perceive their needs for formally generated accounting information. Since auditors or company accountants may well act in the capacity of business advisors, they can in this capacity contribute indirectly to tax collection by influencing entrepreneurs in the direction of better accounting system. Auditors may well be one of the two major forces in encouraging voluntary compliance -- the other being a tougher attitude toward enforcement of tax laws by the authorities.

As auditing professions become established and gain reputations for competence and integrity, it may become possible in some developing nations for tax authorities to require that all business tax statements be certified by independent auditors. Further, tax authorities in developing nations may come to rely so much on these certifications that they should seldom question the information contained in the certified tax statements. Sy Cip<sup>1</sup> informs that in the Phillipines, all tax payers whose quarterly revenue exceeds about PH\$6,400 must, by law, have their income returns accompanied by certified financial statements and in this way the auditor through his integrity and objectivity, assists both the tax payer and the government.

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1. Washington Sy Cip, "Professional practice in developing economies", The Journal of Accountancy, January 1967, PP.43-44.

Scott cites the Mexican case<sup>1</sup> where the Federal Fiscal Code, effective from April 1967, provides that a special (optional) report prepared by an independent public accountant regarding the tax payers compliance with tax laws generally will be accepted as correct by the Ministry of Finance if certain conditions are met. The principal condition is that the public accountant be registered in the registrar of auditors for tax purposes, and presumably only auditors with respected credentials are permitted to registrar.

Seidler<sup>2</sup> is of opinion that "The income tax has been perhaps the most influential factor in the growth of the American accounting profession -- the major supplier of skilled accounting talent in the U.S. The American account profession expanded rapidly after the imposition of the income tax, in response to increasing demands for its services".

Shareholders:

With the separation of ownership from management in the corporate sector of the economy, existing and prospective shareholders depends largely on the periodic financial statements.<sup>3</sup> The financial reports normally comprise of the historical balance sheet, profit and loss account; but may include other statements such as flow of funds statements and forecasts of profit or dividend.

The shareholders are essentially concerned with allocation of their capital as between the competing investment opportunities offered by different companies. In their decision making process they want to know how good the company is, how solid the earnings are and how real the growth is. Much of these information can be indicated by the financial statements.

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1. Scott, op. cit., P.46.
  2. Lee J. Seidler, The Function of Accounting in Economic Development -- Turkey as a Case Study New York, Frederick A. Praeger, 1967, P.47.
  3. Publication of financial statements is said to be the 'stewardship' function report of the management to shareholders. "Stewardship refers to the efficient administration of resources and the execution of plans for conserving and consuming them" -- Trueblood report, P.25.

Financial reporting for the purpose of providing information for use in making investment decision must aid the shareholders in evaluating the 'pay-offs' from owning the shares. These pay-offs may be of two forms: (a) Dividends and (b) Future selling price.

In initial decision to subscribe shares in a particular company the shareholder makes comparison with the dividends of earlier years; and dividends received in comparison with other similar companies. The shareholder is an investor who expects to make a financial return from his investment and compares the estimated return from alternative investments. His decision requires a consideration of the advantages and disadvantages of the alternative courses of action open to him to invest or to refrain from investment or to terminate the investments. These alternatives require appraisal of the dividend and cash flows that are to be expected from the shares concerned. The Trueblood report<sup>1</sup> illustrates this point through the following example;

"Consider an enterprise that was formed today and will be terminated and liquidated ten years from now. Assume further that the enterprise, which is publicly owned, will not pay dividends prior to liquidation. A prospective investor assesses the enterprise's plans and prospects and estimates the return ten years hence, if the expected return meets his preferences for amount, timing, and related uncertainty, the investor buys the security."

Kenley and Staubus<sup>2</sup> observes that:

"If fundamental financial analysis were the only factor influencing share prices, we could conclude that the only way accountants can help investors estimate their future pay off is by providing information which is useful in estimating future dividends almost in perpetuity."

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1. Trueblood report, op.cit., P.19
  2. John W. Kenley and George J. Staubus, Objectives and Concepts of Financial Statements, Accounting Research Foundation, Melbourne, 1972 P.41.

The usefulness of reported accounting information is very much related to its predictive qualities.<sup>1</sup> "...the past record is only of interest as a guide to the future, it is the likely future movements of earnings and dividends that are of prime importance. Thus investors are always interested in information concerning future prospects. More weight is placed on such statements where a company has a history of having made successful forecasts in the past".<sup>2</sup> Financial statements measure the degree of effective utilisation of resources and profitability of the enterprise. Since capital flows from low profit firms to high profit ones -- the performance of the company and expectations of its future prospects will clearly be a significant factor in investor's decision making process. Reported company accounting information may be said to be useful if it helps investors to predict future cash returns from investments.

"An objective of financial statements is to provide information useful so investors and creditors for predicting, comparing and evaluating potential cash flows to them in terms of amounts, timing and related uncertainty"<sup>3</sup>

With an accurate measure of profit and net worth, the shareholders can test whether the company is earning its way. He does that, not in absolute terms, but by comparing the rate of return with that of other possible investment opportunities. He also needs information regarding the risks and potential rate of return involved in his present enterprise as compared to other investment opportunities.

It should also be noted that beside being useful for predictive purposes, reported information is also useful to the investor in a 'feed back' capacity; by helping him to judge the soundness and accuracy of his earlier predictions in the light of published financial results. If the achieved results have not met his original expectations, he may decide to look for alternative investment for his funds. Hence the feed back information contained in financial reports is an integral aspect of the investment decision process, for it

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1. The predictive ability criterion allows alternative accounting measurements to be evaluated to forecast the future benefits and dis-benefits associated with identifiable alternatives in terms of their ability to reveal events of interest to decision makers.
  2. Corporate Report, op.cit. P.19
  3. Trueblood report, op.cit., P.20.

reveals whether or not the objectives of the investment decision have been achieved.

The rapid rise in inflation in recent years and the attendant shortage of corporate liquidity has led investors to seek information about the internal cash generating process of companies. There has been increasing interest in information derived from financial position statements (e.g., balance sheet and flow of funds statements). The Trueblood committee observes that:

"Enterprise earning power has as its essence the notion of ability to generate cash in the future. Cash generating ability and earnings are closely related and the longer the period, the closer the relationship. For a relatively short period like a month, a quarter or even a year, net cash flows (other than capital changes) will differ from earnings because of changes in such items as receivables, payables, inventories and plant --- over longer periods, cash generation and earnings come closer together. Over the entire life of an enterprise, they are the same. That is, earnings can only come from cash generated by operations, cash generating ability and earning power are equivalent."<sup>1</sup>

Corporate report summarizes the requirements of the equity investor groups as:

- (a) Evaluating the performance of the entity.
- (b) Assessing the effectiveness of the entity in achieving objectives established previously by its management, its members or others. This includes compliance with stewardship obligations.
- (c) Evaluating managerial performances, efficiency and objectives, including investment and profit distribution plans.
- (d) Ascertaining the experience and background of company directors and officials including details of other directorship or official positions held.

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1. Ibid, P. 23.

- (e) Assessing the economic stability and vulnerability of the reporting unity.
- (f) Assessing the liquidity of the entity, its present or future requirements for additional fixed or working capital; and its ability to raise long and short term finance.
- (g) Assessing the capacity of the entity to make future re-allocation of its resources for economic purposes.
- (h) Estimating the future prospects of the entity, including its capacity to pay dividends and predicting future levels of investment.
- (i) Making economic comparisons, either for the given entity over a period of time or with other entities.
- (j) Estimating the value of users own or other users present or prospective interests in or claims on the entity.
- (k) Ascertaining the ownership and control of the entity.<sup>1</sup>

#### Capital Markets:

Capital markets and capital formation inter-relates. Capital formation, a strategic factor in economic development is closely dependent upon financial mechanisms and institutions. Studies by Goldsmith<sup>2</sup>, McKinnon<sup>3</sup> and Indian National Council of Applied Economic Research<sup>4</sup> provide convincing evidence of the parallel between the development of capital markets and economic growth.

The development and proper functioning of capital markets in turn is intimately related to the availability of financial information which is provided by the accounting functions of financial reporting. "Evidence in developed countries indicates that where investment flows have increased, accounting has

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1. Corporate Report, Op. cit p.20.
  2. Raymond W. Goldsmith, Financial Structure and Development, Yale University press, New Haven, Connecticut, 1969
  3. Ronald I. McKinnon, Money and Capital in Economic Development, Washington D.C. The Brookings Institution, 1973.
  4. Government of India, Capital Market in a Planned Economy New Delhi, 1966.



constituted an important pre-condition" -- observes Enthoven.<sup>1</sup> The capital market performs several important functions in the process of economic development. The two primary functions are:

- (i) Promotion of saving and investment, and
- (ii) Efficient allocation of funds among competing users.

The major determinant of aggregate savings is national income, but the provision of certain incentives for investment can enhance total savings out of a given level of national income. The capital market provides such incentives by creating a variety of financial assets and by insuring their liquidity and marketability. It can thus help increase the propensity to save. Reliable financial reporting assists the eliciting of greater savings from small investors because these investors are able to make better investment decisions, which tends to increase their propensity to invest.<sup>2</sup>

In most cases, an investor's criterion for allocation of capital is the estimated future profitability of capital as compared to its various alternative users. Even where the primary criterion is different, for example, where it is political, estimated future profitability usually remains a consideration. In most instances, accounting reports provide most of the information from which future profitability is estimated.

Formal stock markets in the nature of stock exchanges is in nascent stage of growth in most developing nations. Informal stock markets are also poorly developed; and the issue of new shares is often accomplished by word of mouth solicitations within a limited circle of friends and relatives in the business community.

On the saver's part, there is still a pervasive reluctance in developing nations to invest outside of one's family company or companies. Business operation about which little is known are generally considered to be too risky for investment. Ataise.<sup>3</sup> observes that:

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1. Enthoven, *Op. cit.*, p. 204.

2. See discussion of government's influence on savings in chapter 2.

3. Ataise, "International Congress Paper," *Op. cit.*, p. 281.

"The average business firm in Ghana tends to enter a line of business more on the basis of intuition and the perceived success of pioneer in the field than on the basis of any rational analysis.... The private businessmen in developing Ghana needs and deserves more information and assistance than he is receiving".

Where broad-based savings do exist, at least a portion of such savings could be induced into private ventures on an arms-length basis by furnishing sufficient and reliable information about investments in order to reduce investment risks. In this respect Enthoven contends that :

"... corporate reporting and disclosure of information to the financial community plays an important part in building investor confidence and interest and stimulating the development of capital markets... many countries have no proper capital market precisely because there is no financial reporting of a nature to generate investor confidence. <sup>1</sup>

It seems probable that equity capital markets cannot exist to any significant degree in the private sectors of developing nations without accounting information about companies being made available to the citizenry. <sup>2</sup>

Accounting information is necessary to inform potential investors about the nature of the investment and to assuage their qualms about the risks involved. Seen from the investor's point of view, accounting information is the means for generating a degree of confidence in the prospects of a healthy return on investment; which in turn helps to elicit a flow of investable savings.

With accounting information about past and present income and asset at hand, potential investors assess expected benefits and compare them to costs of ownership, that is; investors compare the expected dividends and capital gains to the present price of the stock for each investment alternative. The result is a projected rate of return for each alternative. Purchasing shares of the company expected to have the highest rate of return is tantamount to

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1. Adolf J.H. Enthoven, "Economic development and accountancy", The Journal of Accountancy, August 1965, p.33.

2. Scott Op. cit., p.50.

allocating capital to its best use from the point of view of the market and the investor. Unfortunately, this process is not effective in developing nations; largely because accounting information about private firms is either not generated or not available to the investing public. In a developing nation where capital requirements are expanding markedly, provision of this accounting information by any firm seeking outside equity capital is likely to be necessary to the securing of this capital. In a more general way, increasing the overall availability of accounting information about companies is necessary to the creation of a private capital market of sufficient size to adequately serve the needs of developing nations.

There are two important dimensions to supplying accounting information about companies in a manner calculated to materially assist the emergence of equity capital markets in developing nations. The first is a requirement that the company accountants have a high degree of expertise. Establishing and controlling accounting system capable of gathering and properly classifying business data requires a high degree of expertise, and making the choices between a wide variety of alternative measurement practices for each type of asset and equity requires highly developed judgement. An extensive, long term commitment to the acquisition of these accounting resources is necessary in every society to provide the financial reporting necessary for the existence of a capital market capable of fulfilling the needs of an industrial nation. The other dimension is that of giving credibility to the information contained in accounting reports. Since equity investors in developing nations are at best reluctant to invest in firms they do not control, coaxing capital from these investors requires extraordinary assurances of the reliability of information in financial statements.

In advanced nations, confidence is engendered by public accountant's auditing of financial records and physical assets, and by their attesting to management's representations about company status and operating results. This attest function is extremely important in fostering capital markets in developing nations. Sy Cip, the principal partner of a major auditing firm in the Phillipines writes from first-hand experience in this respect:

"In developing economies, particularly, lack of confidence in an unknown management or in the economy itself has often resulted in hesitancy on the part of prospective domestic investors to entrust their funds to an enterprise ... The auditor through his independence, competence, and integrity applies the needed creditability to financial reports. As has been proven in many developed countries like U.K. and U.S.A., the existence of a well recognised and well established accounting profession has influenced significantly the development of domestic capital markets." <sup>1</sup>

In many developing nations, government provide loan to private enterprises or join in their ventures as a partner. The creation of semi-autonomous bodies by government, such as specialised industrial banks, loan and credit agencies, Unit trusts etc., enhance the industrial development of the country. The main institutions of capital market in India<sup>2</sup> are:

- (1) The Industrial Finance Corporation of India.
- (2) The State Finance Corporations.
- (3) The National Industrial Development Corporation Ltd.
- (4) The Industrial Credit and Investment Corporation of India.
- (5) The Life Insurance Corporation of India.
- (6) The Unit Trust of India and
- (7) The Commercial Banks.

Most of these institutions are wholly owned or sponsored by the Indian government.

Even where government is inclined to use political or social criteria, rather than private marginal benefits for the allocation of its resources to private enterprise, accounting information is still invaluable, for seeking for more efficient use, and to account for these funds. All else being equal, among firms seeking government funds, government may prefer to lend or provide equity to the firm, which was demonstrably more efficient

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1. Washington Sy Cip, "Professional practice in developing nations", The Journal of Accountancy, January 1967, p.42.

2. Government of India, Op. cit p.15.

because that firm would need less capital to do the same job or because by making a larger profit, that company would pay more taxes. Accounting can measure this efficiency in a way that is appropriate to the situation -- by measuring previous costs per unit of output, by measuring return per unit of output, by measuring return per unit of capital, or by whatever means that the government requires.

Also important to private enterprise accounting is governments requirement for innumerable reports and concern for extensive and careful planning. If a government is, or is considering financing a private firm, it is essential that the firm possess a sophisticated accounting information system to generate government reports, to plan and budget well into the future, to justify deadlines, and to perform a myriad of other tasks often required by government . The firm displaying this sort of accounting aptitude beforehand is probably the firm which will attract government funds and assistance.

Foreign private capital markets also provide major amounts of capital to private enterprises in developing nations.<sup>1</sup> The foreign capital may be in the nature of loans or equity capital offered by private enterprises from the more advanced nations to enterprises in the developing nation, or equity capital used to begin new branches or subsidiaries of the capital supplying company. Where loans are extended, they are generally to trading partners or to companies in developing nations that are partly owned by the foreign company extending the loan. To a large extent, accounting information desired by foreign firms for investment analysis and control is similar to what should be provided to private investors in a developed nation.

Certainly a major consideration in the evaluation of the wisdom of a loan to a company in a developing nation is whether there are intelligible accounting records in the recipient company. Not only are initial loan decisions partly predicted thereon, but subsequent decisions to withdraw or renew loans and to re-invest or extract earnings also depend on the accounting reports of

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1. See discussion in Chapter - 1.

operations. In addition, such matters as loan repayment dates and amounts, payments on licensed processes, and payment of patent royalties often depend on reported net sales or income figures. Therefore, it is vital that accounting principles used (which are often quite different from nation to nation) be understood by and agreeable to all parties and that accounting practice be accurate and conform in spirit to a set of agreed upon accounting principles.

Equity capital supplied and controlled by foreign private firm, is a common feature of industrial development in developing countries. This may involve complete or only partial ownership of companies by foreign firms. In the case of complete ownership, the effect of the accounting climate in the developing nation is more likely to be a reflection of the desire of the parent firm to hire local accountants. If local accountants are available and well trained, it is generally less costly and more conducive to good relations with other employees, local officials and consumers to employ host-country accountants. Thus, one factor in attracting foreign firms and capital to developing nations is the existence of an accounting profession with sufficient numbers of high quality accountants. Scott observes that:

"A parallel need for trained local accountants is exhibited by large international auditing firms which are heavily relied upon for an objective appraisal of the status of investment of foreign governments and foreign companies in developing nations. The paucity of well trained accounts in developing nations often requires that these auditing firms staff primarily with accountants from home countries of the auditing firms, usually at considerable additional expense to the audit firms and with the additional detriment of thereby remaining permanently set apart as entirely 'foreign firm'.<sup>1</sup>

Several international organisations dedicated to economic development provide loan and equity financing for private enterprises in developing nations. One of these is the International Finance Corporation (IFC), an affiliate of the International Bank of Reconstruction and Development (IBRD). The IFC purchases equity stocks or bonds of private enterprises in developing nations.

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1. Scott, Op, cit., p.56.

These and other agencies must appraise the merits of making loan to or investment in particular firms in developing nations. In doing so, their analysis is not unlike other investors except that they are as much concerned with a venture's probable effect on national economic development as with the venture's financial success. These agencies rely heavily on accounting information from private enterprises in developing nations in evaluation of potential and actual investments. In some companies of developing nations there is too little accounting know-how to prepare financial statements which are acceptable to the IFC. Further, there may be no domestic independent auditors. The IFC recognises these shortcomings and often provides stimulus to accounting and the accounting profession in developing nations as indicated by their statement:

"Investment agreements entered into by various enterprises and the IFC often provide for the installation and maintenance by borrowers of accounting and cost control system and the appointment of independent auditors." <sup>1</sup>

Management:

Management both needs and provides financial reporting in an economic entity. Accounting information generated for external use, i.e. for the use of persons and bodies not involved in the day to day management and for its own internal purposes discussed below.

External accountability: In present day thinking, management must assume broader responsibility in its financial reporting to a wide group of persons and bodies rather than concentrate to its immediate owners and users.

The Corporate report observes that :

"We consider the responsibility to report publicly is separate and broader than the legal obligation to report and arises from the custodial role played in the community by economic entities". This broad based custodian function arises as -

"...economic entities compete for resources of manpower, management and organisational skills, materials and energy and they utilise community owned assets and facilities. They have

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1. IFC, Accounting and Financial Reporting, 1964, p.1.

a responsibility for the present and future livelihood of employees and because of the interdependence of all social groups, they are involved in the maintenance of standards of life and the creation of wealth for and on behalf of the community." <sup>1</sup>

Reporting on management's 'stewardship' has long been recognised as a principal purpose of financial statements. From the time that management and ownership of a business were largely separate, management has traditionally had the legal and ethical responsibility for reporting on the financial position and results of operations. Corporate reports are primarily a means by which the management of an entity is able to fulfill its reporting responsibilities by demonstrating how resources with which it has been entrusted have been used. The stewardship concept represents the view that financial reports should be essentially statements in the nature of an account rendered by management to shareholders of their stewardship of the resources entrusted. Carsberg et al found in a recent survey in U.K. that professionally qualified accountants appear to favour the stewardship objective above all others<sup>2</sup>.

"At the risk of curbing the freedom of company directors to manage as they see fit, the shareholders has been given [through financial reports] a significant source of information with which to hold them accountable for their action" -- observes Lee<sup>3</sup>.

A major concern in financial reporting has been selecting the type of information to be disseminated and variety of user's need envisaged in such reporting.

Writing in the 1940s, George O. May listed ten 'uses of financial statements'

1. As a report of stewardship.
2. As a basis for fiscal policy.
3. To determine the legality of dividends.

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1. Corporate report, op.cit., P.15.

2. Bryan Carsberg, Anthony Hope and R.W. Scapens, "The objectives of published accounting reports", Accounting and Business Research, Summer 1974, PP. 162-173.

3. T.A. Lee, Company Financial Reporting: Issues and Analysis, London, Nelson, 1976, P.51.



4. As a guide to wise dividend action.
5. As a basis for the granting of credit.
6. As information for prospective investors in an enterprise.
7. As a guide to the value of investments in an enterprise.
8. As an aid to government supervision.
9. As a basis for price or rate relations.
10. As a basis for taxation<sup>1</sup>

Today the possible use and users of financial reports are thought to encompass a much broader group of persons, groups and organisations. Information as varied as anti-pollution<sup>2</sup> future prospects<sup>3</sup>, cost of strikes<sup>4</sup>, efficiency indications<sup>5</sup> has been favoured to be shown in the corporate financial statements. Financial reporting is deemed to serve along with immediate users needs (e.g., shareholder, creditors) those potential users of company financial reports who because of the structure of the company are unavoidably prevented from gaining an intimate knowledge of its activities through regular and close contact with its operations and management. To quote the Trueblood study group:

"An objective of financial statements is to serve primarily those users who have limited authority, ability or resources to obtain information and who rely on financial statements as their principal source of information about an enterprise's economic activities."<sup>6</sup>

In the past, there has been discussions about providing separate sets of financial reports to suit different users needs. Trueblood<sup>7</sup>, Gynther<sup>8</sup>

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1. Cited in Paul A. Rosenfield, "Stewardship" The Objectives of Financial Statements - AICPA - Vol. 2 - P. 130.
  2. Corporate report, op. cit. P. 57.
  3. Ibid, P. 55.
  4. Michael Lafferty and Guy Neely "The Corporate report -- the two views" Accountancy, October 1975, P.42.
  5. U.K. Department of Trade, Aims and Scope of Company Reports, London, 1976, P.12.
  6. Trueblood report, op. cit., P. 62.
  7. Robert M. Trueblood, "Information for proprietors and others" in Book of Proceedings—International Congress of Accountants (10th), Sydney, Australia 1972.
  8. R.S. Gynther, "Accounting for changing prices", Chartered Accountant in Australia, December 1971, PP. 12-23.

and Stamp<sup>1</sup> argued in favour of such specific user reporting.

A general purpose, unbiased and impartial financial statement for all the users alike rather than separate specific report has been favoured by the professional accounting bodies.<sup>2</sup>

The Corporate Report is of opinion that:

"The responsibility of corporate reporting we identify is an all purpose one, intended for the general information of all users outside those charged with the control and management of the organization. In short, we are concerned with general purpose reports designed for general purpose use."<sup>3</sup>

Accountability objectives has been moving over the year -- away from the original fraud-prevention into the area of managerial efficiency judgment.

"The disclosure of financial information has been aimed at protecting shareholders from originally, fraudulent practices and now a days from inefficient management."<sup>4</sup> Indeed, if one looks back upon the development of company law requirement of financial information in U.K. up to the present day, he can see quite clearly the manner in which this approach has led, progressively to an enlarged view of the needed level of information disclosure. Beginning with limited requirements of the companies Act 1844, the present disclosure requirement of elaborate financial and non-financial materials (e.g., information relating to exports, employment, director's endowments, political and charitable contribution etc., is required in the companies Act 1967) reveals the progressive nature of information requirement. Because of the growing public interest in the corporate sector of the economy, accountability has still further to encompass the broader social and economic responsibilities. As a member of the community - "An objective of financial statements is to report on those activities of the enterprise affecting society which can be determined and

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1. Edward Stamp, "R. J. Chambers: quo vadis et cui bono?" Chartered Accountant in Australia, August 1972, PP. 10-12.
  2. e.g., in the Corporate report, Trueblood committee report, Arthur Andersen Co. booklet etc.
  3. The corporate report, op. cit., PP. 15-16.
  4. Lee, op. cit. P. 51.

described or measured and which are important to the role of the enterprise in its social environments."<sup>1</sup>

Accounting is not an end itself -- it's purpose is to serve user's needs.

As an information system, the justification for accounting can be found only in its utility. The Trueblood study group argues that accounting should be structured and evaluated in terms of its usefulness for making economic decisions.<sup>2</sup> The usefulness criterion is posed as the foundation for all that is to follow -- the chain of reasoning and assumptions is based on this basic objective in Trueblood study report.

By far the most significant general development in company financial reporting has been the use of accounting data by investors when making investment decisions.<sup>3</sup> Over the years, the gradual increase in the disclosure of accounting information by companies has undoubtedly provided investors with increased data with which to evaluate investment alternatives. This is obviously extending the provision of relevant information beyond the traditional limits of shareholders protection in the stewardship functions.

If financial reporting were restricted to assess management responsibility for past activities, users would be provided with only an absolute measure of management performance rather than with comparative measures. The essence of judging performance and efficiency is the ability to compare the results of one period with another and to compare the results of one company with the other. Financial reporting provides a basis for disclosing information needed for assessing expected performance as well as for reporting on the past. The economic decisions of users establish the need for information about past and future goals.

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1. Trueblood report, op. cit. , P. 55.

2. Ibid, P. 61.

3. Economic decisions deal with some matters which can be measured with precision and with others for which measurement is subjective. A common element of all economic decisions is a comparison of what must be given up with what can be expected to be received (Trueblood report, PP. 17-18)

"Some past actions of the enterprise may be part of a series of events intended to have future consequences. Therefore, these past events, cannot be assessed without considering their probable outcome. In other words, accounting requires that information be provided about potential as well as actual results. Quite apart from any need to predict users are better served when they have information about the present and future as well as the past" --- observes the Trueblood study group<sup>1</sup> .

One dimension of corporate reporting which Trueblood committee envisage as having a major role is cash sequences in investment decision. The study group argues that -- since the principal goal of a commercial enterprise is to maximize cash returns to owners<sup>2</sup> its management is accountable for progress toward this goal. Information useful for estimating earning power becomes equally useful for assessing accountability. To estimate earning power, it is necessary to predict the outcome of management actions. "An objective of financial statement is to supply information useful in judging management's ability to utilize enterprise resources effectively in achieving the primary enterprise goal. [i. e. maximizing of cash returns]<sup>3</sup>

Internal uses: One managerial resource is information for decision making. Accounting as the major source of information in a firm must provide management with various types of information for rational decision making. Accountants in an economic entity shall perform two vital services for management -- (i) they should provide the best possible information systems and (ii) they should provide professional advice to management.<sup>4</sup>

Information provided by the internal accounting system to assist management may be classified as relating to: (1). Planning (2) Operating decisions (3) Marketing (4) Control (5) Tax planning and (6) Miscellaneous purposes.

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1. Ibid, P. 26.

2. The primary and continuing goal of every commercial enterprise is to increase its wealth so that over time it can return the maximum amount of cash to its owners - Trueblood report P. 21.

3. Ibid, P. 21.

4. Howard I. Ross, "The current crisis in financial reporting" The Journal of Accountancy, August 1967, P. 65.

- (1) Planning: Planning, budgeting and forecasting are activities which have a profound impact on a firm's organisation and efficiency. Planning production schedules, capital needs; estimating future performance and other aspects of operations are important in establishing and spotlighting firm goals. The process of careful and comprehensive planning and budgeting requires that management focus on and resolve the long-term objective of the company. Without this process company objectives frequently never become crystalized, with the result that company actions are sometimes contradictory, operating and financial problem are not foreseen, and operating results are difficult to evaluate.
- (2) Operating decisions: In efficient companies; it is the accounting information system which records and makes available most of the internally generated information required for operating and strategic decisions. The management should be informed of different aspects of the entity on a day to day basis. Aggregate performance of an entity represents the combined operations of the various units within the entity, as such management needs to know on a daily basis the relative performance of each of the divisions or plants in such an entity. Typically the primary data needs of the manager relates to detailed operating statistics, cost accounting determinations, cost/price relationships, cash receipts and payments, departmental or individual product performances, market possibilities etc. On the basis of such information, the management would formulate the appropriate operating decisions.
- (3) Marketing: Marketing decisions require use of accounting information. Successful enterprises are likely to make heavy investments in market research, sales forecast, advertising, economic forecasting and economic analysis; as well as in accounting, cost estimating and budgeting. Scott<sup>1</sup> observes that:

"One factor tending to create volatile markets and economic instability in developing nations is the pricing policy of companies that do not know their costs. A firm with limited resources,

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1. Scott, op.cit., P.65.

which consistently prices below long term cost will inevitably go out of business, but meanwhile it has jeopardized its better managed competitors by creating chaos in the industry."

Cost accounting assists in establishing wise pricing policies by setting full unit cost as a floor for long run average sales price. Marginal costs generated by the accounting system indicate minimum short run and segregated market product prices.

- (4) Control: Accounting is a valuable aid in increasing efficiency through the operation of check and control. By establishing job or process cost accounting, standard costing or some combination of these; responsibility for various costs can be assigned to specific persons. Then with a previous estimate of expected costs, variances of actual costs from expected costs can be analysed. This can serve as the basis for evaluating the efficiency of departments, process and material usage.

A cost control system if systematically run can provide great cost savings by encouraging all employees to be cost conscious. The existence of a cost control system serves to deter behaviour not consistent with the firms objectives. Accounting effects employee's decisions about dishonest or wasteful acts by providing information for decision by superiors regarding the continued employment of the employee. In this way the accounting system affects a person's decisions about his own behaviour.

- (5) Tax planning: Tax planning is another area in which accounting information is useful for operating decisions. Whether to purchase an asset just before or just after the fiscal year end may depend on a preliminary calculation of profits to estimate the tax impact. Or, perhaps monthly income statements indicate a trend toward high taxable income this year, and the deferring of a sizeable sale would leave the company in a lower tax bracket. However, the essence of tax planning is two fold:

- (a) to generate the information upon which to base decisions about tax policy and
  - (b) to generate this information on a timely basis. Waiting until after the fiscal year to close the books and then compile information for tax planning is usually too late, since tax liabilities have then already been established.
- (6) Miscellaneous purposes: Other special problems include deciding whether a firm should make or buy its equipment. Management accounting can help in this respect by differential or marginal cost analysis to evaluate the alternative choices open to management. Project bidding also relies heavily on budgeting, cost accounting, and marginal analysis based on cost break downs. Wage negotiations will also find it useful when discussing the merits and feasibility of wage claims extra bonus etc. Along with a multitude of other uses accounting information could be useful in reaching fruitful managerial decisions.

Atiase<sup>1</sup> observes that:

"Because the average firm [in Ghana] has seen little use in accounting information, it has denied itself the invaluable benefits that normally accrue from accounting reports. There are a large number of firms which have been in business for a number of years but which do not know their true income because of the absence of factual or reliable cost/revenue figures."

In developing nations important decisions are sometimes based on mere guesswork without detailed cost/benefit analysis. It is interesting to cite an example of such a decision:<sup>2</sup>

"A \$26 million chemical fertilizer plant was constructed in a Latin American country, only to find that cost of importing fertilizer was less than its production cost. The

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1. Atiase, op. cit., P. 282

2. Robert E. Seiler, "Accounting, Information systems, and underdeveloped nations" The Accounting Review, October 1966, P. 653.

plant was shut down and most of the resources embodied in it were lost."

Seiler<sup>1</sup> concludes: "... sound profit planning and cost projections would have clearly indicated that the project could not succeed."

Creditors and lenders: Information needs of creditors and lenders arise from the direct (or potential) financial relationship that exists between them and the borrower to whom funds are entrusted.

" Many of to-days accounting conventions concern themselves with creditors needs. Because loan grantors have made their needs clear and because they have traditionally controlled much of society's capital, they get the data they want. As a result, it is possible that the form and content of financial statements as they exist to-day have been more directly influenced by creditors and loan grantors than by any other single groups of users."<sup>2</sup>

Like all other users, the lender is a resource allocator. He must make lending decisions on the basis of his desire for a particular combination of risk and return. There are separable categories of creditors, each with somewhat different interests and concerns about the business enterprise to which they supply funds:

- (1) There are those lenders who have substantial and formal association with the enterprise. Such lenders operate under carefully drawn loan agreements which include protective clauses giving the creditors certain preferred rights in the case of default. They mostly provide long-term finance to companies -- for example debenture and mortgage holders.
- (2) There are those lenders who have an interest in specific assets, such as a lien on equipment they have sold to the enterprise, or an

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1. Ibid, P. 253.

2. Trueblood in International Congress of Accountants, op.cit., P. 254.



assignment of stock, or receivables taken as collateral for a loan. Their interest in the total company is incidental to their interest in the related asset.

- (3) Finally, there are those creditors whose interest is primarily short-term. Their concern relates primarily to the general ability of the company.

The number of fundamental decisions made is quite limited. A prospective creditor must decide whether he will grant the sought loan. An existing creditor must decide whether to renew a loan, to institute various degrees of collection activity, or to foreclose. The creditors and lenders traditionally have asked for detailed information about liquidity, cash flow, debt-equity ratio, compliance matters and disaster insurances.

- (a) Protection: The primary requirement of creditors and lenders is for information to assess the risks involved in extending credit or lending to a company and (where interest is payable) to assure themselves of the company's ability to meet regular payments. The creditor is concerned at the outset with the security or asset backing for the re-payments of loans or the meeting of trading debts and in the nature of their liabilities incurred or prior interests.

Creditors want to know the relationship between equity investment and debt. They need to know the cushion between the reported asset values and their investment in the enterprise. This measurement has much to do with the determination of financial risk. Profitability and overall financial position data also appear to be of some considerable use to the lender when assessing its financial strengths and weaknesses.

- (b) Liquidity and cash flow: The lenders and creditors are assumed to be interested in reported data which will help them to evaluate a company's ability to pay regularly the existing or proposed debt and any interest due thereon -- as such on liquidity and cash flow of the company. The Trueblood study group observes that:

"...the information needs of creditors and investors are essentially the same. Both groups are concerned with the enter-

prise's ability to generate cash flows to them and with their own ability to predict, compare and evaluate the amount, timing and related uncertainty of the future cash flow."<sup>1</sup>

As a measure of company's ability to meet it's current obligation -- the quick asset, working capital and current ratio concepts were developed. Creditors have asked that in the preparation of balance sheet, assets be grouped by their relative liquidity and that liabilities be grouped by their relative payments terms.

- (c) Compliance: For those creditors who have formal loan agreements, it is important to know, whether the enterprise has met the covenants of the agreement relating to dividend payments, leases, the application of proceeds from assigned assets, and many other detailed requirements. If restrictive covenants in Articles of Association or debenture deeds commit an enterprise to maintain working capital and liquidity within certain limits, loan creditors may look to the financial statements to confirm that these restrictions have been observed.
- (d) Disaster insurance: Creditors often must evaluate the economic viability of an enterprise within it's environment. They need to evaluate the quality of the company's control system and they want to know about insurance coverages, fire, casualty, liability and fidelity.

The creditors and lenders has to take consideration of all or a combination of the above factors into account to suit his needs.

"In most situations, no single bit of information -- stockholder's equity, net earnings, cash flow or capital position -- can provide the lender with an assured measure of the borrower's ability to repay. Thus the credit decision, like all economic decisions requires an assessment of risk." -- observes the Trueblood study group.<sup>2</sup>

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1. Trueblood report, op. cit., P. 20.
  2. Ibid, P. 19.

Financial reporting in developing countries

By and large, an audited balance sheet and profit and loss account accompanied with the reports by auditors and Board of Directors constitute the general financial statement in the developing countries. It is usually provided that the published financial statements should show a 'true and fair' view of the companies state of affairs, or be drawn up in accordance with generally accepted accounting principles. In Pakistan, as an example, the Companies Act has laid down the minimum information that must be given in an annual report of a public limited company, which includes the following:

- (a) A profit and loss account together with an appropriation account (retained earnings).
- (b) A balance sheet together with a schedule of fixed capital expenditures.
- (c) A report by the auditors on the above.
- (d) A report by the directors on the affairs of the company.<sup>1</sup>

The financial statements published in developing countries are thought to be more a legal instrument than an information media. In India the law requires the annual accounts of joint stock companies to be prepared and submitted to shareholders for approval and filing with government authorities. The information to be specifically given and the form of the balance sheet has been laid down by the Companies Act. As a consequence of this Bhargava<sup>2</sup> observes that:

"...the purpose of the financial statements in India is to comply with law ...there is much unhappiness with the information presently given and the manner in which it is done. In fact legal requirements can sometimes be a problem and may well hinder the development of the art -- or science -- of accounting, to the detriment of the common good. Accounting is largely a means of

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1. A. Qureshi, "Economic development, social justice and financial reporting: Pakistan's experience with private enterprise" Management International Review, vol.15 - No. 6 - 1975, pp.74-75.
  2. K.P. Bhargava, "Objectives and scope of financial statements" in The Role of Accountants in Economic and Development, Commonwealth conference of accountants (6th to 8th February 1975) Institute of chartered accountants in India, New Delhi 1975, PP.44-45.

communication of information to the users; needs of users : change with changing circumstances but if the communication is compulsorily placed in a strait-jacket it is generally the user and the profession that suffers."

It is generally expected that, accounts should normally be prepared on the basis of commercial experience and need not necessarily reflect the strict legal position. In India and other developing countries, unfortunately, the accounting profession as well as the enforcement agencies seem to be more concerned that the mere form and technicalities are ensured, to the comparative exclusion of substance; whereas it is the substantive economic characteristics which should prevail over legal and technical form in case of conflict. To criticise legal requirements is not to deny the positive aspects of legislation, but ideally the law should follow the professional developments. Where the environment is not conducive to professionalism, the standards laid down by the law or professional bodies may be more a statement of goals than achievements.

The bases on which the general financial statements are made, vary somewhat from country to country. Within each country the reporting basis evolved to meet the most urgent need in the social and political environment of the country. In the past there have been a few significant considerations that have properly influenced the direction of reporting procedures. The socio-political forces mould the financial reporting practices to cater to the needs or protect the interests of some preferred user groups.

The information needs of various user groups in developing countries are growing with economic development and they are diverse. Present reporting practices may serve some information users well, but they do not adequately meet the needs of the diversified user groups. Accounting information should not be prepared or concerned with the needs of a specialised or favoured group, but should serve the general needs of various user groups.

Qualitative characteristics of financial reporting: The corporate report<sup>1</sup> the Trueblood study group<sup>2</sup> and Sandilands committee<sup>3</sup> has sorted out certain

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1. The corporate report op. cit. , pp. 28-29.
  2. Trueblood report, op. cit. , PP. 57-60.
  3. The Sandilands report, op. cit. , Para 230-245.

qualitative requirements as desirable for an accounting reporting system.

These characteristics are:

1. Relevance.
2. Understandability.
3. Reliability.
4. Completeness.
5. Objectivity.
6. Timeliness.
7. Consistency.
8. Prudence.
9. Freedom from bias.
10. Ease and economy of preparation.

In the following paragraphs, these qualitative characteristics would be discussed and evaluated in the context of environment present in developing countries to highlight the various aspects of financial reporting existing there.

- (1) Relevance: One important characteristics of financial reporting is that it should be relevant. "Relevance is the characteristic which embodies the fundamental notion that corporate reports should seek to satisfy, as far as possible user's information needs."<sup>1</sup>

Being overridden by an imposed legal framework and concentrating to a narrow user group, financial reporting in developing nations may not be sufficient to serve the needs of all user group. The Companies Act of Pakistan prescribes that the balance sheet should be prepared in accordance with 'Form F' -- as given in the Act. Form 'F' is a pro-forma balance sheet which should be followed as closely as circumstances permit. Qureshi<sup>2</sup> points out that there are serious flaws with such a form on the ground, inter alia, that it does not suggest a classification of assets according to their nature; such as current assets, fixed assets, intangibles, long-

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1. Corporate report, P. 28 Para. 3.4.
2. Qureshi, op. cit., PP. 77-78.

term investments and so forth; intangibles like goodwill, trade marks, patents, etc., are described as fixed assets and preliminary expenses and underwriters commission lack proper classification. He also points out that the Companies Act lays greater emphasis on the balance sheet, to the neglect of the profit, and loss statement which is given a secondary consideration in the Act.

An important condition for relevant useful reporting is the willingness of management to make information publicly available. A law with disclosure requirement would have some significant effect in this area. But, beyond the law a fundamental attitude of compliance by management is required if adequate disclosure is to be produced -- which seems to be absent in most cases. "A great fetish is often made in Turkey of surrounding financial information with a curtain of secrecy" -- is the observation of Seidler<sup>1</sup>.

- (2) Understandability: The essential function of accounting is to provide understandable financial information about complex business activities to a wide variety of users.<sup>2</sup> "Understandability does not necessarily mean simplicity, or that information must be presented in elementary terms, for that may not be consistent with the proper description of complex economic activities. It does mean that judgements needs to be applied in holding the balance between the need to ensure that all material matters are disclosed and the need to avoid confusing users by the provision of too much detail. Understandability calls for the provision, in the clearest possible form of all the information which the reasonably instructed reader can make use of and the parallel presentation of the main features for the use of the less sophisticated."<sup>3</sup>

Understandability of financial statements should be a major qualitative requirement in developing economies where general literacy and

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1. Seidler, op. cit., P.177.

2. Arthur Andersen and Co. Objectives of Financial Statements for Business Enterprises, London, 1972, P.10.

3. The Corporate Report, op. cit., PP - 28-29.

sophistication in accounting practice is low and the availability of advisory services of financial analyst and management consultants are very limited. The observation of Vigano<sup>1</sup> on general understanding of the technicalities of accounting expression is --

"The language of a financial report is not immediately discernible as being different from everyday language but it is pregnant with technicalities. The unwary reader, unfamiliar with technical expressions, falls into all kinds of traps and ends up by not having grasped very much ----the accounting language is a mixture of ordinary language and technical terms both natural and artificial. It means that the first is not compatible with the second and synthesis creates confusion."

To make understand the technical expressions and complicated transactions to less sophisticated users in a developing country, the accounts which make up the financial statements may be supplemented by furnishing other kinds of explanations that cannot be expressed usefully in technical terms, or by simple adoption of figures and symbolic signs. The intelligent use of pictures, diagrams, charts, etc., can enhance the general understanding of the average user in a developing country.

- (3) Reliability: "The information presented should be reliable in that users should be able to assess what degree of confidence may be reposed in it."<sup>2</sup> It is alleged that accounts are sometimes 'cooked up' and 'window dressed' to show the results more impressive by unscrupulous management in developing countries. 'Since accounting has prevention of cooking up of accounts as one of its major missions, people who want to benefit through such cooking up process decry accounting personnel, and this creates mistrust and bad blood

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1. Enrico Vigano, "Information for proprietors and others" in National Papers International Congress of Accountants (10th) 1972, Sydney, Australia P.322.

2. Corporate report, op.cit. , P.29.

impairing relations in the organization. It may be noted in this context that cooking up of accounts is the usual practice of accounts in the non-corporate sector in Bangladesh."<sup>1</sup>

Lack of reliability of published financial statements hampers industrial development -- "...small investors are nervous about placing their savings in shares with respect to which there is a lack of financial information. The average investor cannot find out the true net profit of a given company. Such information is typically guarded by a few insiders, and "audited" statements do not have the credibility of their counter-parts in developed countries".<sup>2</sup> Qureshi<sup>3</sup> describes a case in point in his study of financial reporting practices in Pakistan, "Sui Northern Gas Company suffered a heavy loss on abandoning a gas supply line and deferred the loss to be written off over a period of time. The portion of the loss that was written off in 1967 did not appear in the profit and loss account of that year; instead the write-off amounting to Rs. 2,002,000 was adjusted through the Appropriation account. Thus the income for the period was overstated by the amount of the write-off".

It is appropriate to re-iterate the warning of Seidler<sup>4</sup> in regard to reliability of published information -- "The abuses which occurred in the early days of Western capital markets as a result of fraudulent or insufficient information is a lesson for the necessity for disclosure and independent verification of financial information. Such fore-warning, if heeded, will reduce the possibility of the confidence destroying incidents which occurred so frequently in the early days of the American capital markets."

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1. M.Habibullah, "Human aspects of accounting" The Dacca University Studies, Vol.xxii - part A, June 1974, p.19.
  2. Phillips Perera, Development of Finance -- Institutions, Problems and Prospects, New York, Frederick A. Praeger, 1968 - pp 298-99.
  3. Qureshi, op.cit., P.78.
  4. Seidler, op.cit., P.212-13.



- (4) Completeness: "The information presented should be complete in that it provides users, as far as possible, with a rounded picture of the economic activities of the reporting entity" -- observes the Corporate Report<sup>1</sup>. In many developing countries, balance sheet and profit and loss statement report the aggregate activity of the entire economic entity. Breakdowns, or subsidiary statements are typically provided only for legal components, as distinguished from economic sub-entities. The consequences of such reporting practice as Trueblood observes:

"...for an investor who has an interest in a large far-flung corporate conglomerate -- legal entity reporting is presumptively inadequate. To make decisions about the corporation growth prospects the investor needs to know, how the various components of the company are progressing. The investor may not necessarily be interested in the activities of the divisions or branches as such, but he should be interested in the progress of the company's various product lines and services."<sup>2</sup>

Qureshi observes the incomplete nature of reporting practice in Pakistani industries, in his study of reporting practice in 30 companies there:

- (a) The various sources of revenues were distinguished, but the gross revenue was not broken down by product lines, major business activities, or by different segments in case of a conglomerate.
- (b) The valuation of year-end inventory was described (cost or lower of cost or market etc.) but the method (LIFO, FIFO, Average etc) applied for relating the different costs of goods acquired to periodic revenues was not disclosed.

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1. The Corporate report, op. cit., P. 29.

2. International Congress paper, op. cit., P. 261.

- (c) The depreciation method was not disclosed. Only one company (out of total thirty) disclosed the depreciation rates.
- (d) The 'reserve' section of the balance sheets included a great variety of items which in the absence of any accompanying explanation were more confusing than revealing. Failure to maintain distinction between appropriation of profit for specific purposes and provision for liabilities and allowing depreciation to appear along with other reserves were noted to be common practices in accounting for 'reserves'.<sup>1</sup>
- (5) Timeliness: There is an inverse relationship between the usefulness of a financial statement and the time taken to prepare it. The greater the time lag between the period end and the presentation of annual reports to members of a company, the less valuable is the information transmitted. It must be realised that a financial statement is at best a historical document, but this document should belong to contemporary and not ancient history.

"The information presented should be timely in the sense that the date of its publication should be reasonably soon after the end of the period to which it relates". -- observes the corporate report.<sup>2</sup>

Timely publication of financial statement is not a common practice in developing countries. A survey conducted by Qureshi (30 annual reports of a cross section of Pakistani companies for the period 1958-1968) indicated that Pakistani accountants did not take cognizance of the value of prompt reporting -- "The average time lag between the end of the financial year and the presentation of financial reports to stockholders was about six months. While the inordinate reporting delay imposed serious limitations on the

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1. Qureshi, op. cit., P.76.

2. The Corporate Report, op. cit., P.29.

relevance of financial reports, the situation was further aggravated because Pakistani companies did not issue preliminary statements or publish interim reports. This means that the operating results of the previous year were not made public until six months of the following year had elapsed."<sup>1</sup>

- (6) Consistency: "It is desirable that as far as possible accounting practices should be applied consistently over time. The main reason for this is to facilitate comparison of accounting statements relating to different periods, either of different companies or within a single company."<sup>2</sup> But it is also reminded that -- "The desire for consistency should not become an obsession that impedes progress."<sup>3</sup>

"In Pakistan there is no way of knowing if consistency in accounting is given proper consideration. The Companies Act is silent on the matter. The standard audit report does not contain any implied or expressed reference to consistency. The financial reports do not disclose the accounting methods used in arriving at net income. Thus, one is compelled to doubt seriously if the accountants in Pakistan are aware of the concept." -- this observation by Qureshi<sup>4</sup> might be a common characteristics in accounting practice in developing countries.

- (7) Ease and economy in preparation: The criteria of ease and economy in preparation of accounts in the context of a developing country is important, as they have scarce financial and manpower resources at their disposal. The Sandilands committee observes that, "It should not require a disproportionate amount of effort and expenses by companies to prepare their annual accounts."<sup>5</sup>

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1. Qureshi, op. cit., PP.76-77.
  2. Sandilands report, para - 243.
  3. Trueblood report, op. cit., P.60.
  4. Qureshi, op. cit., P.77.
  5. Sandilands report, op. cit., Para - 245.

Reporting objective in developing nations

From the above discussion it is very much in evidence that, the current state of financial reporting in developing countries is not satisfactory. Financing reporting practice is largely regulated by legal or governmental regulations, the emphasis is much more on producing annual financial statements of past profitability and the financial position statements are represented on an extremely conservative basis with the minimum explanation of reported data.

Since the economic activities of business organisations have become more complex and diverse, the information needs of users outside the immediate ownership and management has to be catered to. Information dissemination in the context of developing economies should be seen more as an important instrument for better economic growth. Through improved financial information, better resource allocation and better management decision can be made which in turn help the economic development process in the economy. An informative financial reporting system would help to tap the savings for capital formation and through improved capital market, improved and efficient corporate sector of the economy -- it would usher economic development in developing countries.

There is considerable agreement in the literature that accounting information should have the overriding objective to help making economic decisions. While financial statements present a picture and information about what has happened in the past concerning business enterprises, most economic decisions made by users of financial statements, no matter what their individual nature, concern assessment of the future. In financial reporting, the present emphasis is on past performance and position. The present day financial reporting is historical in outlook, concentrating on past profitability and financial position. The accusation of Trueblood committee that:

"Accountants have considered themselves primarily historians not prophets"<sup>1</sup> -- is very much appropriate in this regard.

If users of financial report are mainly concerned with making decisions and needs

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1. Trueblood report, op. cit., P.45.

assessing the future, then it would seem appropriate to question the relevance of historically based financial statements. It is debatable whether historic cost based information on income and capital is relevant to a variety of users, concerned with future. Historic cost does not give an adequate impression of current values for company assets, nor does it give a reasonable portrayal of income earned by a company during a specific past period (concentrating as it does, on income realization during the period). Thus financial report users are deprived of realistic information about asset values and income performances which could be of relevance to their assessment and decisions.

The nature of an economic decision requires a consideration of the advantages and disadvantages of the alternative courses of action open. Estimation of future events is essential as part of the process for indentifying and selecting alternative actions. In their decision making process -- shareholders and prospective investors would be looking to the past record of earnings and current financial position with a view to judge future earnings; creditors would use financial statements to assess the prospects of future principal and interest payments- governmental decisions would be based part on the economic health of business as indicated by financial statements.

All economic decisions look to the future. Since economic decision makers can not know the future, they must approach it by looking to the past and the present. For this reason, financial statements that provide information about the past and the present are most useful for economic decision making.

If financial reports do not satisfy the users, then the accounting function is not being fulfilled. Therefore, an important consideration in establishing and achieving the objective of financial reporting is that the information be as useful as possible to users in appraising the alternatives to make the economic decisions. The relative usefulness of different inflation accounting methods in information dissemination should be an important consideration in selecting an approach to inflation accounting in the context of developing economies.

Chapter 5: Concepts of profit and capital maintenance

The calculation of accurate profit is of fundamental importance in an economic entity. The practical purpose of the concept of profit is to ensure that a company does not prejudice its future by distributing too much of the gains<sup>1</sup> arising during the year. The concept of profit for the year implies an underlying concept of capital which, if distributed, would leave the company in a weaker position than it was in before the operations of the year began. Thus any definition of profit for the year adopted by a company implies a consequent concept of capital which the company considers should be maintained intact.

In considering the problem of profit measurement and capital maintenance, it is useful to get back to fundamentals in theory. Economics and Accounting both are concerned with the relationship between capital and income and in the implications of this relationship. So, in this chapter we would consider concepts of profit and capital maintenance in both the disciplines. This process would highlight the theoretical concept of income and capital as conceived in Economics and their practical application or deviation in accounting practices - particularly in a period of inflation.

Economist's Concepts

Irving Fisher:

To Fisher, "Income is a series of events"<sup>2</sup> The events that constitute 'ultimate income' for each individual 'are only those events which come within the purview of his individual experience'. It is the abstract 'psychic' experience of the individuals' minds with which Fisher is concerned in measuring income.

'Psychic income' is an event or happening which 'occurs' somewhere i.e. in a person's mind and is 'caused' by another 'external event of happening,

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1. A company's total gains during a year may usefully be described as (a) 'realised' and 'unrealised' gains and (b) 'holding' gains 'operating' gains and 'extra-ordinary' gains.
  2. Irving Fisher, The Theory of Interest, New York, Macmillan, 1930, p. 3.

for example by the receipts of goods and services by that person. In other words, Fisher seeks to approximate the psychic by reference to the physical and then the physical by reference to monetary equivalence in order to give some common denominator to the measurement procedure. The monetary equivalence used to measure income is the monetary cost incurred in experiencing the enjoyments -- what Fisher calls the 'cost of living'. In summary, Fisher concludes that:

"It is only what we carry out of the market place into our homes and private lives which really counts. Money is of no use until it is spent. The ultimate wages are not paid in terms of money but in the enjoyment it buys. The dividend cheque becomes income in the ultimate sense only when we eat the food, wear the clothes, or ride in the automobile which are bought with the cheque".<sup>1</sup>

To overcome the dichotomy of bodily and internal psychic enjoyment, Fisher invents a fiction similar to the one which is usually employed to obtain a symmetry of doubly entry accounting system -- in regarding a business or venture as something apart or dissociated from its proprietors. So he employs the fiction that the body as transforming instrument is something apart or dissociated from its 'proprietor' namely 'the mind' to which the 'body' pays out final or 'true' income, which finds income, Fisher argues, is not received until, as subjective income it emerges into the stream of consciousness<sup>2</sup> of any human being.

Fisher's concept of income is equivalent to consumption of goods and services as measured in monetary terms. This is not to say that income is measured by reference to all money spent during a period whether on durable or non-durable goods -- rather it is the money spent on the services actually consumed or enjoyed during the period. Any question of savings or over spending is disregarded. The measure of income in any period is therefore totally dependent on the individuals personal decision

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1. Ibid p.5.

2. Ibid p.5.

as to whether or not to save.

Fisher's discussion centres around the individual, not the business entity. He is of opinion that, "It is interesting to observe that a corporation as such can have no net income. Since a corporation is a fictitious, not a real person, each of its items without exception is doubly entered. Its stockholders may get income from it but the corporation itself, considered as a separate person apart from these stockholders receives none." <sup>1</sup>

Fisher values capital on the basis of the future income discounted back. Any capital gain, presumably an increase in the monetary equivalent owing to new physical attributes or just a price change, if consumed such growth is recorded as income. To regard the gain as income both when it arises and on consumption, is to Fisher; double counting. The effective difference in treatment of the gain would appear to be one of timing; sooner or later the gain will be included in the income measurement.

Fisher's conception of income in psychic terms runs into measurement problem and devoid of practical application. It is apparent that if we accept this concept of 'ultimate' or 'true' income based on fictional mental accounting, we would have to postulate another 'mind' or skin of consciousness in which the mental accounting is conducted. In terms of any general significance such a measure is at best of very limited use and Kaldor observes -- "... if we reserved the term income for consumption, we should still need another term for what would otherwise be called income; and we should still be left with the problem of how to define the latter." <sup>2</sup>

The subjective measurement process in such psychic experience and the round about process has led Frankel to say "It is as if, while eating my dinner, I am observing, recording, or reporting to myself on the 'agreeable sensation' and experience of eating it, and it is as if I calculate or

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1. Ibid p. 24.

2. Nicholas Kaldor, An Expenditure Tax, London, Allen and Unwin, 1955, p.57.



measure my net psychic income by not only continually observing recording and reporting on 'agreeable sensation' -- if that is possible -- but also by observing and reporting on accompanying disagreeable ones (such as those which Fisher calls the 'labor pain' involved in earning income) and deducting the latter from the former.<sup>1</sup>

In terms of any general significance, Fisher's idea of income as psychic enjoyment is of little use. This concept may be useful and relevant when attempting to measure the psychic enjoyment of economic man, but it is less than perfect when attempting to measure the maintenance of his economic well being. Because of its psychological base, the model ignores economic reality and the need to maintain capital and preserve the well-being and future income prospect. Fisher's idea of income is also attacked on the grounds that capital movements and savings are ignored and thus the owner's capital and well being not maintained.

Erik Lindahl:

Lindahl advanced the notion that income is -- "the continuous appreciation of capital owing to the time factor."<sup>2</sup> For any given period, income in this sense can be regarded as the product of the capital value existing at the beginning of the period and true rate of interest ruling in that period. This measures the appreciation in capital value that arises because the discounted future value comes nearer and nearer in time; in other words it measures the rate at which the value of capital goods increases through time. The income which is thus derived as the interest over a period on the capital value at a particular instant of time is a forward looking concept -- it is the income expected for the coming 'period' or income 'ex-ante'. In a world of certainty, this approach to income might be useful, but in conditions of uncertainty, its use is severely limited. Both the future receipt and the future rate of interest are open to doubt; accordingly the amount of interest and the value at any time are equally uncertain.

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1. S. Herbert Frankel, "'Psychic' and 'accounting' concepts of income and welfare" in Readings in the Concept and Measurement of Income, R.H. Parker and G.C. Harcourt (edited) Cambridge University Press, 1969, p.96.

2. Erik Lindahl, Economic Essays in Honour of Gustav Cassel, London, Allen and Unwin, p.400.

F.A. Hayek:-

According to Hayek, maintenance of capital is done in terms of maintenance of income.<sup>1</sup> "Capital is a quantitatively determined fund which has some existence apart from and beyond the concrete non-permanent resources in which it is embodied".<sup>2</sup> He is of opinion that - "what is relevant is whether a person maintains a stock of non-permanent resources which will secure him, an increasing, constant or decreasing income stream, not whether this stock itself increases, remains constant or decreases in any of its directly measurable dimensions."<sup>3</sup>

Capital maintenance in Hayek's approach is seen as a means of avoiding using of unintentionally parts of the sources of income. "We are interested in the magnitude of capital because, ceteris paribus, a change in it will cause a change in the income to be expected from it, and because in consequence every change in it may be regarded as a symptom of such a change in the really relevant magnitude of income."<sup>4</sup> The capitalised value of the capitalist's future income anticipations may be greater or less at the end of any period, than at the end of the previous period because of the presence of 'windfall gains or losses' - but these 'windfalls' do not need to be compensated out of current income, in order to maintain capital intact for Hayek's purpose. All that is required is that current consumption should be adjusted to that level. Hayek states that "whether the particular unforeseen change is favourable or unfavourable, as soon as he learns about its occurrence or imminence he will have to change his consumption to the level at which it can not be permanently kept, If, for instance, his receipts increase in consequence of the change by £210 and the rate of return which he can obtain on re-investment is 5 per cent, he must consume only £10,

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1. F.A. Hayek, "The Maintenance of Capital" Economica, August 1935, p. 241. Hayek was concerned with variations in the income of individuals owners of capital and with changes which affect them as owners of capital.
  2. F.A. Hayek, The Pure Theory of Capital, London, Routledge and Kegan Paul Ltd, 1941 p. 294.
  3. Ibid, p. 300.
  4. Ibid, p. 298.

and must re-invest the remaining £200, which at 5 per cent will give him the same return in every future year. Such windfall profits, are, therefore, not income in the sense that their consumption is compatible with maintaining capital intact. Neither does consumption need to be reduced by the amount of corresponding windfall losses. In both cases only the current interest on the (positive or negative) capital gains ought to be counted as income".<sup>1</sup>

J.R. Hicks:

Hicks, also like Hayek, concentrates on individuals in analysing income and capital maintenance concepts. Discussing the behaviour of individuals with respect to expected income (income ex-ante) which is significant for 'prudent conduct' in a frequently quoted passage, Hicks suggests - "The purpose of income calculations in practical affairs is to give people an indication of the amount which they can consume without impoverishing themselves. Following out this idea, it would seem that we ought to define a man's income as the maximum value which he can consume during a week, and still expect to be as well-off at the end of the week as he was at the beginning".<sup>2</sup> The weekly period mentioned by Hicks is not, of course, intended to have any special significance. It might equally well be a day or a year.

Hicks regards the above definition as the 'central meaning' of the term income, but states that in practice we must content ourselves with approximations to it. He gives three such approximations:-

- (i) "The maximum amount which can be spent during a period if there is to be an expectation of maintaining intact the capital values of prospective receipts (in money terms).
- (ii) "The maximum amount the individual can spend this week, and still expect to be able to spend the same amount in each ensuing week". This takes account of changes in interest rates, which the first approximation does not.

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1. Ibid, p. 308.

2. J.R. Hicks, Value and Capital, Oxford, Clarendon Press, 1946  
2nd edition, p.172.

- (iii) "The maximum amount of money which the individual can spend this week, and still expect to be able to spend the same amount in real terms in each ensuing week". This takes into account price changes, which the first and second approximations do not. <sup>1</sup>

Adapting Hicks' definition to a company it stands as follows:

"A company's profit for the year is the maximum value which the company can distribute during the year, and still expect to be as well off at the end of the year as it was at the beginning." <sup>2</sup> In accounting literature Hicks' definition of economic income has been widely discussed and in recent years much importance is placed on this definition in official pronouncements. <sup>3</sup>

The Hayek-Hicks concept of economic income is centred around 'income stream' or 'well-offness' of an individual. For a company to retain the same degree of 'income-stream' or 'well-offness' at the end of a year as it possessed at the beginning is equivalent to maintaining its capital intact. This raises the issue of how capital maintenance is to be measured. According to the Hayek-Hicksian concept, the basis of income determination is the discounting or capitalisation of the expected cash receipts.

Discounting all future net cash flows arising for the company would give the figure of net capital value at present. These future net cash flows are in economic terms the 'value' of a company, since they represent what can be got out of the company by keeping it in being as an entity. Discounting them to their net present value, in recognition of the fact that they arise at discrete points over a long period of time, leads to what is described as the 'capitalised value' of the company at any given moment. The difference between the capitalised value of a company at the beginning and end of a year after allowing for net cash flows arising during the year will be the profit for the year; since the whole of this sum could be

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1. Ibid, pp. 172-174.
  2. Report of the Inflation Accounting Committee, F.E.P. Sandilands (Chairman), London, HMSO, Cmnd Paper 6225, 1975 para. 98.
  3. Like the Sandilands report, the Trueblood report, the Corporate report, the Mathews Committee report, the Richardson Committee report.

distributed while maintaining intact the capitalised value at the beginning of the year. Following the economic income concept, the Sandilands Committee defines an 'ideal income concept' for a company as "The discounted net present value of all future net cash flows at the end of the year, less the discounted net present value of the future cash flows at the beginning of the year, plus the net cash flow arising within the year after making adjustments for the introduction of new capital during the year." <sup>1</sup>

The essential approach of this definition may be illustrated through an example in conditions of (a) Certainty and (b) conditions of uncertainty. The calculations assume a discount rate of 10%, which represents the company's time preference rate at which it would be willing to invest a sum of money at the present time.

- (a) Conditions of certainty: We assume that a firm expects a net cash inflow of £1,000 at the end of each of the next three years -- 1978, '79 and '80. The £1,000 may be an expectation known with certainty or it may be the average of a possible range of receipts. Discounting the future expectations of £1,000 for the next three years, the present value of this investment is £2,487. Of the £1,000 received during the year 1978, profit is calculated as follows:-

Cash received	£1,000
Discounted value at the end of 1978 of two annual expected cash receipts of £1,000	<u>1,736</u>
Total value at the end of 1978	2,736
Less - Value at the end of 1978	<u>2,487</u>
Income for 1978	249 *

The remainder of £1,000 i.e. £751 received is a return of capital.

\* If the payments were certain, the profit for the year can also be computed by multiplying the capitalised value of the investment at the beginning of the year by the discount rate as  $£2,487 \times .10 = £249$ .

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1. Ibid, para. 100.

- (b) In conditions of uncertainty: Here we assume that, the actual cash received in the first year is £1,500 and that expectation changed so that two future net cash inflows of £1,100 were expected at the end of each of the next two years. The profit for 1978 is computed as follows:

Cash received	£1,500
Discounted value at the end of 1978 of two annual expected cash receipts of £1,100	1,910
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Total value at the end of 1978	3,410
Less - Value at the end of 1978	2,487
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Income for 1978	923
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From the above illustrations it is evident that, as each benefit 'flow' approaches its point of realisation, its present value increases until the realisation value is obtained. It then ceases to be part of the existing 'stock' of capital, instead, represents periodic possible consumption which, according to the Hayek-Hicksian model is partly income and partly a return of capital requiring re-investment if capital is to be maintained.

If profit could be determined following this economic concept, it would no doubt be the most meaningful one. In practice the viability and feasibility of the economic income model in a world of uncertainty are severely constrained by the requirement to forecast future benefit flows involving the attendant problems of timing of benefits, re-investment; prediction and growth factors and the choice of an appraisal discount factor dependent on the investment preference and alternatives open to the investor. In Hayek-Hicksian terms 'income-stream' or 'well-offness' is defined as the present value, using an appropriate rate of discount of the expected stream of future net cash receipts of the enterprise. This makes it evident that the concept is a purely subjective one, since it not only depends upon expectations of future net receipts, but it is also dependent upon one's (subjective) choice of discount rate. Moreover, as Kaldor has pointed out, although it is a concept of income which aims to maintain capital intact, one has to tread

warily since, "We can not first define income as what is left after maintaining capital intact and then define the latter as what is required to maintain income intact, without getting involved in circular reasoning".<sup>1</sup> Thus if we are to translate the Hayek-Hicksian concept of profit and capital maintenance into practical terms, we must define a measurable concept of value which avoids the circularity against which Kaldor warned. Economic concept of profit and capital maintenance therefore in practical terms remain an unattainable ideal.

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1. Nicholas Kaldor, *Op. cit.*, p.65.

Accountant's Concepts

Like economists, accountants do not agree on a single concept of profit.<sup>1</sup>

While there is general agreement that a company's profit is a measure of the sum that may be distributed after maintaining capital on a certain basis, disagreement and controversy surround further specification. There are many different ways of measuring the assets and liabilities of a company at a particular date, or the income arising during a particular period. Each way may lead to a different picture of the company's activities from a certain point of view. But some ways of measurement may be more useful than others from the point of view of meeting the requirements for information of different users of accounts and in different economic environment.

In the following paragraphs, an attempt is made to discuss theoretically fundamental concepts of profit and capital maintenance embodied in different approaches to inflation accounting. We begin with conventional historic cost approach so that inflation accounting methods could be properly appreciated in that perspective.

Conventional historic cost approach

The conventional accounting concept of profit uses past business transactions as its foundation and is based on 'historic cost -- realised revenue' basis of determining income and value. The conventional approach in income measurement follows the pattern: first, define the particular accounting period, second, recognise the revenues of that period, third, recognise the corresponding period costs and lastly, match those costs relevant to the recognised revenue carrying forward the residue of unallocated costs for matching with subsequent periodic revenues.

This concept equates the capital to be maintained before any distribution is made with the monetary value of the shareholders interest<sup>2</sup> at the beginning of the year. Profit or loss for the year is determined in relation to costs

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1. The difference in outlook between the economist and the accountant is more fundamental. The accountant's calculations are designed to serve practical ends. He is more concerned to serve business expediency than to aim at truth for its own sake. Truth to him is something relative not absolute. The economist for purposes of analysis can make assumptions which do not hold good in real life, but the accountant must accept the business world as it is.
  2. 'Shareholders interest' in the company differs from the 'share capital' in that it includes those reserves established in previous years which may be regarded as part of the shareholders funds.



and is arrived at after matching against revenues received during the year the historic cost incurred in generating the revenue. In the words of the Sandilands committee -- "Profit [in conventional historic accounting] for the year is regarded as any gains arising during the year which may be distributed while maintaining the amount of the shareholders interest in the company at the beginning of the year, which is regarded as the company's capital."<sup>1</sup>

The basis for measuring traditional accounting profit is the transactions which the business entity enters into in its operational activities. Under the transaction approach, revenues and expenses are recorded as changes in assets and equities become evident as a result of an entities transactions. These transactions relate mainly to revenue received from the sale of goods and/or services and the various costs incurred in achieving these sales. All these transactions will, in some way, involve the eventual receipt or payment of cash and if the eventual cash exchange is not complete at the moment of measuring income, this incompleteness is allowed e.g; by accounting for amounts due by debtors for sale on credit. Once these adjustments have been made, the revenues and costs, which have been recognised as having arisen during the defined period are then linked or matched in order to derive accounting profit. It is this matching process which gives rise to most judgemental problems in accounting.

Because of the dynamic nature of enterprises with their continuing activities extending beyond the accounting period and balance sheet data, there are incomplete transactions which represent effort by the enterprise to which income and costs can be related or matched. As such the recorded costs need to be analysed and segregated; those costs which can be realistically attributed to the revenue of the period are matched with it and those which cannot be matched are carried forward to subsequent periods to be linked with appropriate revenues in the future. The accounting problems of carrying forward costs attributable to such long - lived resources as plant and equipment or to such trading resources as stock and work in progress are

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1. Sandilands report, op.cit., Para-105.

example of this allocation process in conventional accounting practices. It gives rise to the 'residue' balance sheet i.e. a balance sheet which describes unallocated or unmatched past costs as assets of the business.

Under this approach, all transactions are recorded in terms of their original or historic prices. Periodic profit is measured by recording both revenues and expenses in terms of their original transaction prices. Where assets purchased in past periods -- such as fixed assets or stock are used to generate profit, an appropriate share of their historic cost is charged against revenue as part of the process of profit measurement. Expressed in another way, accounting profit is equal to the gain in net assets over the period; where assets are valued in terms of historic prices. The revenues from sales of goods and services are associated with an inflow of assets (cash and other financial assets) while the incurring of costs is associated with an outflow of cash, an increase in liabilities.

'Pure historic cost' is not always adopted in practice. The rule of conservatism sometime sway away them from objective historic cost -- the most prominent being that trading stock at hand at balance sheet should be valued at cost price or market value whichever is the lower. Conservatism or the accounting policy of reasonable caution being that -- losses may be but profits should not be anticipated.

In the case of items where the benefit is received and utilised by the enterprise at virtually the same time that the cost is incurred, for example wages, the historic cost is also very close to the current cost. However, where there is a significant time lag between acquisition and utilisation, the historic cost may well differ from the current cost as the point of use. In the case of these latter items, the unexpired costs are usually stored in the asset accounts. This principle is applied to such items as stocks, fixed assets and prepaid expenses. Various methods have been developed by accountants for allocating the costs to the expense accounts, when the asset's services are used. There are various methods of valuation of stock, depreciation of fixed assets and the amortisation of prepaid costs. It is this element of the matching process which has given rise to difficulties when there is a price change between acquisition and utilisation date.

The strict adherence to the historic cost base in accounting has meant that accountants continue to account for resources at their original acquisition value until such time as a resource is realised, at which date the value change is recognised. The result of using the historic cost principle is that any unrealised gain which could be classified as income are in general ignored until such time as realisation takes place. It also means that, on realisation it is inevitable that, part of realised gain will include amounts earned in previous periods. The overall result is that the accounting profit of a defined period may not be entirely representative of value changes during that period and so the corresponding balance sheet may well portray resources expressed in outdated value terms.

In the profit measurement process, the accountants accept the realisation principle as a twin of historic costs. As a generally accepted guideline, recognition of income is only made when realisation has taken place.<sup>1</sup>

An important implication of the realisation principle is that, there should be a market transaction before there can be any recognition of upward value changes even when the increases are readily measurable. Normally only realised revenues are brought into the income statement against which costs are matched. Realisation is, however, a general rule and there are exceptions in specific circumstances, as for example (a) when a significant time-lag is likely before realisation eventually takes place. In these cases such delays are accepted as reason enough for discarding the realisation principle and recognising unrealised gains. Examples are long term contracts on construction and ship building where contract income can be recognised through the contract period instead of only at the contract completion date. (b) Repaid rises in land and property values may lead many companies on the grounds of the materiality of the unrealised value increments to feel it necessary to measure and report the value changes even though no realisation contemplated. (c) Certain kinds of firm may abandon the realisation test when valuing their stock -- e.g. some farms, producers of precious metal and exotic plantations.<sup>2</sup>

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1. The conversion of a resource into cash or near cash for assets and payment through cash or otherwise for expenses and liabilities usually constitute realisation.
  2. W.T. Baxter, Accounting Values and Inflation, London, McGraw Hill, 1975, p.18.

(d) Unrealised losses are recognised, measured and subsequently reported -- the rule being that such losses should be accounted for prior to realisation, whereas gains should not. But on the whole, despite these exceptions, the realisation principle is adhered to in practice and as such the over all result is that, reported accounting profit for a defined period contains a heterogenous mixture of gains of the current and prior periods, thus masking the effective profit of the current period.

The last important guideline in the conventional profit measurement process is the matching principle. It requires that, revenues which are recognised through the application of the realisation principle should be related or matched with relevant and appropriate historic cost. Past costs are examined and despite their historic nature; are subjected to a prediction based procedure whereby cost elements regarded as having expired service potential are allocated or matched against relevant revenues. The remaining elements of cost which are regarded as continuing to have future service potential are carried forward in the balance sheet and are termed as assets.

The most important feature of the matching principle is that, there should be some positive correlation between respective revenues and costs. There is however, much difficulty inherent in this exercise, because of the subjectiveness of the cost allocation process which results from estimating the existence of unexpired future service potential in the historic cost concerned. Differences of opinion exist on how historic cost incurred should be matched against revenue, since it is not always clear how particular expenditures and revenue correlates. Conventional accounting bases have been developed in order to standardise as far as possible the treatment of certain areas but historic cost accounting still allows significant variations of treatment in certain areas. The main areas of difficulties affecting matching process are stock valuation and fixed assets depreciation policy. Matching is not an easy or straight forward process and consequently much care and expertise is required to give the allocated figures sufficient credibility to satisfy their users.

The actual approach to measuring profit involves a rather complete understanding of existing accounting practices. Although described as a historic

cost basis, exceptions are sufficiently numerous to rule out any brief technically accurate description. The historic cost approach lacks a built in logic for universal application in every circumstances. So, the accountants have formulated basic rules as a guide in depicting the position of enterprises and their profits over a period of time. The accounting profession recognises four fundamental accounting concepts as having general acceptability, they have been variously stated and we quote from the SSAP No-2 issued by the U.K. ASSC in November 1971:-

- " (a) the 'going concern' concept: the enterprise will continue in operational existence for the foreseeable future. This means in particular that the profit and loss account and balance sheet assume no intention or necessity to liquidate or curtail significantly the scale of operation;
- (b) the 'accruals' concept: revenue and costs are accrued (that is recognised as they are earned or incurred, not as money is received or paid), matched with one another so far as their relationship can be established or justifiably assumed, and dealt with in the profit and loss account of the period to which they relate; provided that where the accruals concept is inconsistent with the 'prudence' concept [Paragraph (d) below] the latter prevails. The accruals concept implies that the profit and loss account reflects changes in the amount of new assets that arise out of the transaction of the relevant period (other than distribution or subscriptions of capital and unrealised surpluses arising on revaluation of fixed assets). Revenue and profits dealt with in the profit and loss account are matched with associated costs and expenses by including in the same account the costs incurred in earning them (so far as these are material and identifiable);
- (c) the 'consistency' concept: there is consistency of accounting treatment of like items within each accounting period and from one period to the next;
- (d) the concept of 'prudence': revenue and profits are not anticipated, but are recognised by inclusion in the profit and loss account only when

realised in the form either of cash or of other assets the ultimate cash realisation of which can be assessed with reasonable certainty; provision is made for all known liabilities (expenses and losses) whether the amount of these is known with certainty or is a best estimate in the light of the information available."<sup>1</sup>

The conventional concept of profit is the one underlying in profit and loss account prepared by most companies. It has the merit of simplicity and the figure of capital is taken from the opening balance sheet of the year. The approach is based on an assumption that the capital of a company for the purposes of calculating the profit of the year is the amount subscribed by its shareholders plus the additional amount which have accrued as gains in past years and have been retained by the company as reserve. The process of charging expenses against revenue to determine accounting profit is one of recovering, from revenues, the resources used in terms of their historical money values. It follows that, if the whole of accounting profit is distributed, the original money value of proprietorship capital is maintained intact, proprietors thus have the same number of pounds invested in the business at the end of the period as at the beginning.

Many spirited advocacy and defences of the conventional accounting profit model have been made over the years. The most important ones have come from Kohler<sup>2</sup> Littleton<sup>3</sup> and Ijiri<sup>4</sup>. The first argument invoked to justify historic cost based profit is that it has stood the test of time and so it must have been found useful by a great many people. The next favoured argument is that, since the function of accounting is to provide a knowledge of past business activity, predictions of the future can be made by using it as a foundation. In other words, the job of the accountant is to record fact rather than to value. A supporting argument to this one states that the

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1. SSAP-2, Disclosure of Accounting Policies, issued November 1971.
  2. Eric L. Kohler, "Why not retain historical cost?" Journal of Accountancy, October 1963, pp.35-41.
  3. A. C. Littleton, "The significance of invested cost." Accounting Review, April 1952, pp.167-173.
  4. Yuji Ijiri, "A defense of historic cost accounting" in Asset Valuation and Income Determination, R.R. Sterling (ed) New York Scholars book co, 1971, pp. 1-14.

conventional income model is credible because it is based on factual transactions which may be evidenced and verified so that it is less open to dispute than any other income model. This is the classic defence of objectivity; that accounting income is measured and reported objectively and that it is consequently verified.

The fact that accounting profit appears well suited to two distinct managerial activities is also often used in its defence. First, it is said that it is useful for control purposes, particularly when reviewing the worth of past decisions and secondly, it is said that it is useful for making management accountable to owners for the use of resources entrusted to it. Other arguments in favour of traditional accounting income have been advanced, suggesting that the historic cost basis is the least costly in social and economic terms because it minimises (a) potential disputes about information reliability and (b) time and effort in preparing the information. An additional argument is that, in times of rising prices, alternative income models to historic cost could give lower rates of return which could lead to lower share prices and market ratings.

Of the several counter arguments to the above; the main one is that the traditional measurement process represents an income figure which is a product of principles and conventions rather than a product of economic reality. Historic cost and realisation principles prevent essential information about unrealised gain being reported and also lead to reports of heterogeneous mixtures of realised items spreading to current as well as past value increments. The conventional balance sheet represents as assets the residual unallocated cost figures rather than economic values of resources employed by the firm.

The conventional accounting income model is based upon conventions and principles. These may severely be criticised for the lack of contemporary valuation, for the unnecessary caution and conservatism introduced in the measurement process. The whole effect of the conventions introduced may result in producing accounting figures which may not be in the best, produce relevant information required by the users of accounts. The conventional approach with its principles of matching historic cost and realised revenues implies a concept of profit which ensures maintaining intact the

the original 'money capital' invested in the enterprise. This results in no recognition being given to any changes in the purchasing price between acquisition and realisation dates. This creates problems and serious anomalies in financial reporting in a period of changing prices which we have discussed in the introductory chapter.

General purchasing power approach:

The concept of profit adopted by the purchasing power approach regards the gains arising during the year as distributable after maintaining the purchasing power of the shareholders interest in the enterprise at the beginning of the year. Capital is regarded as the amount at the end of the year equivalent in 'purchasing power' to the monetary amount of the shareholders' interest in the company at the beginning of the year. This approach to profit and capital maintenance takes into account the changing purchasing power of money. The assumption is that the capital of a company is the amount belonging to its shareholders, and this is expressed as an amount of 'purchasing power' rather than of money. No gains arising during the year are regarded as profit until an amount has been set aside sufficient to maintain the shareholders' interest in terms of 'purchasing power' at the beginning of the year.

The objective of the purchasing power approach is to show the affairs of a company in terms of a unit of measurement which is different from the monetary unit used in the conventional accounts. The purchasing power method approaches the profit measurement process from the point of view of the unit of money used in the accounts, and is based on the assumption that the most significant problem arising for the preparation of company accounts during a period of inflation is that the conventional unit of measurement i. e. , the pound becomes unstable, and itself changes in value too quickly to be any longer useful as a unit of measurement for company accounts.

A price index which approximates to the changes in prices of items purchased by shareholders as a class is normally the basis of a 'rate of exchange' between historical pounds and purchasing power pounds and is used to calculate the amount that should be set aside to maintain the 'purchasing power' of the shareholders interest. This index is normally the one which shows the changes in general price level and not to the particular types of resources held and used or to the goods and services produced by the enterprise. In other words,



they do not reflect the specific changes in costs and prices affecting that enterprise but is related to the shareholders' general consumption pattern as a member of the society.

We would evaluate this concept of profit and capital in detail in chapter 10 since this is the basis underlying proposals of a comprehensive inflation accounting method favoured by accounting bodies (until recently) in a number of countries around the world.

#### Replacement cost approach

This concept of profit and capital regards a company's capital not as the amount of the shareholders' interest but as the productive capacity of the company, in the form of its assets, which it uses to generate future cash inflows. In other words, the capital to be maintained is the asset resources; which are needed to retain the existing potential of the entity for providing goods and/or services. Profit for the year is regarded as any gains arising during the year which may be distributed while maintaining the productive capacity of assets held by the company. Capital is regarded as the productive capacity of the company.

The notion of maintaining capital in terms of 'productive capacity' is the bench-mark used for measuring operating and distributable profits.

'Productive capacity' in general terms is based on some notion of the maintenance of a physical quantum of assets, or production capacity or service potential of assets, singly or in aggregation. Whatever notion is used, the mode of calculation generally entails that, provision is to be made for replacement of the physical assets in possession at the balancing date. Underlying such replacement criteria, the idea is that -- operating capability will be impaired, if distributions reduce the level of asset resources. To maintain its operating capability, the enterprise must remain in command of resources which on aggregate are capable of producing the same flow of goods and services. But maintaining operating capability or productive capacity does not mean that assets and expired services will or would have to be replaced with identical assets or services. It generally means that the overall holding of resources at the end of a period is the same as at the commencement of the period, leaving the same overall ability to provide goods and services. In

summary, the logic is that, if operating or productive capacity is maintained at all times, capital is maintained at all times.

The maintenance of productive capital is the basis of matching principle in this approach. Revenue is charged with the current cost of producing that revenue. No sums are regarded as profit, until provision has been made to replace the company's productive assets as they wear out, or expressed another way, to maintain the company's assets at a constant physical level. As business firms will not usually undertake to manufacture or trade in goods unless the revenues expected to be obtained exceed the outlays and running costs incidental to production or trade, the amount laid out is expected to be 'replaced' before net income or profit is deemed to be earned. If a firm is to continue in business and to remain equipped to do business of a certain quantity and kind, it may seem that provision must be made out of its revenues, for the replacement of the stock and other assets appropriate to its style and level of operations before a surplus of the nature of net income arises. In other words, there must be a recovery of capital consumed or used up so as to maintain a constant stock of resources or wealth.

Relative price changes approach:

This approach regards capital as the 'purchasing power' of money invested in the company's assets. The assumption underlying this approach is that the company will continue to invest money in the same type of fixed assets and stock in the future as in the present and the company has command over purchasing power rather than the assets actually held during a period of time. Profit for the year is regarded as any gains arising during the year which may be distributed while maintaining the 'purchasing power' of the amounts in the balance sheet representing the assets of the company at the beginning of the year. Capital is regarded as these amounts adjusted to their equivalents in terms of 'purchasing power' at the end of the year.

Under this approach, from revenue sufficient amount is retained as has been used up in terms of purchasing power represented by assets during the period before the balance of profit is strike out. For the purpose of matching cost on a 'purchasing power' basis, two types of indices are used. First, so far as money invested in fixed assets and stocks is concerned, changes in 'purchasing power' is measured by the movements in prices of the fixed assets and stock in which the money is invested. In other words, for non-

monetary assets specific indices are in use. Second, for the maintenance of amounts invested in monetary assets, the movement in purchasing power is measured by the change in a wide-ranging consumer index of prices.

Current cost approach:

This approach regards capital not as the physical assets of the company nor as the amount of purchasing power invested in the assets, but as the 'value' of the assets to the company. The concept of profit adopted is a 'current cost operating profit' in which the revenue is charged with the 'current cost' representing that part of the value of the company's assets which has been consumed during the year. Profit for the year is regarded as any gains arising during the year which may be distributed after charging for the 'value' of the company's assets consumed during the year. Capital is regarded as the 'value to the business' of the company's assets.

Taking the CCA method proposed in the Sandilands report as a model of such profit and capital maintenance concept; the general principle followed is that 'operating profit' of the enterprise is arrived at by charging against the amounts realised for a company's output during the year -- the 'value to the business' of the assets consumed in generating those amounts.

'Operating profit' of the enterprise is the difference between the enterprise's revenue from goods and services and the cost of the input used up or consumed in generating that revenue. A figure of 'operating profit' is arrived at from the historic cost by making certain adjustments in respect of 'value' consumed. In balance sheet also, the assets are not shown at historic cost but at their 'value to the business'.

We would evaluate this concept of profit and capital maintenance in detail in chapter-11. In very recent years, in official pronouncements in many countries, this approach is much in favour as a comprehensive inflation accounting method.

Conclusion

The above discussion reveals that different approaches to profit and capital maintenance would lead to different results on a set of accounts on the basis

of measurement process and value bases adopted. To quote Sandilands committee -- "In our view no single concept is likely to be universally 'correct'. Some will be more useful than others in certain circumstances and it is very unlikely that one concept will be appropriate in all circumstances.... characteristics of the profit figure is that they are all equally 'correct'. It is impossible to say in abstract that one of the five figures [discussed] is 'right' and the others are 'wrong' since all are right within their own assumptions."<sup>1</sup> This is a difficult situation. The Sandilands report also goes on to say "...the choice of a profit is a practical business issue that cannot be resolved independently of the needs of users of accounts."<sup>2</sup> With this we would like to add that, it also needs the consideration of environment for our present purpose to find the best approach to account for inflation in the context of developing economies.

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1. Sandilands report, op. cit., Para-137.
  2. Ibid. Para-137.

Chapter 6: Basis of evaluation of inflation accounting methods

There are many possible methods to account for inflation. In this chapter we would sketch very briefly the most relevant and widely discussed alternative methods to historic cost accounting<sup>1</sup> and establish criteria of evaluation to highlight their relevance and usefulness as ideal inflation accounting model in the context of developing economies. We feel that no important purpose would be served by attempting to analyse every system, method and standard prescribed over the years in accounting literature to adjust for inflation.

We have narrowed down our choice of inflation accounting methods to those which have been discussed and developed internationally as partial or comprehensive and practicable alternatives to conventional historic cost accounting. In the selection process, we have avoided the highly theoretical models like present value (discounted cash flow) accounting method for obvious difficulty of their practical implementation. Our evaluation concentrates on those systems and methods which in our opinion warrant particular consideration as the most relevant and probable useful model in the context of developing economies. Where same principle or conceptual framework based inflation accounting method have been given different names for slight variation of approach, or different aspects of the same principle framework has been put together to form a new method -- we have favoured the inflation accounting method which represents the most comprehensive and practicable approach. This is true in case of value based accounting methods, where current cost accounting (CCA) has been taken to be the most comprehensive method inclusive of current or replacement cost accounting method widely discussed in accounting literature.

We would evaluate the following inflation accounting methods widely discussed as alternatives to historic cost accounting and would try to find

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1. The detailed description and analysis of the various inflation accounting methods would be undertaken in chapters 7 to 11.

out the relevance and usefulness of these methods in the context of developing economies.

1. Partial Adjustment Methods:- The impact of price level changes is more pronounced on those assets which have a fairly long life in use and where a time-lag exists between acquisition and the apportionment of acquisition costs to the income earning process. The two major classes of assets in this group are depreciable fixed assets and stock in trade. Historic cost modified through piece-meal approach like revaluation of fixed assets, adoption of LIFO convention in stock adjustment, acceleration of depreciation charges, additional reserves, etc., have been widely favoured over long time to alleviate the problems created by inflation.
2. Cash Flow Accounting Method:- Cash flow accounting method would only concentrate on the flow of cash, in and out of the firm, over a period of time -- as advocated by its proponent in lieu of the conventional cash cum accrual method of present practice. As advocated, in a cash flow accounting method, the conventional profit and loss account would disappear and be replaced by a statement of cash inflow and outflow over a certain period of time. Under a comprehensive cash flow accounting system, entries would only be made in the books of accounts when cash is actually received or paid out. Depreciation would be abandoned for the purpose of published accounts and the cash spent on acquisition of fixed assets would be charged in full to the year of acquisition. Similarly the cash spent on acquisition of materials, fuel, stock and all other factors would be charged in full at the point of outgoing.

The cash flow statement may be supplemented by a financial position statement as at the year-end, showing the company's 'legal' items such as share capital, debentures in monetary terms. No money values would be placed upon physical assets, but they would be described in terms of such technical or other measures, such as horse power, productive capacity, model, make of the machinery; floor area, location, alternative possible uses of buildings -- as were thought

most appropriate to give the reader an adequate idea of their nature and capacity for rendering service to the firm.

3. Continuously Contemporary Accounting:- In this method assets are valued in the accounts by reference to their current sales value and capital is maintained in terms of the purchasing power of shareholder's equity. CoCoA is based on the economic concept of opportunity cost -- that is value expressed in terms of what the owners of resources is sacrificing by having them in their existing forms rather than in a next best alternative form. Under this method, assets are valued at their opportunity cost in terms of the current cash equivalent of the benefits obtainable in an orderly programme of asset disposal in current market conditions. Use of this method is not taken to imply an intention to liquidate.
4. Current Purchasing Power Accounting:- Current Purchasing Power (CPP) Accounting method attempts to restate the historic cost accounts in terms of the change in the general price level i. e. , to express the historic monetary amounts in general purchasing power. The capital to be maintained is the purchasing power of the monetary amount of the shareholders interest in the enterprise at the beginning of the year. Profit is regarded as the gains arising during the year which may be distributed while maintaining the purchasing power of the shareholder's interest in the enterprise at the beginning of the year. Until very recently, purchasing power based adjustment to conventional historic cost financial statements had been widely favoured as the most appropriate method to account for inflation by the professional accounting bodies in various countries. The professional bodies in Argentina, Australia, Canada, Ireland, The Netherlands, New Zealand, U.K. and U.S.A. has favoured such an approach in discussion papers, exposure drafts, provisional standards in recent past.<sup>1</sup>
5. Current Cost Accounting:- Whereas CPP accounting is concerned with changes in the general price levels, the Current Cost Accounting (CCA)

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1. See Appendix-A to Introductory chapter for official pronouncements.

method is concerned with changes in value of specific assets. CCA is a value based method which uses current market prices or approximation thereto to show asset figures and charges to the revenue earned during the period.

Normally assets are shown in the balance sheet at 'value to the business' following 'deprival' principles. According to deprival principle, the value to the business of an asset is to be equated with the amount of the loss suffered by the company concerned if the asset is lost or destroyed. Current cost of replacement, current net realisable value and net present value -- are the value bases which are considered to arrive at the appropriate value to the business following deprival principle.

The use of the current replacement cost of an asset as a measure of its value to the business does not necessarily imply that asset used up in operation will be or would have to be replaced with other identical asset in existing form. Neither the current net realisable value as appropriate value to the business means intention on the part of the company to dispose of the asset. Moreover, when assets are valued on the basis of current replacement cost, it is not a valuation based on the assets estimated future replacement cost, it is the current cost of replacing at the time the valuation is made which is material. A distinction is therefore drawn between the current replacement cost of the asset and the price that would have to be paid sometime in the future if the assets were replaced.

The capital to be maintained is the asset resources of the entity on the assumption that capital is related to the entity asset. However, it regards capital not as the physical assets of the company nor as the amount of purchasing power invested in the assets to the company. No sums are regarded as profit until a charge has been made representing that part of the value of the company's assets which has been consumed during the year.

The current cost profit or loss for the year is the 'operating profit or loss' for the year. The general principle followed in determining



profit is that current revenue should be charged with the value to the business of the asset used up in producing that revenue. All holding gains whether realised or un-realised are excluded from the computation of 'operating profit'. The main revenue items requiring adjustments (when compared with historic cost accounts) are the cost of sales and depreciation. All other expenses are charged as in the historic cost as there is no significant time lag between purchase and use.

The latest world-wide development in inflation accounting is much in the direction of CCA. Such method of accounting for inflation has been favoured in principle through Discussion Papers, Exposure Drafts, Provisional Standards, in Australia, Canada, Germany, Ireland, The Netherlands, New Zealand, South Africa, U.K. and U.S.A.<sup>1</sup>

The above inflation accounting methods are based on different notion of profit determination and capital maintenance. They also focus primarily on the information needs of a particular group or groups of accounting information users. In a general way, the inflation accounting methods approach the same problem from different directions. So, they would be best suited where particular framework or assumptions hold true. In the context of developing economy, we have to look for an inflation accounting method which could alleviate the major distortions caused in accounts during a period of inflation and at the same time be best suitable to the particular environment.

A single method or particular aspects of a preferred method has to be found out to be an ideal model for developing economies. If a particular inflation accounting method has to be preferred in comparison to the other method in a systematic way, it is important that attempts should be made to draw up guidelines or pre-select important criteria through which relevance and usefulness of each inflation accounting method could be evaluated. The inflation accounting method with most relevance and usefulness on the basis of this evaluation could be preferred in comparison to the other inflation accounting method. The list

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1. See Appendix-A to Introductory chapter.

of preference could be extremely long, but we have selected six major criteria to be used in the evaluatory process of an inflation accounting method. Each of the above selected inflation accounting methods would be evaluated in the context of the following criteria to judge their conceptual framework, important characteristics, relevance, economy, practicability etc. to be an ideal inflation accounting method in an environment of a developing country.

- (a) Information dissemination:- The main criterion we apply is relevance; the information disclosed by an accounting system should be relevant to the requirements of information users. Accounting is not an end in itself- rather it is a means towards an end. Any method of accounting is essentially an information system designed to produce relevant and useful information about the enterprise in a realistic way. "Accounting statements are exercises in communication, whose objective is to transfer information from one group of people to another".<sup>1</sup> In present day accounting thinking, it is deemed that the sole purpose of an accounting statement is not report on the 'stewardship' function of management to its shareholders, but it is thought to encompass a wide and divergent group of information users who are interested in the affairs of the economic entity. The list of information users may comprise of shareholders, loan creditors, management, investment analyst- adviser group, stock exchange, employees, the Government official bodies, other companies and the general public.

The needs of all accounting information users are not alike. The information needs of different groups of information users are divergent and sometimes contrasting to each other. No one inflation accounting method will meet all information needs of all user under all circumstances. The exclusive attention given on information requirement of a particular group or groups of

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1. Peter Bird, Accountability: Standards in Financing Reporting, London, Accountancy Age Books, p. 62.

users may possibly deprive other group of users of accounts of their information needs. Our endeavour would be to highlight the information dissemination process of an inflation accounting method so the diversified information users through preparing a general purpose financial statements to meet most of the relevant information needs of users, in a balanced way. In the context of developing economies, it is also important that the macro-economic aspects of financial reporting is also given adequate consideration, as financial statements generated from corporate sector would have important relevance in national planning, resource allocation and governmental decision making process.

- (b) Maintenance of capital:- Maintenance of capital is particularly important in developing countries, where savings and capital formation constitutes major economic problem. Developing countries are short in productive capital, so whatever limited capital they may have, an inflation accounting method should help to ensure that at least some level of output and services could be produced out of it. Inflation accounting in such a situation should delineate properly the part of profit which could be distributed without impairing the productive capacity of the economic entity.

Since the objective of a business entity is to maintain continuity of production without eroding its capital structure, it is important to consider as profit only that portion of the surplus that can be consumed without impairing productive capacity. Any major deviation from this standard can impair the delicate capital structure and continuity of a company. Since developing nations are plagued with heavy inflationary strains, the determination of what increase in net asset is consumable is exceptionally important. In the advanced nations from 10% to 20% of income may go into capital formation but in developing countries

the rate of savings and investment may be less than 5%.<sup>1</sup> 'Net savings equal to 4% or 5% of GDP normally yields no economic growth, for this is about the ratio needed for mere capital widening for an annual increment of 1% or 1.5% in the labour force. At higher rates of population growth the percentage of GDP that must be invested merely to keep with the labour force is correspondingly higher'.<sup>2</sup>

When accounting profit is not entirely real, it includes a capital element in it. As on the basis of profit shown in the accounts; companies makes decision on dividend, wages, salaries and other matters - disposition of the entire reported profit (if it includes unreal gains) under such circumstances will have the effect of distribution of capital. The National Council of Applied Economic Research in India<sup>3</sup> stated aptly that, "... in the context of an under-developed economy like India, capital consumption is a conspicuous vice and capital accumulation a distinctive value" - which is true for all other developing nations.

The impact of capital erosion is greater particularly in these days of steeping inflation. Replacement by higher priced plant and machinery raises financing problem. The financial problem for replacement becomes still acute with distribution of inflationary profit and purchase of other inputs at higher cost. Inflation accounting methods underlies a concept of capital which is to be maintained before profit is calculated,

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- 1 Paul A. Samuelson, Economics, Tokyo, McGraw-Hill Kogakusha, ninth edition, 1973, p.779.
  - 2 Everett E. Hagen, The Economics of Development, Illinois, Richard D. Irwin, 1975, p.329.
  - 3 National Council of Applied Economic Research, Replacement Cost in Industry, New Delhi, Government of India, 1960, p.3.

and on that basis, such capital may be:-

- (a) Maintenance of shareholder's interest
- (b) Maintenance of 'purchasing power' of the shareholders's interest
- (c) Maintenance of the physical assets
- (d) Maintenance of 'purchasing power' invested in assets
- (e) Maintenance of the value of assets to the business <sup>1</sup>

In the context of a developing country, an inflation accounting method must be favoured which underlies the kind of capital they would like to maintain.

- (c) Resource allocation:- "... a pre-requisite for any criteria applied to the allocation of capital resources in comparable accounting information on the past performance and current position of companies, presented in a way that provides a basis for assessment of future prospects" - is the observation of the Sandilands Committee. <sup>2</sup> We see the introduction of an inflation accounting system as having important long-run influence on the allocation of resources in developing economies. Resource allocation effects of an inflation accounting method and its possible consequences on economic growth process in developing countries should be an important consideration in the evaluation process of inflation accounting methods. The resource allocation decisions of investors, management and governments are all affected by accounting information and therefore allocation of capital resources both in the macro and micro level of economic decisions has to be taken into consideration.

There can be little prospect of real economic growth in developing economies until economic resources are utilised more efficiently

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1. Following the distinction made in the Sandilands Committee report - Para-141
  2. Report of the Inflation Accounting Committee F. E. P. Sandilands (chairman), London, HMSO, Cmnd Paper 6225, 1975 Para-737.

and effectively. Sustained economic growth is dependent on more efficient utilisation of productive resources. In the macro level, as the developing nations are in the threshold of economic growth, objective of an accounting method should be the facilitation of resources into basic and growth-type manufacturing industries. Resource allocation should not be mis-guided, say, by portraying some industries as more profitable or highly successful, where the nature of operation is such that they generate substantial holding gains. If an accounting system does not properly segregate normal operating gain and other holding gains, it could attract investment, for example, towards the speculative real estate, stock investment (or hoarding), luxury housing or other less productive uses and manufacturing industries may fail to attract sufficient investment with lower normal operating profit.

Private capital investments are channeled into various industries by decision based largely on accounting data. Therefore, the allocation of resources of private investors depends to a marked degree on accounting information. Useful data need to be generated to permit the correct flow of capital into capable hands and away from less efficient firms and industries. The shareholders are essentially concerned with the allocation of capital in various competing investment opportunities offered by different companies. In their decision making process they would like to know the present and future cash flow of their investment. Financial reporting therefore should portray realistically the cash flow generating capabilities of different enterprises for investment decision.

Accounting information should also facilitate resource allocation decision within a firm. Faulty measurement methodology of an accounting practice could have repercussion on allocation process in different departments and segments of a firm. Efficiency of operations through facilitating more accurate forecasting, cost calculations, plant replacement, profit measurement,

etc. , should be important qualities of an inflation accounting method. An accounting system by measuring the return derived from employment of resources in different departments or segments could provide good indication of the profitability of these departments or segments and thus facilitate operational resource allocation of man and material.

- (d) Liquidity:- The most immediate problem which inflation give rise for most companies is a chronic shortage of cash as the price of most inputs go higher. This is further aggravated by the need to pay tax and cash dividend on fictitious profits. In a period of inflation, liquidity as measured by cash movements and profitability as measured by conventional accounting practice move in different way and often misleading. The sums tied up in working capital might result in a negative cash flow despite a relatively healthy profit figure. Due to under-developed money market in developing countries, the situation is much worse, and companies find it difficult to raise additional funds either by borrowing or by issuing shares in a limited capital market. The high inflationary pressure on management to meet the day to day working capital requirement has led many companies to contraction of activities or run-down the volume of business.<sup>1</sup>

Liquidity is crucial to the survival and progress of a business. It is a fact that in the long-term a company which consistently fails to make profit cannot continue, but in the short-run, a company which runs out of cash can collapse over-night. Thus the liquidity situation of an enterprise should be a major concern in inflationary conditions. We take the stand that, a business is better off under an inflation accounting system which retains and reports accurate cash-flow and earnings than one which does the opposite.

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1. Asim Kumar Sengupta, Inflation Accounting in India, Calcutta, Finance Publications, 1976, P.38.

- (e) Economy and Practicability:- Economy and practicability of an inflation accounting method should be a major consideration in the context of a developing country. The extra work, cost and effort needed for any inflation accounting system must be judged by its potential value and utility to the economy. Some inflation accounting systems are likely to involve more expense than the conventional historic cost systems. This must be taken into account when evaluating their comparative advantages. The education and transformation process of an inflation accounting should also be an important consideration.

The accounting profession is not very much developed or sophisticated in developing countries, in this situation a simple and less complicated method would be much preferred. The question of training of accountants and orientation of accounting information users is an important element in implementation of any inflation accounting method, so it is natural that a method which is understandable to majority of users should be preferred as could be implemented without undertaking of long and costly transformations programme. The degree of sophistication of an inflation accounting method is also limited by the lack of availability of proper accounting and data processing machinery, technical know-how, valuation facilities, financial information disseminating organisations in developing economies.

- (f) Macro-economic affects:- Last but not the least should be the consideration of the macro-economic affects of an inflation accounting in the whole economy. Macro economic figures reflect the sum of the figure of all individual firms, what they show, therefore depends upon the actions of the individual firms. It has been suggested that accountants have intensified the effects of trade cycles as they tend to over-state profits; following conventional accounting practices when prices are rising and thus add to business confidence and the inflationary spiral. On the other hand they are also alleged to understate reported profit



when prices are falling and thus building up pessimism during a period of depression. The latter in turn have very unfortunate effect on the level of employment and on income and prices<sup>1</sup>. An inflation accounting system should be favoured which would not lead to trade cycle optimism and pessimism. Greater stability of income over the trade cycles could reduce substantially the incentives for business boom or bust -- and thereby encourage greater stability in business operations, employment and the general level of prices over the long-term.

Another important macro-economic consideration is the effect of adoption of an inflation accounting method on the rate of inflation in the economy. As accounting measurement process would have wide repercussions in various spheres of economic activities, an inflation accounting method which on the one hand accounts for inflation and on the other hand accelerates the rate of inflation itself should very much be undesirable. An inflation accounting method, if not going to reduce; at least neutral in effect on inflation rate should very much be looked after.

### Conclusion

Through the evaluation of the selected inflation accounting methods on the basis of the above criteria, the possibilities are that:-

- (i) a particular inflation accounting method may be best suited in the environment of developing economies in its existing form without any changes;
- (ii) a particular inflation accounting method may have useful framework and approach but would need adaptation and changes to be practicable and best suited in the environment of developing economies;
- (iii) no particular inflation accounting method has the correct

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1. William T. Baxter, Accounting values and inflation, London, McGraw-Hill, 1975, chapter - 11.

ingredients to be successful in developing economies.

If the evaluation process of inflation accounting methods reaches the last mentioned possibility -- then attempts should be made to build up a new method of inflation accounting to best suit developing economies.

Chapter 7: Partial adjustment methods

The impact of price level changes is more pronounced on those assets which have fairly long life in use and where a time lag exists between acquisition and the apportionment of acquisition costs to the income earning process. When prices change, the costs charged in accounts (being historical) tend to lag behind costs and revenue, with various ill results. The two major classes of assets in this group are:-

- (a) Depreciable fixed assets and
- (b) Stock and Work in Progress

In this chapter an attempt would be made to evaluate the various adjustment procedure made through these two assets (individually or in combination) on a partial or piece-meal basis to alleviate the problem created by inflation. In subsequent chapter consideration of more comprehensive inflation accounting methods would be undertaken.

Depreciable fixed assets

Depreciable fixed assets are a major item in the company accounts; and subject to much controversy in a period of inflation. The dual effect of depreciable assets as a charge (depreciation, amortization, depletion etc.) in profit and loss account and a valuation figure in the balance sheet, coupled with time lag (in the period of acquisition and apportion) and increasing price levels give rise to much complexity. The valuation, and charge as depreciation related to depreciable fixed assets, are closely related with the concepts of profit and capital maintenance. The Committee on Research and Special Studies of the Philippines Institute of Certified Public Accountant states that, "The Committee concludes that for companies with major investments in property and equipment, such as manufacturing companies and public utilities, the adjustment of fixed assets and depreciation alone would achieve the principal objectives calling for price level adjustments.<sup>1</sup>"

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1. Philippines ICPA - Revaluation of Fixed Assets, Manila, 1971, Special Bulletin No. 2-71, p.5.

For many years depreciation has occupied a central position in discussions about inflation accounting. It is generally considered that in most business organisations; depreciation is one of the major causes of inaccurate profit measurement in a period of inflation. The primary importance of depreciation stems from the dual effect it has got on income measurement and capital recovery, in accounting process.

Let us follow the consequences of income and capital recovery process through the choice of a depreciation method.

Income measurement:

To the accountant, an investment in plant or equipment is a prepaid cost, to be charged to operations and recovered in cash over the serviceable life of the facility. ED-15 - "Accounting for depreciation" issued by ASSC in January 1975 defines - "Depreciation is a measure of the wearing out, consumption or other loss in value of a fixed asset which can arise from use, effluxion of time and obsolescence through technological and market changes".<sup>1</sup> Thus an appropriate proportion, of the total depreciation, relating to a fixed asset, is charged against the profit and loss account for each year, of the estimated useful life of the asset, in order to match revenue earned in a particular year, against that part of the cost of fixed assets assumed to be related to the generation of that revenue.

The charge of depreciation during a period of stable price level would match revenue during that period satisfactorily. But in conditions of increasing price level, this produces a situation where depreciation based on say 1971 costs are matched against 1977 revenue. Fixed assets of a company will usually have been purchased on several different occasions, extending many years into the past. As a result the depreciation estimates contained in the conventional profit and loss account are based on asset costs which represent a completely different purchasing power from that which is in existence to-day.

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1 ED-15, Para-14.

Capital Recovery: One of the purposes of depreciation accounting is to measure the amount that must be recovered from revenue to compensate for the portion of fixed asset cost that has been used up. This idea is embodied in the phrase of 'maintaining capital intact' which is so often used in relation to income measurement. Ordinarily, historic cost depreciation method recovers only the number of pounds originally committed to the asset; regardless of differences in their purchasing power. This recovery is satisfactory in periods of relative stability in the price level, but can be seriously or even ruinously inadequate during periods of inflation. Terborgh<sup>1</sup> states that, "If a company invests 100 cents dollars and recovers only an equal number of 50 cent dollar, it has lost one-half of its real capital whatever the books may show. To think otherwise is to take the shadow for the substance".

To illustrate the situation let us take an example. A machine costs £10,000 and has a life for depreciation purposes of 10 years. Shortly after it is acquired, however, the price level starts rising, eventually doubling, so that subsequent annual recoveries represent a diminishing purchasing power. Assuming for convenience straight line write off, we can describe the development as follows:-

TABLE - 8  
Effect of rising price level on  
depreciation and capital recovery

Year of service	Historic cost depreciation (Col. 1)	Index of price Date of Investment =100	Purchasing power equivalent of depreciation charge (Col 1x100) Index	Number of current dollars required to equal depreciation original dollars (Col 1xIndex) 100
1	£1,000	110	£909	£1,110
2	1,000	130	769	1,300
3	1,000	140	714	1,400
4	1,000	150	667	1,500
5	1,000	160	625	1,600
				/continued.....

1. George Terborgh, Realistic Depreciation Policy, Chicago, Machinery and allied products institute, 1954, P. 114.

Year of service	Historic cost depreciation (Col. 1)	Index of price Date of Investment =100	Purchasing power equivalent of depreciation charge (Col 1 x $\frac{100}{\text{Index}}$ )	Number of current dollars required to equal deprecia- tion original dollars (Col 1 x $\frac{\text{Index}}{100}$ )
6	1,000	170	588	1,700
7	1,000	185	541	1,850
8	1,000	190	526	1,900
9	1,000	195	513	1,950
10	1,000	200	500	2,000
	<u>£10,000</u>		<u>£6,352</u>	<u>£16,310</u>

The company owing this machine is likely to assume that it has made full provision for recovery of the capital consumed during each year, yet if it looks behind the fiction, it finds at the end of the service life that the total of depreciation measurement in purchasing power at the time of the charge, is only 64% of the original investment. So far as the reliance on depreciation charge for capital recovery is concerned, it has dissipated 36% of its original capital in terms of general purchasing power. In the mean time it has understated costs of operation over the life of the asset by the equivalent of 3,648 original pounds of 6,310 current pounds and has overstated net income by a like amount. Moreover, it has paid income taxes on this overstated profit.

The under-charging of depreciation and its subsequent effect on profit measurement may lead to excess payment of dividend and taxes.

"...the reporting of capital recoveries as income -- the inevitable result of under-depreciation is bound to effect adversely the supply of capital funds. This would be true even if the erroneously reported income were free of taxation, but it is doubly so under the impact of the high tax rates now prevailing", -- observes Terborgh<sup>1</sup>.

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1. Ibid. P.4.

"From the standpoint of capital formation, a dollar of depreciation is worth several dollars of taxable income"<sup>1</sup> From the standpoint of its availability for capital investment, a pound reported as taxable business income is subject to a two fold or double erosion; it is reduced both by the applicable income taxes in the case of an incorporated business and by any consumption expenditure by the owners from dividend or proprietary withdrawals. With the present tax structure, this double erosion ordinarily leaves for investment only a minor fraction of the original pounds.

On the other hand, when a pound is reported as depreciation, it usually remains intact, and moreover, as a capital recovery it is tax free. Because it is a recovery and not an income, it is normally regarded by management as unavailable for distribution. Hence, it is protected against consumption by the owners. Both forms of erosion are thus avoided.

We can illustrate, following Terborgh<sup>2</sup> the erosion of capital by a hypothetical example. We have a company subject to a 50% tax charge; the shareholders of which pay an average effective rate of 40% on dividends received. We assume that the company distributes 60% of its reported after tax income, and that the shareholders consume 80% of their after tax income from the dividends saving 20%. We assume further that the company has an income of £10,000 before depreciation and that it reports depreciation of £4,000 instead of the correct figure of £5,000. The effect of this understatement, and the consequent overstatement of taxable income is traced in the following comparison with the results of correct depreciation.

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1. Ibid P. 4

2. Ibid, Table-1 P. 5

**TABLE - 9**

**Loss of capital funds from treating of  
£1,000 depreciation as income**

<u>Company</u>	<u>Results as reported</u>	<u>Results with correct depreciation</u>
1. Income before depreciation	£10,000	£10,000
2. Depreciation	4,000	5,000
3. Taxable income (1-2)	6,000	5,000
4. Taxes paid (50% of 3)	3,000	2,500
5. Balance after taxes (3-4)	3,000	2,500
6. Dividends paid (60% of 5)	1,800	1,500
7. Total payments (4+6)	4,800	4,000
8. Capital funds retained (1-7)	5,200	6,000
<u>Shareholders</u>		
9. Dividends received (from 6)	1,800	1,500
10. Tax paid (40% of 9)	720	600
11. Balance after taxes (9-10)	1,080	900
12. Consumption expenditure (80% of 11)	864	720
13. Total payments (10+12)	1,584	1,320
14. Capital funds retained (9-13)	216	180
<u>Company and shareholders combined</u>		
15. Capital funds retained (8+14)	5,416	6,180
16. Loss of capital funds from treating £1,000 of depreciation as income	764	-

The following partial or piecemeal adjustment methods of charging for depreciation has been favoured in a period of inflation:-

- (a) Accelerated depreciation charges and
- (b) Additional depreciation for asset replacement.

(a) Accelerated depreciation:- The more rapid write down of depreciable assets using the accelerated depreciation methods rather than the conventional straight line depreciation has been suggested as a means of recognising the effects of changing prices. Accelerated depreciation is based upon the notion that there should be relatively large amounts of depreciation expense reported in the early years of the useful life



and correspondingly reduced amounts of depreciation expenses in the later years. The argument is that, a fixed asset is more efficient in generating revenue in the early years, than in the later years of its life and repair costs tend to be low in the early years and higher in the later years.

There are several variations of accelerated depreciation. The following methods are generally used in practice:

- (a) Reducing balance method;
- (b) Sum of the years digit method;
- (c) Shortened useful life <sup>1</sup>

In the following table, the comparative effect on the profit and loss account and on balance sheet, for the same asset with varying acceleration of depreciation charges are shown, assuming that the asset is worth £5,000, having a normal economic life of 5 years, and a salvage value of £500.

TABLE - 10

Depreciation methods -- comparative results

Year	Straight line		Reducing balance		Sum of years digit		shortened life (a)	
	Depre- ciation	Book value	Depre- ciation	Book value	Depre- ciation	Book value	Depre- ciation	Book value
At acqui- sition		£5,000		£5,000		£5,000		£5,000
1	£900	4,100	£1,840	3,160	£1,500	3,500	£1,125	3,875
2	900	3,200	1,163	1,997	1,200	2,300	1,125	2,750
3	900	2,300	735	1,262	900	1,400	1,125	1,625
4	900	1,400	464	798	600	800	1,125	500
5	900	500	294	504(b)	300	500	-	-

1. The effect of adopting a shorter than average estimate of the useful life of an asset is to increase the depreciation provision per year on the asset. By deliberately adopting pessimistic estimates of useful lives, a company can increase its provision for depreciation in the short run -- observed the Sandilands committee, (Report of the Inflation Accounting Committee, HMSO, Cmnd 6225 - Para 322).

Note:

- (a) On the assumption that 4 years economic life has been estimated deliberately instead of normal 5 years.
- (b) £4 excess salvage value results from rounding of figures.  
Depreciation rate @ 36.8%

The above table demonstrates how the selection of a particular depreciation accounting approach will cause a difference in the measurement of income and asset valuation. The depreciation method chosen will have great impact on the measurement of net income, even though the asset cost, estimated life and residual values are the same.

The arguments put forward in support of accelerated depreciation charges are as follows:-

- (1) Accelerated depreciation charge has considerable appeal from the income tax viewpoint. Higher depreciation expenses means lower reported profits in the early years, hence lower income taxes. Of course, the effect reverses in the later years; however an early tax deductions is to be preferred to later tax deductions, because of the time value of money. Deferred taxes represent in effect an interest free loan from the taxing authorities for the period of the postponement. The funds made available by the earlier tax benefits can be put to work in the tax payer's business, and can earn a return pending their absorption by additional tax liabilities later on when deductions are reduced.
- (2) Davidson<sup>1</sup> observes that, "On both the scores of increased profitability and availability of funds, accelerated depreciation comes off rather well as a factor in investment decision making". His assertion is based on the fact that, for investors who seek a protection against risk by an early return of capital, accelerated depreciation may be a decisive factor. The greater the amount of

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1. Sidney Davidson, "Depreciation, income taxes and growth" in Studies in Accounting Theory, W. T. Baxter and S. Davidson (edited) London, Sweet and Maxwell, 1962, P. 294.

depreciation deductions that may be claimed during the pay off period, the lower the amount of cash generated by the new investment that will be subject to the tax and the greater the net cash contribution to the pay off.<sup>1</sup> The other point is that, if re-course to external finance is necessary, accelerated depreciation may make such funds easier to obtain as most lenders seek repayment of loans made to finance equipment purchases over a period shorter than the estimated economic service life of the equipment. Accelerated depreciation permits a larger part of the cash inflow generated during the early debt management years to be free of income tax and gives an added protection to the lender.

- (3) Accelerated depreciation may help to reflect a more uniform level of total expenses associated with specific plant assets. As the asset grows older, repair and maintenance expenses tend to increase. Total expenses may in part be levelled by recording less depreciation expenses under an accelerated method during the latter years of the assets life.
- (4) Directors who are aware that reported net income will be lower during the earlier years under accelerated depreciation may be less inclined to declare large cash dividends which might be better used to pay for recently purchased plant assets or to replace assets at higher prices.
- (5) If the asset is retired earlier than anticipated as a result of unforeseen obsolescence, the loss upon retirement will be less than if straight line depreciation were used. The reluctance of the management to 'take a loss'<sup>2</sup> by writing off an undepreciated asset also favours accelerated depreciation.
- (6) Davidson<sup>3</sup> concludes that, "A Plausible case can be made for the

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1. Ibid; P. 292

2. When the question arises as discarding an old, but still usable and substituting a newer model, one faces the necessity of writing off the book value of the obsolete machine. It is always disagreeable to write off an asset and requires compelling reasons. (Delmas D. Ray, Accounting and Business Fluctuations, Grainsville, University of Florida, 1960 P. 74.)

3. Davidson, op. cit, P. 298.

view that accelerated depreciation for tax purposes encourages investment by increasing profitability and lessening risk as well as by permitting growing firms to finance more of their investment internally. Accelerated depreciation may be expected to remain as a feature of the tax laws of those countries seeking to promote economic growth."

Despite the advantages, accelerated depreciation methods are subject to several criticisms -- as approach for giving effect to price level changes.

- (1) Accelerated depreciation is effective only when property, plant and equipment subject to depreciation are relatively new. The compensating effect generally is during the first half of their useful lives. Over their total useful life, the aggregate amount of the depreciation charges can not exceed what it would be under straight line or any other alternatives. Even in the early years of an asset life, only by co-incidence will depreciation based on acquisition cost and accelerated methods, equal the amount that would be obtained from determining depreciation, using current replacement costs or some other type of current value.
- (2) Accelerated depreciation in the context of taxation does not correspond with the accounting concept of allocation of costs of depreciable assets as usually applied. Acceleration will usually be preferred by management for tax purposes to minimise the effect of taxes. Depreciation, for tax purposes, may, therefore be different from depreciation for financial reporting. In the case of an individual asset, the deduction of a greater amount of depreciation for tax purposes at the beginning of the assets life will reduce the taxable profit as compared with the accounting profit. Since depreciation allowance do not exceed the original cost of an asset, the position will be reverse during the remaining life of the asset. Tax savings at the initial stage of the asset's

life is therefore offset by the increase of taxes during the subsequent periods. With a view to avoiding the shifting effect of taxes from one period to another and the adverse effect produced in the subsequent years, the accountant is faced by a difficult judgemental problem of inter-period allocation of taxes. Such a situation has prompted Gynther<sup>1</sup> to say:

"Accelerated depreciation tends to cause the overstatement of profits in later years when the asset is still in full production and there are few costs remaining to write off against the revenues it creates. It has been argued that the accelerated depreciation of newer assets will take care of this, but as this process goes on, it would take expert mathematicians and magicians to produce accurate depreciation charges. In any case, the day of reckoning must come as soon as there is flattening out of the capital investment curve."

- (3) Since the total amount of depreciation, on an asset, over its life, will not exceed acquisition costs, extra depreciation claimed in early years using accelerated depreciation method means that, less depreciation must be charged in latter years. Depreciation expenses during the latter years will probably seriously mis-state the current replacement cost of the asset services consumed during that period.

Use of accelerated depreciation method is at best only a temporary solution to account for changing prices. Even at that, accelerated depreciation methods make only the profit and loss account more current at initial stage of charging depreciation. Following accelerated depreciation the balance sheet figure for depreciable assets can be significantly different from that of the current values of those assets.

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1. R. S. Gynther, Accounting for Price Level Changes: Theory and Procedures, Oxford, Pergamon, 1966, P.129.

(b) Additional depreciation for asset replacement:- The Institute of Chartered Accountants in England and Wales suggested in 1952, that accountants should draw attention to the desirability of "setting amounts aside from profit to reserve in recognition of the effects which changes in the purchasing power of money have had upon the affairs of the business, particularly their effect on the amount of profit which as a matter of policy can prudently be regarded as available for distribution"<sup>1</sup>. The 1968 Research committee of ICAEW suggested that, after complete general price level calculations, a transfer should be made to an inflation reserve, representing the amount by which the conventional profit exceeded the profit re-calculated in terms of current pounds.<sup>2</sup>

The rationale for such additional reserve is that, in times of inflation historical cost depreciation will not secure sufficient funds out of the cash flows from operations to finance the replacement of assets used up in production. The transfer of a part of pre or taxed profit is to make good this shortfall.

The creation of additional depreciation reserve takes place in a number of countries.

Extensive use of the procedure is found in Australia, Canada, U.K. and U.S.A.<sup>3</sup> The creation of such replacement reserve by means of charges against income has been allowed from time to time under the provisions of tax legislation in Chile, Brazil, Italy and Uruguay.<sup>4</sup>

This method has the advantages of simplicity and is designed to notify the financial statement users that management is cognizant of inflationary effects on asset replacement and that dividends must be restricted. Thus it ensures that whole of the profits available are not distributed to shareholders.

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1. Recommendation on accounting principles - N-15, Accounting in Relation to Changes in the Purchasing Power of Money, London, ICAEW, 1952, Para-31.
  2. Accounting for Stewardship in a Period of Inflation, London, ICAEW, 1968, para-38.
  3. R.W. Scapens, Treatment of Inflation in Published Accounts of Companies in Overseas Countries (Revised October 1975) - London, ICAEW, 1975 - P. 5.
  4. Ibid. P. 5.

The criticisms put forward against this method are:-

- (1) One particular shortcoming is that the method does nothing to indicate the effect of inflation on balance sheet values of the depreciable assets.
- (2) Where the transfer is made through an appropriation of profit, creation of such reserve would generally tend to give the impression that all is well with current profit calculation, as no additional charges are made against profit.
- (3) The calculation of the annual amount to be set aside to the reserve is frequently quite arbitrary. There is a risk that "...such policies might be abandoned when profit falls and the accumulated replacement reserve might even be brought back into consideration for profit distribution."<sup>1</sup>
- (4) The provision of finance for asset replacement is a great problem in conditions of inflation, but the fact that an annual transfer is made to a replacement reserve will not in its own ensure that cash is available for replacement purposes.

Reserve transfers in a way will help to cope with inflation problem, but much will depend on the size and the calculation of the transfer, and the financial policy of the organisation. This type of transfer is easily the most simple accounting method for inflation purposes, but it is naturally a very incomplete application, as it does not really tackle the problem of showing a more realistic profit figure and balance sheet situation.

#### Revaluation of fixed assets:

A partial adjustment method of treatment of price level changes in the accounts has been the practice of 'Re-valuing' fixed assets and entering the revalued figures in the balance sheet. An objective of such revaluation is to disclose

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1. P.R.A. Kirkman, Accounting Under Inflationary Conditions, London, George Allen and Unwin, 1974, P.135.

the true value (such value depends upon the choice of valuation bases such as current open market, existing use, alternative use, depreciated replacement cost, going concern, etc.) of the fixed assets shown in the balance sheet which is now different from its acquisition cost with changes in price level. If the revaluation is accompanied by a similar adjustment of the depreciation charge and is allowed for tax purposes (Practices vary in different countries as to the allowance of revalued depreciation charges for tax calculations). Scapens<sup>1</sup> in his survey of inflation accounting practices in a large number of countries observed that -- "The method of recording the effects of price variations in annual financial statements which was most frequently observed in the countries examined was the revaluation of fixed assets, with or without the restatement of the depreciation charges".

When fixed assets are revalued in the balance sheet, it is normal accounting practice that the subsequent charges for depreciation will be the amounts linked to the revalued figure over their remaining life.<sup>2</sup> The figures shown as profits for years subsequent to the revaluation will therefore be arrived at after charging depreciation which yield a larger amount of deductions over the remaining lives of the assets; than would be obtained by charging depreciation at acquisition cost. For example; if an asset is purchased for £10,000 and is estimated to have a useful life of 10 years and depreciation is charged on a straight line basis, the historic cost depreciation would be £100 per year. If the asset is revalued to £750 after five years (compared with its net book value of £500) it would be the practice to provide £150 per year for depreciation in each of the remaining 5 years of the asset's estimated life. The relevance of such depreciation charges and price level changes through revaluation would much depend upon the recurrence of revaluation. Sandilands committee observes in this connection:

"If the assets value is increasing every year, the provision for depreciation would represent the value of the asset consumed in each year only if the asset itself were revalued every year to its current value..."<sup>3</sup>

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1. Scapens, Op. Cit. P. 6.
  2. In U.K. this practice is recommended at paragraph 9 of ED-15.
  3. Sandilands Committee report, Op. Cit, Para-319.



The balance sheet effect of asset revaluation is to restate the value; which had been substantially out of line with current prices; as these assets may have been brought many years earlier. When assets are stated at current valuation; the financial position and progress of an enterprise will be more realistically portrayed. The need for management to know the true value of fixed assets consumed in the business to ensure that a realistic return has been earned on the company's capital employed is better informed through revaluation. The benefit of revaluation is also enhanced from financial point of view -- "A company's borrowing powers are commonly keyed to its capital and reserves. A revaluation of land, buildings and equipment might therefore increase borrowing capacity by 50% or more" -- was the viewpoint of a merchant banker speaking at the first conference on valuation of property and assets sponsored by a joint working party of the ICAEW and Royal Institution of Chartered Surveyors in London, 21st September, 1974.

Revaluations of fixed assets has a long history going back to First world war period.<sup>1</sup> In some countries official revaluation co-efficients are published which may also provide the basis for the adjustment of the depreciation charge for tax purposes. The revaluations of assets may be permitted or even compulsory on a continuing basis, or special revaluations may be allowed to meet particular crisis such as extreme monetary inflation. One very exception is U.S.A., where companies are not permitted to revalue assets in their historic cost balance sheet.

During and after Second world war many countries experienced rapid inflation. As part of the post war reconstruction of their economies; these countries introduced measures which permitted the revaluations of assets recorded in company balance sheets. In many cases, this was regarded as essential to prevent extreme distortions from being carried

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1. George Terborgh, "Depreciation policy and the price level" in Studies in Accounting Theory, W. T. Baxter and S. Davidson (edited), London, Sweet and Maxwell, 1962, P. 334 -- cites earlier precedents of asset revaluation in Austria and Germany through legislation in 1922, 1923 and 1924.

forward into the post war era. The German revaluation took place in June 1948, when all companies were required to provide a base point for future financial statements. Revaluations were permitted by similar legislation in Austria, Belgium, Italy and Japan. In France, the accounting re-action to the post war inflation was the use of a system of uniform re-valuation which was instituted by legislation in 1947.<sup>1</sup>

The revaluation of fixed assets has become normal practice in many Latin American countries during the last decade. These countries have experienced rapidly rising prices over a period of years and legislation has been introduced to regulate revaluations. It is normal practice in these countries for the revaluation to appear in the 'main' financial statements i.e. the adjustments are not confined to supplementary statements. In Latin American countries revaluations are normally based on official co-efficients which are intended to measure changes in the general level of prices. In some cases, indices have been specially designed for this purpose, but in others existing published index numbers have been used. Co-efficients are published once a year in most of the Latin American countries and are used to revalue fixed assets in the balance sheets prepared at dates occurring within the subsequent twelve months. In Latin American countries, legislation normally allows the depreciation on the revalued fixed assets to be deducted in calculating income for the purpose of tax calculation.

Periodic revaluation of fixed assets are a common practice in many countries outside Latin America. Examples of companies revaluing their fixed assets are to be found in Australia, Denmark, Norway, Philippines, Sweden, U.K. and to a limited extent in Canada.<sup>2</sup>

The revaluation of fixed assets and charging of depreciation on appraised value provides only a partial adjustment for dealing with the problems of price level changes but it is an important one. It has the advantage of being

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1. Scapens, Op. city. PP.8-9

2. Vide - Table - 25, A Survey in 46 Countries - Accounting Principles and Reporting Practices, London, ICAEW, 1976.

flexible with changes in price levels by charging depreciation on appraised value of assets in the balance sheet. But it fails on many ways to cope with the problems created by price level changes and has been attacked on various grounds. The Richardson committee on inflation accounting in New Zealand<sup>1</sup> observes in the context of Practice of New Zealand.

"...the departure from conventional historical cost accounting in relation to the revaluation of fixed assets and the determination of the allowance for depreciation, while done with the best of intentions and to meet to some extent the inability of conventional historical cost accounting to fulfill users need in times of changing prices, have produced a most unsatisfactory situation. Some enterprises have revalued some assets. Few have revalued all. Few enterprises revalue on a regular annual basis. Different bases of revaluations are adopted. Some disclose the basis of revaluation others do not. In many cases where assets have been revalued, depreciation has still been based on historical costs, with the result that valuation principles adopted for balance sheet purposes are not in accord with those adopted for the calculation of profits ... There has been no consistency in practice. Nor is there ever likely to be, since it is essentially a pragmatic approach divorced from an overall concept of profit and capital maintenance."

The conclusions of Sandilands committee evaluating practices in U.K. and Ireland are also similar, "...the piecemeal way in which revaluations have been carried out has created considerable confusion and difficulty. Few companies have revalued all their assets few revalue assets on a regular annual basis, and few disclose the exact basis of the revaluation. The result is that present day balance sheets in this country consists of a mixture of entries at historic cost and valuations prepared on different bases."<sup>2</sup>

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1. Report of the Committee of Inquiry into Inflation Accounting, I. L. M. Richardson (chairman), Wellington, 1976, para-8.44.
  2. Sandilands report, Op. cit- para-346).

Stock and Work in Progress

"No area of accounting has produced wider differences in practice than the computation of the amount at which Stock and Work in Progress are stated in financial accounts" --- begins the SSAP-9 'Stocks and Work in Progress' (Issued May 1975). Surveys conducted by Accountants International Study Group<sup>1</sup> in the mid 1960s in the U.S.A., Canada and U.K. have shown that Stock and Work in Progress generally constitute after fixed assets; the largest balance sheet item in the financial reports of manufacturing firms. Expressed as a percentage of total assets after depreciation, the size of Stock and Work in Progress has been calculated during the period as follows:-

U.S.A.	(a)	--	24%
Canada	(b)	--	25%
U.K.	(c)	--	29% <sup>2</sup>

The study also reveals that the overall ratio of stock and work in progress to pre-tax profits in the sample of 1,800 U.K. companies reporting in 1966 was 2.5 to 1 (equivalent ratio for the Canadian survey cited were 2.9 to 1, for the U.S.A. 1.9 to 1). "Assuming constant inventory and income levels, an error of  $\pm 5\%$  in inventory valuations as between one year and the next would affect average before tax profits of the companies in the sample by  $\pm 12.5\%$  (in U.K.)... 86 firms in the U.K. motor car, aircraft and engines group reporting in 1966 showed an average ratio of year end inventories to before tax profits of over 4 to 1; all other things being equal, an error of  $\pm 5\%$  in computing inventory would be multiplied four fold in its proportionale effects on reported profits."<sup>3</sup> -- The findings clearly indicates that relatively small errors in inventory valuations can have a disproportionate effect on reported results.

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1. Accounting and Auditing Approaches to Inventories in Three Nations, 1968.
  2. (a) Year of survey 1966. Based on 10,000 corporate manufacturers  
(b) Year of survey 1964. Based on 116,000 companies of all types.  
(c) Year of survey 1966. Based on 1,800 industrial concerns.
  3. Ibid. Para.13.

A major objective in accounting for Stock and Work in Progress is that proper determination of income is made through the process of matching appropriate costs against revenue. Cost for Stock and Work in Progress purposes may be determined, where specific identification is not possible or practicable, through adoption of a cost flow convention. Under any of the commonly used cost flow assumptions like average (weighted or moving), FIFO, LIFO and base stock, the base is historic cost. The choice of a cost flow convention leads to variation in cost of goods sold and ending Stock and Work in Progress figure in the financial accounts.

During a period of increasing prices, the choice of a cost flow convention also gives rise to reporting the part of the realised holding gain known as 'stock appreciation' as part of profit so calculated. It has been said that, "No cost flow method is more 'accurate' than any other, because each is based on an assumption made for some reporting purpose. In historical cost accounting for inventory 'truth' is a matter of definition." <sup>1</sup>

If all prices remained constant Stock and Work in Progress accounting problems would be minor, because only variation in values of Stock and Work in Progress would be attributable solely to changes in quantities. But in present day inflationary environment, the major problem in Stock and Work in Progress accounting arises from the fluctuations over time in the unit acquisition costs of stock items. To find out the relative merits of different cost flow conventions during a period of price changes, we illustrate through a very simple situation. We assume that, we had one table in stock worth £25, two similar tables were purchased during the year for £29 and £30. Two tables were sold towards the end of the year. The three tables were all alike in every physical respect and no effort to identify them was made. Following the different cost flow assumptions, the

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1. Sidney Davidson and others, Financial Accounting -- An Introduction to Concepts, Methods, and Uses, Illinois, Dryden press, 1976, P.261.

cost of goods sold and ending stock would be as follows:-

TABLE 11

Impact of different cost flow conventions - A

Convention	Cost of Sales	Ending Stock
Average	£56	£28
FIFO	£54	£30
LIFO	£59	£25
Base	£59	£25

The above illustration shows, that higher the cost of sales, the lower must be the ending Stock figure. In other words, the higher cost of goods sold shown in the profit and loss account, subsequently leads to lower ending Stock figure in the balance sheet. Thus the choice of a cost flow assumption is closely related to determination of reported profit and balance sheet valuation of ending Stock and Work in Progress.

The extent of 'stock appreciation' element present in different cost flow conventions can be shown through the continuation of the previous illustration. Assuming further that each table were sold at £35 and the cost of such new tables are £32 now. The historic cost profit, realised holding gain, operating gain, unrealised holding gain following different conventions would be as follows:-

TABLE - 12

Impact of different cost flow conventions - B

	Average	FIFO	LIFO	Base
Sales -- £35 x 2	£70	£70	£70	£70
Less cost of sales	£56	£54	£59	£59
(1) <u>Historic cost profit</u>	£14	£16	£11	£11
Revenues from sales -- £35 x 2	£70	£70	£70	£70
Less replacement cost of goods sold £32 x 2	£64	£64	£64	£64
(2) <u>Operating profit</u>	£ 6	£ 6	£ 6	£ 6
Goods available for sale during period (**) valued at replacement cost £32 x 3	£96	£96	£96	£96
Less acquisition cost of goods available for sale during period	£84	£84	£84	£84
(3) <u>Holding gains</u>	£12	£12	£12	£12
Replacement cost of goods sold £32 x 2	£64	£64	£64	£64
Less cost of goods sold	£56	£54	£59	£59
(4) <u>Realised holding gain</u>	£ 8	£10	£ 5	£ 5
Replacement cost of ending inventory £32 x 1	£32	£32	£32	£32
Less ending inventory	£28	£30	£25	£25
(5) <u>Unrealised holding gain</u>	£ 4	£ 2	£ 7	£ 7

\*\* i.e. cost of goods sold + ending inventory.

It is evident from the above table that following different cost flow assumptions, reported profit or loss during a period assimilates different component of gains, both realised and unrealised. The most important factor leading to major discrepancy following different cost flow conventions is the inclusion of the holding gains as part of the profit during the period. In a

period of inflation, as inclusion of realised holding gains (known as 'stock appreciation) has much adverse effects on reported profit figures; showing a profit figure as close to 'operating profit' as possible is desirable.

To remain in business, companies must replace their stock, so the amount of profit represented by 'stock appreciation' should not be available for distribution. 'Stock appreciation' element in reported profit should not be regarded as part of the distributable profit as the enterprise as a going concern will have to invest realised revenue from sale of goods in purchase of new stock at higher prices. During inflationary period showing 'stock appreciation' as part of the reported profit should be of much concern due to increasing price of replacement stock. As tax would be paid on 'stock appreciation' element of reported profit it further aggravates the liquidity position of the entity. As the price of inventory has been increasing rapidly, this has resulted in a significant difference between the figures shown as historic cost profit and 'operating profit'. This can be seen from the exceeding prevalence of stock appreciation element in U.K. corporate profit figures in recent years from the following table.

TABLE -13

Stock appreciation as percentage of trading profit\*\* in U.K. corporate profit in recent years

Year	Rate of Inflation	Stock Appreciation
1965	4.8%	5.4%
1966	3.9	6.6
1967	2.5	3.2
1968	4.7	9.0
1969	5.4	11.6
1970	6.4	16.7
1971	9.4	14.2
1972	7.1	15.7
1973	9.2	29.8
1974	15.9	50.3
1975	20.7	42.7
1976	17.2	42.5

\*\* Before providing for depreciation and stock appreciation



Source: Central Statistical Office  
National Incomes and Expenditure 1966-76  
London, HMSO, 1977  
Table 5.1 P.39.

Table (12) revealed that on the scores of showing a realistic profit figure closer to operating profit, LIFO and Base stock conventions shows favourable results. Further analysis of these two conventions would be undertaken to find out their characteristics, advantages and disadvantages in different situations.

LIFO:

LIFO results in a lower reported income and saves taxes. As such it has attracted a good deal of attention in present inflationary situation. The Sandilands committee <sup>1</sup> made a very critical appraisal of LIFO. "The problem of stock appreciation has become so serious for British industry that something must be done to remove this distortion from company profits. The use of LIFO has been advocated for this purpose on the grounds that it is a tried technique in the U.S. and could be introduced quickly in an urgent situation."

LIFO has been accepted for assessing taxable profits in U.S.A., where it is widely in use. <sup>2</sup> Outside U.S.A. it has widespread use in Italy, Denmark, Japan, Germany, Netherlands and Mexico. <sup>3</sup> LIFO has been rejected for tax purposes by Commonwealth courts <sup>4</sup> in the past.

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1. Sandilands report, Op. cit. para-348.
  2. It has become a popular convention in U.S.A., since 1939 when it was accepted for tax calculation. Like many innovations it has a long evolutionary development. Initially it was allowed only for refining and basic metal industries who need to keep a 'normal base stock' for practical operational purposes. Later development of 'Dollar value LIFO' eliminated the identification requirement and made it available to all others.
  3. Vide: Table-97, ICAEW, Accounting Practices in 46 Countries
  4. Minister of National Revenue vs Anaconda Americal Brass Ltd. (1956), Patrick vs Broadstone Mills Ltd (1954)

The objective of LIFO is to make a charge against the profit and loss account in respect of stock consumed during the year closer to the current cost of the stock consumed. This objective can only be attained if the goods sold are replaced rapidly enough to maintain a base stock, as such the LIFO convention assumes that the unit of stock consumed during the year are those most recently purchased, and the cost of replacing the goods sold becomes the cost of goods sold.

LIFO does not have a clear cut rationale in terms of actual physical flow of goods as does FIFO. Complex theories have been set forth to support it. Accounting Research Study no-13 of the American Institute of Certified Public Accountant (AICPA) underlies the theory as, 'LIFO is a compromise method of achieving a matching of costs and revenue recommended under base stock theory without a theory of its own. It is not a method of determining cost of product as such. It is, instead a method of matching costs and revenue under an artificial assumption that dissociates the flow of incurrence from the physical flow of product'.<sup>1</sup>

The cornerstone of theory of LIFO is:-

- (i) 'Minimum fixed inventory' and
- (ii) 'The disposal income approach'<sup>2</sup>

In 'minimum fixed inventory', the assumption is that; a business carries a certain number of units on hand at all times and that current operations and sales are carried on with the use of units purchased most recently. The minimum quantity of inventory can be identified by many enterprises as necessary for a going concern operation and therefore represents an involuntary fixed commitment analogous to a fixed asset. Management would be concerned to invest in goods and to maintain this initial investment. If part of the goods are sold, they must be replaced in order to maintain this initial investment. The aggregate money value of the minimum stock will only be changed if there is a change in physical quantity, that is, there was a decision made to either increase or decrease the quantity of unit.

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1. Horace G. Barden, The Accounting Basis of Inventories, Accounting research study no-13, New York, AICPA, 1973, P.89.
  2. Rufus Wixon et al, Accountant's Handbook New York, Ronald Press 5th edition, 1970 p.44.

'The disposable income approach' holds that no realised profit or loss results from mere fluctuations in the value of things that a company must continue to own in order to be a going concern. Increases or decreases in the cost basis of the fixed minimum quantities that would result from pricing them at current purchase prices would represent unrealised profit or loss that should not be reflected in net income of the various period if an appropriate matching of costs and revenue is to be achieved. To achieve this objective, in LIFO, the cost factors are transferred in reverse chronological order of incurrence, i. e. the last costs incurred are credited to inventory first, second from the last next, etc., until incurred costs for a number of units equal to those sold have been charged to cost of goods sold.

In certain situations the LIFO cost actually represents the physical flow of the goods in and out of stock. The goods that are going to be taken first are the goods that were placed just recently on the pile. For instance, in the case of a coal pile, it can be shown that in most situations the last goods in are the first goods out, since the coal removed is not going to take the coal from the bottom of the pile. The coal pile situation also prevails in case of grain, iron ore and other industrial raw materials. LIFO may also correspond more closely to physical reality in manufacturing companies whose stock is stored in bins and new purchases are dumped in before the supply is exhausted completely. The quantity at the bottom of the bin may have been purchased many months, or years ago. Though the above are normal situations, most often, however, LIFO cannot be justified in terms of physical flows and enterprises have adopted LIFO whether or not they can clearly identify the characteristic represented in LIFO convention.

The major advantages in support of LIFO are as follows:-

- (1) Realistic profit calculation: One virtue of the LIFO method is its tendency to limit the amount of reported income to an amount which might be made available to shareholders without impairing the scope and intensity of the operations of a going concern. In other words, LIFO improves the quality of earnings reported; as the more recent costs are matched against current revenues to provide a better measure of current income.

The rationale of LIFO is that, the physical quantity of goods may remain constant from year to year, but the capital invested in that stock may increase or decrease solely as a result of changes in prices. So long as a business entity relies upon continuous turnover of goods to produce income; it is important that the effects of mere changes in prices be distinguished from profits attributable to the sales of merchandise. The holding profit on stock cannot be used to pay taxes, wages or dividends, but must be retained in the business in order to permit its very continuation by replacing the goods which have been sold. If such holding profits were to be distributed, the business entity would be forced to secure additional capital to finance the higher cost purchases, even though there has been no actual growth.

LIFO allows the reported income to be relatively close to disposable income. Present day higher inflation, coupled with FIFO or similar conventions produces income figure that simply are not disposable. With rising prices, the relative advantage of LIFO over other conventions can be seen from figures in our previous illustration in Table (12).

TABLE-14

Comparison of LIFO with other conventions

Revenues from sales	-- £35 x 2	£70
Replacement of goods sold	-- £32 x 2	£64
Amount available after replacement (operating profit)		£ 6
Average	-- profit	£14
FIFO	-- profit	£16
LIFO	-- profit	£11
Base	-- profit	£11

It is obvious that none of the above figures can be treated as a true disposable profit estimation. LIFO and base stock figures are nearer to operating profit but falls short because of the fact that latest replacement price is above what has been charged as current cost in cost of goods sold.<sup>1</sup>

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1. Cost of goods sold charged under LIFO is £59 whereas the replacement cost is £64.

£16 FIFO profit is far away from disposable profit figure and if this was fully distributed in the form of dividend, the company would not be even able to replace the unit of goods sold in order to continue business.

Another aspect which we have not taken into consideration is the tax liability on reported profit. Realised holding gain included in profit do not represent gains in economic sense, but when income tax would be levied on such profit it would further worsen the liquidity situation in the above illustration. "LIFO can save dollars -- by lowering tax payments and by influencing against wage increases out of non-existent profits."<sup>1</sup>

- (2) Improved cash flow: LIFO has the potentiality to increase cash flow by reducing or deferring income tax payments, where it is allowed for tax purposes. In the words of Meigs et al<sup>2</sup>

"Despite the theoretical arguments built up in support of LIFO as an inventory valuation procedure, the dominant reason for its popularity appears to be the income tax benefits that result from the use of this method. During periods of rising prices, taxable income and income taxes are reduced through the use of LIFO. If prices later fall to the level at the time LIFO was adopted, this reduction is simply a deferral of the tax.

If prices continue to rise the reduction will be permanent. In either case the LIFO user gains, since a postponement of taxes has economic value." These tax savings normally occur at a time when it is highly advantageous to the company for use in offsetting drains on cash flows resulting from increasing prices of goods and services. LIFO indirectly helps cash flow problem by showing lower profits and thus reducing union pressure for higher wages, dividend payments, employee benefits etc.

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1. Orville R. Keister, 'LIFO and inflation' Management Accounting (NAA), May 1975, P. 27.
  2. Walter B. Meigs et al, Intermediate Accounting, New York, McGraw-Hill, 3rd Edition, 1974, P. 306.

LIFO has certain significant disadvantages which are discussed below:-

- (1) Unrealistic balance sheet valuation: One of the objections to LIFO is that the valuation of the stock for balance sheet purposes is continually out of date reflecting prices of some past period completely meaningless in the context of current conditions. Under LIFO, the initial quantity of stock is valued forever in terms of whatever the price level happened to be at the time LIFO was introduced. As the time goes on, and price level changes, the stock figure under LIFO departs further and further from reality, becoming neither a reflection of actual purchase costs nor a current cost. In periods of prolonged inflation, the amount of stock reported on the balance sheet is far below current replacement cost. Thus LIFO may make the stock figure on the balance sheet of dubious usefulness.

LIFO materially undervalues stock in the balance sheet. This undervaluation becomes progressively greater once LIFO is adopted whilst prices continue to rise. This has prompted Johnson<sup>1</sup> to say "The basic flaw, in all this, it seems to me, is the assumption that we can produce meaningless balance sheets and meaningful income statement at the same time."

- (2) Reduced stock situation: When it becomes necessary to reduce the stock below the normal quantity either voluntarily or involuntarily, the matching of earlier costs against current revenue produces absurd results. In view of the Sandilands committee -- "This in our view gives rise to more serious problems [when LIFO adopted]. If the base or layers of old costs are eaten into, strange results can occur, because old, irrelevant costs can be matched against current revenue. Not only can this lead to a distortion in reported income for a given period, but the consequences from an income tax point of view can be detrimental."<sup>2</sup>

In a year when the physical size of the stock increases above the amount on hand at the beginning of the year; in a LIFO system the stock account is increased by the additional quantity valued at the costs existing during that year. During a period of growth, the stock account will therefore consist of a number of layers, a new layer being added each

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1. Charles E. Johnson, "Inventory valuation: the accountants Achilles heel" in Financial Accounting: Issues and Controversy -1 Stephen A. Zeff and Thomas Keller (edited), 2nd edition, New York, McGraw - Hill, 1973, P. 254.
2. Sandilands report, op.cit. Para - 334.

year. If subsequently the physical stock should decrease in size, these layers in effect are stripped off, taking the most recently added layer first, second from the last next etc., in accordance with the basic LIFO rule. This process can have a peculiar effect on the profit and loss account, if for example, stock is decreased even below its original size when the LIFO system started; stock items will be moving into cost of goods sold at costs established several years earlier and if there has been constant inflation during the interim period; such a shrinkage in stock volume can result in significant increase in reported income.

In reality, many LIFO firms have stock layers built up over several decades, and the costs of the early units are often very little in comparison to the current cost. For these firms, a dip into old layers will substantially increase income. Davidson et al<sup>1</sup> cites a footnote from an annual report of the U.S. Steel corporation illustrating this phenomenon:-

"Because of the continuing demand throughout the year, inventories of many steel making materials and steel products were unavoidably reduced and could not be replaced during the year. Under the LIFO system of accounting, used for many year by U.S. Steel the net effect of all the inventory changes was to increase income for the year by about \$16 million."

Considering the circumstances which might cause stock liquidation to occur -- such as company getting in financial straits and being unable to replace its stock, strikes at the company, suppliers forcing an involuntary liquidation of the stock, lessening demand for the company's products calling for stock reduction, stock simply not being available due to shortages, etc., may make the situation difficult for a company and thus force to reduce its stock level. A company may be placed in a situation where it must either try to replace its stock at an inopportune time or pay the higher income taxes (again at an inopportune time) due to its failure to replenish the stock. A classic

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1. Davidson, op. cit, P. 260.

example of this situation arose in U.S., during the Korean war, stock reduction was on such a scale that Congressional approval was given for Next in first out (NIFO) stock valuation as a relief for tax payers who were on the LIFO basis.<sup>1</sup>

- (3) Scope of profit manipulation: "A company which wishes for whatever reason to improve its apparent profits for the year may do so by intentionally reducing its holding of stock if it is using LIFO"-- observed the Sandilands committee.<sup>2</sup> The use of LIFO permits management to influence the measurement of net income by deciding on timing of purchases. In a year of relatively poor profits, assuming that price levels have been rising, management could allow the year end stock to decline to a substantial extent. This would have the effect of charging into cost of sales, for the current year, items carried at costs incurred at lower price levels of previous years. On the other hand, if profits are expected to be too high, substantial purchases of stock just prior to year end would reduce profit to a large extent.

The apparent opportunity to manipulate net income through purchasing decisions with the LIFO method does not reflect good accounting practice. "The determination of periodic net income of a business entity should be the result of economic reality, not managerial whims."<sup>3</sup> The opportunity for manipulation of profit by a company using LIFO is a major disadvantage of the convention.

- (4) Management dilemma: Assuming inflation continues, a change to LIFO will reduce current and future reported earnings. Lower reported earnings could reduce the market value of the company securities or constraint its credits, thus increasing its cost of capital. In its inception, reported profits will be reduced, some strikingly so with earning per share ratio. Rather stunning drops in earnings may be difficult for management to explain, and may cause share prices to fall.

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1. J.M. Fremgen, 'Involuntary liquidation of LIFO inventories' Journal of Accountancy, December 1962, P. 51.

2. Sandilands report, Op. cit, para-337.

3. James B. Edwards and Dean E. Graber, "LIFO -- to switch or not to switch" Management Accounting (NAA) October 1975, p. 39.



The lower reported profits could cause shareholders and creditors to perceive lower expected returns and increased risks. The understatement of stock resulting from the use of LIFO will have effect on the calculation of current ratio, working capital measurement, stock turnover rate and other measures of short term financial stability.

Management who recognises the potential tax benefits of LIFO face a dilemma -- tax payments will be reduced, but equally lower earnings will be recorded in annual reports to shareholders, creditors, suppliers and so on. Accounting research study - 13 of AICPA states that, "During the interview of financial executives of industrial organisations and their independent accountant...the view expressed generally is that a great majority of those using LIFO for tax purposes would switchover to FIFO for general financial reporting purposes if permissible under tax law."<sup>1</sup>

- (5) Reflection of replacement cost: LIFO reflects the latest cost price of the specific commodity, which may or may not be the actual replacement cost. When there are regular short-time purchases, the replacement cost may not be very different, but if purchases are made at long intervals, there could be a significant change in prices between the date of the last purchases and the date when the latest sales took place. Thus to reflect replacement cost, the cost of sales should not consist of the most recently incurred costs but rather the cost that will be incurred to replace the goods that have been sold. The convention using replacement cost in stock is referred to as NIFO.
- (6) Operational and practical problems: The mechanics of maintaining a LIFO stock system are significantly more difficult than any other system. The technical problems in applying the method are too great. Companies may incur substantial costs in installing LIFO and in changing

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1. Barden, op. cit P.97. If a company elects to use LIFO for tax purposes, the Inland revenue code in U.S.A. requires that the company must also use it for financial reporting purposes.

accounting procedure. "A typical manufacturing company may carry several thousand items of stock which will be purchased in varying quantities at frequently changing price levels. In these circumstances the administrative work involved in operating LIFO may be significantly greater than FIFO.." <sup>1</sup> Sandilands committee envisages that "...the system [LIFO] must . . . to a certain extent be wasteful of resources." <sup>2</sup> The findings of the Accounting Research Study No-13 of AICPA, inter alia, is that, "Complexities inherent in the application of LIFO tend to deter its use in many small companies." <sup>3</sup>

7. Decreased comparability: A further result of LIFO is to weaken comparability among the published financial statements of different companies. Even the comparability of financial statements of a company over a period of years becomes difficult. For example, the calculation of stock turnover involved a comparison of cost of sales with stock figures. But the stock figure under LIFO bears no relationship to current conditions, consequently the calculation of stock turnover in such cases is a useless exercise. A similar effect is observable with respect to the current ratio and other analytical devices involving stock data.

#### Base Stock:

The base stock convention assumes that, there is a normal or base stock of goods that should be maintained at all times. In other words, in the base stock convention a minimum stock is a requirement of the business and subsequent purchases are made primarily to meet current sales requirement. The base stock is regarded as a permanent commitment of resources, similar to a fixed asset, which should be shown in the accounts at the lowest cost experienced by the company. Maintenance of the base stock at a constant value is intended to avoid the problem of stock profits. Goods acquired for normal operational purposes, above minimum base stock, are viewed as temporary increments, and are normally valued at the price current when they are purchased.

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1. Sandilands report, Op, cit para-338.

2. Ibid, footnote to para-340.

3. Barden, Op. cit p.96.

The operation of the base stock may be illustrated with an example appearing in an accounting text book.<sup>1</sup>

TABLE -15

The Base Stock Method

	Units	Unit Cost	Amount
First purchase (and base quantity)	100	\$1.00	\$100.00
Second purchase	200	1.10	220.00
Total	300		320.00
First sale	175	1.10	192.50
Inventory	125		127.50
Third purchase	250	1.20	300.00
Total	375		427.50
Second sale	275	1.20	330.00
Inventory	100		97.50
Fourth purchase	100	1.25	125.00
Total	200		222.50
Third sale	50	1.25	62.50
Inventory	150		160.00

The results disclosed above are those from a perpetual stock record. The perpetual stock record would be adjusted from time to time, at least annually, to conform to the results of physical stock. The pricing procedure in such annual stock taking is usually as follows:-

(a) If quantities are in excess of base stock -

Base stock quantities at base price

+ excess quantities at current cost

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1. Albert E. Finney and John B. Miller., Principles of Accounting - Intermediate, New Jersey, Prentice-Hall, P. 203

(b) If quantities are less than the base stock

Base stock quantities at base price  
- deficient quantities at current cost

There are operational advantages of adopting base stock convention in certain types of business. A minimum quantity of stock can be identified as necessary to maintain certain types of productive operation on a going concern basis. It can be seen in many refining process and in making steel and glass. The petroleum products in the refining pipes and the molten glass in the furnaces can be made available for sale only by liquidating the operation in the production process. Removing that quantity of stock completely would lead to shut down and often can be restored only after a long and expensive period of rehabilitation. The argument is that, the fixed minimum quantity is not available for sale by a going concern -- it is as fixed in character as the plant and equipment. No useful purpose is served by revaluing the fixed base quantities at current cost from one period to another; to do so within the framework of the historical cost concept can result in distorting reported information on an enterprise's resources and profit making activities.

One practising accountant, defending the use of base stock convention in his sugar refining firm points out that, "...daily price of raw sugar on four separate dates covering the end of 1974 and the beginning of last year was :-

September 30th 1974	£360 per ton
November 21st 1974	£650 per ton
January 16th 1975	£360 per ton
April 28th 1975	£220 per ton

The cost on a FIFO basis would follow the movement of the market price, so that, if at the year end the price was £650 followed by a period of falling prices, a FIFO valuation would necessitate a post balance sheet review." <sup>1</sup>

The effect of the base stock method is that, the stock consumed during the year is charged to the profit and loss account at the costs incurred during the year in making purchases of stock. Companies using the base stock method

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1. David W. Hardy, "In defense of base stock", The Accountant Magazine, May 1976, p.182.

tend to match purchases and sales as nearly as possible during the year, so the effect is that the global amount of purchases during the year will equal the aggregate 'cost of stock consumed'. The Sandilands committee is of the opinion that -- "The base stock method, in effect calculates the charge for stock consumed at its 'value to the business' at the time of consumption, in cases where 'value to the business' is the current purchase price. Thus the base stock method gives the figure of 'operating profit' and is in our view a useful method.<sup>1</sup>

The base stock method is of limited application. It is suitable only where a company has a limited number of separate items of stock and where the nature of the business is such that the quantity of stock on hand is not subject to fluctuations and where the company concerned deliberately makes no attempt to trade in its own stock. The extreme degree of arbitrary nature of both the quantity and unit values of the assumed base stock along with the scope of manipulation through selective purchasing are the principal reasons for not being acceptable to taxation authorities and general use.

#### Conclusion

The partial adjustment methods have been favoured in most cases for the essential simplicity and the minimum of change. The extra adjustment necessary are confined to only a single item or two in the financial statements, mostly in stock and depreciation adjustment.

The piecemeal approaches are subject to numerous objections. In some situations they may achieve a reasonably desirable short run result (from a standpoint of counter-acting the effects of inflation) on one financial statement but they either ignore or worsen the reporting on another statement. They do not deal with the broad area of inflationary effects and as a result cause inconsistent measurement of assets, liabilities and net income. "They may lull many users of the financial statements into a false sense of security that the problem is adequately accounted for and reported by the entity or that it is not serious enough to cause concern. "-- is the observation of Welsh et al.<sup>2</sup>

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1. Sandilands report, Op, cit, para-344)

2. Glenn A. Welsh et al, Intermediate Accounting Illinois, R.D. Irwin, 4th edition, 1976, p.1068.

The partial adjustment methods are naturally not as satisfactory as it would be under more complete methods of price level accounting, where many other adjustments are taken into consideration. "... they [partial adjustment methods] should only be regarded as an initial step in a process that should eventually lead to the adoption of more complete methods of price level accounting."<sup>1</sup>

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1. Kirkman, op, cit, p.179.

Chapter 8: Cash flow accounting

Cash flow accounting follows the flow of cash in and out of the firm over a period of time. As implied by its name, such a system would concentrate on the one key factor in company activity which is of primary importance to all persons and groups involved or interested in companies -- that is cash. In a cash flow accounting method, the conventional profit and loss account would disappear and be replaced by a statement of cash inflow and outflow over a certain period of time. Under a cash flow accounting system, entries would only be made in the books of accounts when cash is actually received or paid out. Depreciation would be abandoned for the purpose of published accounts, and the cash spent on acquisition of fixed assets would be charged in full to the year of acquisition. Similarly, the cash spent on acquisition of materials, fuel, stock and all other factors would be charged in full at the point of outgoing. This means that fixed assets and materials purchased for either resale or further processing would be charged in full to the year in which they were acquired irrespective of when the benefits from acquiring these assets will accrue.

The hub of virtually every business activity is a cash cycle -- cash is obtained from some source and is then invested in various productive factors, which in turn are combined to produce goods and services for sale or delivery to customers who pay for those goods and services in cash, thereby completing the cycle. It is this 'flow' through the business of cash movements which is useful for management and investment decision making. "... one resource which indicates progress, survival and the ability to provide returns in investments is cash. A business cannot survive, progress, repay loans and other debts, or pay dividends without cash." -- observes Lee.<sup>1</sup>

Inflationary conditions in recent years have enhanced the importance of the distinction between liquidity, as measured by cash movements and profitability as measured by conventional accounting practices. Asset valuation

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1. T.A. Lee "Enterprise income: survival or decline and fall" Accounting and Business Research, Summer 1974, p. 179.

and income measurement are so formidable that an alternative accounting system as cash flow accounting has been strongly supported by Lee, Lawson, Giles, Heller et al<sup>1)</sup> in a period of inflation. It is claimed that cash flow accounting satisfies the requirement of users of accounts, and companies should include in their annual reports a comprehensive cash flow statement instead of the profit and loss account and balance sheet.

By focussing on cash flow, the gain for the period, as the difference between the cash received and the cash outlaid explain the nature of the financial events which has affected the firm in certain period. Thus, if a firm had a balance of £X at the beginning of the accounting period and £Y at the end of the accounting period, the cash flow statement will explain the reason for the difference and help trace the important changes in financial structure of the firm.

#### Principal characteristics

The principal characteristics of a cash flow accounting system are:-

- (a) Cash flow accounting is not based on any particular concept of profit and capital maintenance.
- (b) Under cash flow accounting profit ( variously termed as 'disposable income' 'net surplus' etc.) is basically the difference between cash received and all cash payments, irrespective of purpose at the end of the period.
- (c) No distinction is drawn between capital and revenue items. The problem of depreciation, valuation and accruals are all avoided, because the expenditure and income is recorded at the point it is outlaid or received.

In cash flow accounting, the present method of preparing and presenting the balance sheet would be eliminated. But as it is desirable to show a company's financial state of affairs at a particular point in time, some kind of balance sheet or financial statement will always be necessary. This balance sheet or financial statement would enable the full economic significance of the cash flow figures to be evaluated realistically in conjunction with the substance of past accomplishment. In other words, there should be some kind of financial position statement in addition to cash flow analysis for decision ma-

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1. Reference to their work and argument are cited in various pages of this chapter.



king and evaluation as well as for stewardship reporting. The actual format or content of such financial position statement is a matter of wide discussion. Following type of approaches have been put forward:-

- (1) On consistent going concern basis: Cash flow statement would be supplemented by a financial position statement as at the year end showing the company's 'legal' items such as share capital, debentures in money terms. No money values would be placed upon physical assets, but they would be described in terms of such technical or other measures, such as horse power, productive capacity, model, make, etc., of machinery; ; floor area, location, alternative possible uses of buildings -- as were thought most appropriate to give the reader an adequate idea of their nature and capacity for rendering service to the firm. As conventional depreciation charges are to be omitted from cash flow statement, it would be important to disclose the age structure of assets in the financial statement together with their life estimates, productive capacity, overhauling, major break-down etc. Any significant fixed capital expenditure which has been undertaken in the current year should specify various details about its operative, technical and future cash generating capabilities. It is proposed that no value would be imputed to equity as a whole nor would the statement 'balance' in any normal sense.
- (2) On consistent liquidation assumption basis: The value of an economic entity would be represented by the discounted present value of the expected future cash flows. The making of such estimates would require companies to disclose their plans and expectations in the future. In his submission to the Sandilands committee Lawson states that, "The question of whether companies should be required to disclose their future plans and expectations in the interests of investor decision making and resource allocation in the light of international competition and other consideration is one which, strictly speaking, can be settled in principle, at the conceptual level .... what might be suggested is that since a comprehensive disclosure of company plans and expectations is a subject on which there is still even only a very slender amount of literature, it

cannot yet be considered as a serious candidate for statutory law.

In the writers opinion the evolution of this aspect of disclosure will inevitably be a trial and error process." <sup>1</sup>

A somewhat less ambitious 'first step' recommendation in this regard --- Lawson suggests that, companies should be required to disclose their detailed cash budgets for 12 to 18 months following their financial year ends. <sup>2</sup> He is of opinion that such cash forecast will provide the important link between the past and the future and thereby would pave the way for further more detailed development. It would also give a rather more dynamic complexion to the character of disclosure and thus also help to shift the focus from a rather static view of the past to what the future might hold in store in financial terms. The format of the cash flow forecast should quantify all the major determinants of a company's future cash flow stream. Statement of the assumptions upon which these forecasts have been based; explanations of the differences between actual and forecasted data and independent audit report on the credibility of the published data should be the future accounting development.

#### An appraisal of cash flow accounting

Major advantages of cash flow accounting are:-

- (1) Performance evaluation: Cash flow accounting accords with the fundamental business purpose of survival and growth. The cash flow available for dividends and debt repayments is by far the most important single measure of the effect of a year's transactions upon a company's survival and growth prospect. If a company's cash flow is persistently negative, it can only survive through the willingness of creditors and/or shareholders to finance increased debt, irrespective of what profit figures are recorded in the accounts. The ability of the enterprise judged by its performance in the period under review to continue as a going concern by meeting all payments against cash inflows is highlighted by cash flow accounting.

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1. G.H. Lawson, Memorandum Submitted to the Inflation Accounting Committee - July 1974, Manchester Business school, Working paper series - 12. pp. 48 - 49.
2. Ibid P. 49.

Cash is crucial to the survival and progress of an enterprise. The problem of solvency is necessarily tied to the availability of cash to meet current liabilities. Whereas conventional accounting treats the problem of solvency as of secondary importance by focusing primarily on profit measurement. This situation has led Heller<sup>1</sup> to state that "Business do not earn profits; they earn money" ---- consequently "the figure called profit is an abstraction from the true underlying movement of cash into and out of the company." Many enterprises have shown profits up to the day when a liquidator have been appointed<sup>2</sup> and on the other hand many enterprises have survived despite accounting losses owing to the availability of cash.

- (2) Objectivity and verifiability: The cash flow accounting method is more objective and more easily verifiable than any other system of accounting. Amounts for cash receipts and disbursements by means of source documents can more easily be verified than historic cost or value based accounting methods. Unlike the accrual method of conventional accounting which embodies a not inconsiderable degree of subjective judgement (e.g., asset lives, provision for bad debt, timing of receipts and payments of cash etc) a cash flow accounting system facilitates completely objective financial reporting on a known set of facts and therefore gives a perfectly objective specification of the determinants of the stream of cash flow. In other words, cash is more objective than profit; since its measurement is free of subjective valuations and specifications.

Giles<sup>3</sup> takes the view that conventional accounting is already highly vulnerable to profit manipulation by directors -- in this respect cash flow accounting would be a better improvement. He argues that "Through

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1. R. Heller, "When is a profit not a profit?" The Observer, 16th November 1969, P. 9.
  2. It is noteworthy that all the spectacular company crashes in recent years in U.K, like Rolls - Royce, Pergamon Press, Court line Country and General Insurance etc., recorded substantial profit while not generating enough cash to remain solvent.
  3. R.H. Giles "Cash flow accounting for capital intensive companies" The Australian Accountant, January/February 1977, p. 26.

purely abstract accounting decisions directors can manipulate profits which are extremely difficult for auditors to detect, e.g. through excessive or inadequate stock write downs, assessment of asset lives etc. By contrast profit manipulation under cash flow is only possible by physical actions which either (a) have deleterious physical effects e.g. a reduction in plant capacity or productivity, or (b) require the co-operation of third parties (e.g. delayed payments of creditors) whose interests are likely to be contrary to that of the intending manipulator."<sup>1</sup>

- (3) Inflation adjustment: The present conventional accounting system overstates earnings retained and cash generated. The profit and loss account becomes an increasingly less reliable indicator of cash flow generating capacity as the rate of inflation increases. In an inflationary environment turnover will grow in money terms and other things being similar the money value of debtors and stock will also increase, but unless there is a proportionately greater increase in creditors, there is likely to be a significant deviation between accrual earnings and cash flow earnings. During an inflationary period the sums tied up in working capital might result in a negative cash flow despite a relatively high accrual earnings. The corollary of this is that at the moment conventional accounts do not provide a reliable measure of earnings and so any appraisal of estimate made will be seriously undermined from the start. This deficiency in conventional accrual accounting could be remedied by companies publishing amounts on a cash flow basis.

Cash flow accounting is capable of overcoming the problem of price level changes. It takes account of the changing value of money through time by entering receipts and expenditures only when they are actually received or paid and thus succeeds in measuring periodic financial performance in terms of periodic purchasing power. That is to say it

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1. Ibid, P. 26.

compares like with like and also reflects price level changes. All costs and receipts are entered at their cash value when paid or received, so that all the entries in the accounts are automatically at current value when they are made -- this reflects the impact of inflation upon business much more accurately than conventional accounting. The problem of calculating the correct depreciation provision, which is significant for other systems of accounting when costs and prices are changing, does not arise under cash flow accounting. By entering receipts and expenditures when they are received or paid in cash, not when they fall due; cash flow accounting avoids the problem of gains or losses arising from holding monetary liabilities or assets when costs and prices are changing.

Accrual accounting suffers from the drawback that it masks a company's cash position and can lead to a situation where a substantial amount of the company's capital is eroded before its true position becomes apparent. In periods when the rate of inflation is low, there is a much closer correspondence between accounting flows and cash flow than is the case when the rate of inflation is high. Accounting flow measures based upon the accrual principle tend to over-state income and understate both capital and revenue expenditure even at relatively low rates of inflation compared to cash flow measures of the same items. This deviation is accumulated by higher rates of inflation, that is to say the higher the rate of inflation the greater is the amount by which conventional profits exceed true operating cash flow minus the current periods replacement capital expenditure. In other words, a good performance, in conventional accounting terms, associated with a good cash flow or liquidity attainment is eminently more possible at relatively low rates of inflation. As the rate of inflation accelerates, organisations actually begin to feel that the profit and loss account no longer can simultaneously reveal the state of profitability and cash flow generating capacity.

- (4) Economy and practicability: It is a simple method. It is reasonably simple to measure actual cash receipts and actual disbursements during specified period of time. The adoption of cash flow accounting would result in a significant reduction in accounting, administrative

and auditing costs. A considerable amount of time is currently spent on the calculation of accounting abstractions ( depreciation, tax effect accounting, stock valuation, bad debt provision etc.) which are irrelevant to cash flow accounting. The preparation and printing of annual accounts for circulation to shareholders would be vastly simplified, particularly for large complex companies. The complexity and contention with conventional accounting is an important cause of lengthy delays in published financial results. Cash flow accounting would vastly simplify the preparation procedure and will thus enable more timely information to be available to users.

Cash flow accounting retains money as the unit of measurement and so is quite an important advantage as alternative accounting systems like CPP accounting use a different unit of measurement. By retaining the monetary unit as the unit of measurement, cash flow accounting avoids all the problems of changing the unit or measurement.

(5) Information dissemination: Cash flow accounting makes a significant contribution to business comprehension through creating an objective financial record of business transactions. The underlying principle is easily understood; easily implemented and capable of consistent application. Cash flow statements bring into sharp contrast the enterprises earning capacity with its spending activity. Accounting conventions restrict the present profit and loss account to matching periodic revenues with the cost of earning those revenues. The cash flow statement is not restricted in this way, hence, it provides an extended view of the financial inflows and outflows of cash by including both capital and revenue flows. Thus borrowing and capital injections, as well as proceeds from the realisation of assets are incorporated with cash generated from sales to give a more complete picture of financial inflows, repayments of loans, capital expenditure, dividends and taxation to give a more complete picture of financial outflows. If cash forecasts are published as part of comprehensive cash flow accounting system; management's view of the future will be projected which is of considerable importance to investors who are concerned with evaluating the desirability of being part of that future. The investors could see from the projected cash flows both the ability of the company to pay its way in the future and also its planned financial policy. It is clear that this information would be of considerable use to the investors and one of the strong points of cash flow accounting from investors point of view.

Cash flow accounting accords with economic theories as to project and business evaluation. New projects and going concern business are normally evaluated by an estimate of future cash flows, appropriately discounted. The adoption of cash flow accounting would facilitate the application of this principle and is much consistent than with the present conventional accounting practices. The effectiveness of all inter-firm and inter-industry profit are currently adversely affected by the wide range of accounting methods used to record similar transactions. The cash flow method will ensure that similar transactions are recorded in the same way.

- (6) Taxation: Cash flow accounting has obvious advantages in the sphere of taxation matters. It is the most appropriate basis for determination of tax liability, because a direct deduction for stock and fixed asset expenditure provides an adequate basis for calculating tax payment ability, It also provides the best indication of the ability of current trading to reasonably sustain a taxation impact. Cash flow accounting is completely consistent with the principles of tax neutrality,<sup>1</sup> as it has inbuilt safeguards that can prevent the influx of stock appreciation and holding gains in profit measurement.

Cash flow may be more acceptable to government as a basis for inflation accounting. As cash flow accounting is much more universally comprehensible, it therefore is more likely to attract the necessary sustained political support. Moreover, the implementation of tax legislation is currently heavily influenced by important aspects of the cash flow approach as modified version of cash flow is the usual taxation basis for small business, professional firms, various government and semi autonomous bodies.

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1. G.H. Lawson, 'The rationale of cash flow accounting' The Investment Analyst, December 1976 p. 5.

- (7) Resource allocation: Cash flow accounting would promote a more efficient and speedier allocation of resources from the broad national standpoint, through facilitating information designed to make more efficient decision by investors. Investors seeks to optimize the cash flow they desire from their investments. Since both current and future dividends are linked to the availability of cash flow, this information would be of crucial importance. Cash flow accounting would inform investors of the dimensions of the company's cash flows, thereby would provide them with a realistic standard of reference by which to judge the adequacy of its dividend policy. Thus it would enable users to form an opinion on the level of future dividends and other cash flow in the company. The failure of conventional financial reports in this respect lies in accounting procedures for allocating against current income non-current expenses such as depreciation and other charges.

One of the major information requirements of financial statement is that it ought to enable individuals and others to make investment decisions. Shareholders will be interested in future dividends and their likely growth, as these will affect their consumption possibilities in near future. Those shareholders who invest for a finite time period will also be interested in the level of future dividends, since these will affect the exit share price they would receive. Clearly users decisions about alternative investments would be helped considerably if these informations were available.

It is alleged that faulty measurement methodology of conventional accounting practices has adverse repercussion on capital market and investor behaviour -- adoption of cash flow accounting would improve the situation. Lawson states that "Since there are strong grounds for assuming that the degree of overstatement of earnings is not uniform across the private sector as a whole it might be supposed that some thing akin to a distortion in the price mechanism is at work and that accounting methodology may therefore be contributing to inefficient resource allocation by introducing errors of differing orders of magnitude into managerial calculations for decision making purposes comparing one firms with another.<sup>1</sup> As a result of the foregoing he then argues that

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1. Memorandum to Inflation Accounting Committee, op. cit., p. 44.



improvement in capital market efficiency through adoption of cash flow accounting will lead to a more efficient allocation of resources in the economy.

Cash flow accounting is criticised on the following grounds:

- (1) Over simplification: Cash flow accounting tend to ignore the problems of profit measurement by presenting an over simple portrayal of a company's financial affairs. Cash flow accounting as the sole accounting method "is far too rudimentary to meet the reasonable information requirements of users of financial statements in today's society."<sup>1</sup> Still to others cash flow account "... savours to throwing out the baby with the bath water."<sup>2</sup>
- (2) Profitability measurement: According to the Sandilands committee, the main difficulty of cash flow accounting is to accommodate it within the conventional forms of presentation of annual profit and loss accounts and balance sheet required by the law. "We believe that despite its subjectivity users of accounts still require a useful measure of the profitability of a company for practical purposes .... The abandonment of the existing concept of the profit and loss account altogether and its substitution by a statement of cash surplus or deficit over a period of time would not we feel fully meet the requirements for information of users of accounts. In addition to be of most use a cash flow accounting system would need to incorporate cash forecasts possibly based on difficult assumptions about future earnings affecting the company. We doubt whether such a fundamental change would be acceptable to British companies at the present time."<sup>3</sup>
- (3) Capital expenditure: Jaedicke and Sprouse<sup>4</sup> argues that when the accounting periods are shorter than the life of the unit being accounted for,

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1. Report of the Committee Into Inflation Accounting, I. L. M. Richardson (Chairman), New Zealand 1976, para. 10'05.
  2. G. A. Lee Modern Financial Accounting, London, Nelson, 1975, p. 181.
  3. Report of the Inflation Accounting Committee, F. E. P. Sandilands (Chairman) HMSO, Cmnd paper 6225, para. 517
  4. Robert K. Jaedicke and Robert T. Sprouse Accounting Flows; Income, Rnds, and Cash, Prentice-Hall, New Jersey, 1965, p. 38.

pure cash flow accounting rarely satisfies the goal of users. Most business utilise some assets whose useful lives extend beyond one accounting period. Even if their goods and services are sold strictly for cash, a measurement of profit based on actual cash flow during a period of time is apt to be misleading because of the erratic incidence of major cash disbursement for long lived assets and for payment of debt. Similarly, where goods are involved, any measurement of income which ignores varying levels of stock from period to period is apt to be misleading.

- (4) Managerial efficiency: Through a financial system like cash flow accounting it would be difficult to assess managerial efficiency. This is because there is no yardstick by which to judge whether cash flows are attributable to managerial action or fortuitous circumstances. An interesting paradox is that for many business an increased net income is frequently associated with increased cash, while contraction of net income may also be accompanied by an increase in cash. In the first stages of a business decline, cash may start to build up from the liquidation of stock and receivables that have not been replaced, as well as from postponing replacement or expansion of plant.<sup>1</sup> When conditions improve, and receivables are expanded, new plant acquired and a cash shortage may develop.
- (5) Taxation: Cash flow accounting would be unsuitable for tax purposes. It would provide scope for manipulation of profit for tax purposes through the acquisition of long lived assets immediately before the preparation of such cash flow statements.
- (6) Entity valuation: The cash flow accounting method does not attempt to show the total value of the enterprise at any point.

### CONCLUSION

The proposal of cash flow as an inflation accounting method has much attractiveness. It could be a means of short circuiting the many knotty

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1. Sidney Davidson et al, Financial accounting -- An introduction to Concepts, Methods and Uses, Illinois, The Dryden press, 1976, p.361.

problems attending the construction of conventional accounts. The method has the advantage of supplying a statement of a company's cash position most objectively. It is based on the simple truth that -- in the long term a company which consistently fails to make profits can not continue, but in the shorter term, a company which runs out of cash can collapse overnight.

As we have followed earlier, accounting practice in developing countries are not much sophisticated, the accounting profession has not gained maturity -- so that an inflation accounting favoured there should be inexpensive and practicable. The simplicity of cash flow, its lack of involvement in measurement problems and its relevance to investors and others concerned in resource allocation process has much to offer to be an acceptable approach to inflation accounting in the context of developing economies.

But two very serious shortcomings of cash flow accounting method has prompted us to look for other inflation accounting methods. The first problem is that, following a cash flow accounting, no realistic portrayal of the economic condition of an enterprise is possible. A cash flow system would not allow any adequate portrayal of multitude of changes taking place in assets, liabilities, owner's equity, reserves, etc., if not involving a real cash inflow or outflow. We are apprehensive that, without involving accrual concept, it is not possible to represent significantly the various changes brought by an economic transaction. Recording of transactions only involving the cash inflow or outflow, would lead to a very narrow vision of the whole economic changes taking place in an enterprise.

The second problem is that, developing countries in this present day of international involvement in economic sphere can not go alone in selecting any accounting method. Developing countries should have to publish financial statements which are comprehensible to the users of accounts not only in the home country, but also to the providers of funds and economic partners abroad. They would be in a much disadvantageous position if they elect a much radical approach like cash flow accounting to counter intlation at home which is incomprehensible to others. The syndrome of 'throwing out the baby with the bath water' may be a repercussion of going for cash flow accounting. Moreover, no where in recent history of accounting practices, any country has abandoned conventional accrual principle in favour of complete cash flow accounting, whether it is Germany of 1930s or present day habitat of extreme inflation -- Latin America.

Chapter 9: Continuously Contemporary Accounting

Continuously contemporary accounting (CoCoA) is based on the economic concept of opportunity cost ---- that is value expressed in terms of what the owners of resources is sacrificing by having them in their existing form rather in a next best alternative form. Under this method assets are valued at their opportunity cost in terms of the current cash equivalent of the benefits obtainable in an orderly programme of asset disposal in current market conditions. Use of this method is not taken to imply an intention to liquidate. CoCoA has two distinctive features:

- (i) assets are valued in the accounts by reference to their current sales value;
- (ii) capital is maintained in terms of the purchasing power of shareholders equity.

This particular approach to inflation accounting was first advocated by MacNeal<sup>1</sup>, in the 1930s and has since been developed by Sterling<sup>2</sup> and Chambers.<sup>3</sup> An Exposure draft, (Accounting for inflation --- exposure draft, University of Sydney, September 1975) by Professor Chambers outlined the CoCoA method. The summary in the exposure draft states that the rules of CoCoA are:

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1. Kenneth MacNeal, Truth in Accounting, New York, Scholars Book co 1939 - esp pp. 200 - 324.
  2. Robert R. Sterling, Theory of the Measurement of Enterprise Income, University of Kansas press, 1970 - esp pp. 319 - 331.
  3. Raymond J. Chambers, Accounting Evaluation and Economic Behaviour, New Jersey, Prentice Hall 1966 - esp pp. 78 - 102, "Continuously contemporary accounting -- additivity and action" Accounting Review, October 1967 pp. 751 - 757, "Continuously contemporary accounting" The Accountant, 30th April 1970 pp. 643 - 647, "Second thoughts on continuously contemporary accounting" Abacus September 1970 pp. 39 - 55, "Evidence for a market -- selling price -- accounting system" in Robert R. Sterling (ed) Asset valuation and Income Determination --- a Consideration of Alternatives, New York, Scholars Book co 1971 pp. 74 - 96, "Third thoughts" Abacus, December 1974 pp. 129 - 137, The Development of the Theory of Continuously Contemporary Accounting, Alabama University, 1974, "Accounting for inflation -- the case for continuously contemporary accounting" The Australian Accountant, December 1975 pp. 642 - 645, Accounting for Inflation -- Methods and Problems, University of Sydney 1976, "Continuously contemporary accounting misunderstanding and misrepresentation" Abacus, December 1976 pp. 137 - 151.

- "(a) all assets should be stated at the best approximation to their money equivalents, in their then state and condition, at the date of the balance sheet;
- (b) all transactions shall be accounted for in the amounts at which they occurred.
- (c) all variations from the costs or book values of assets, which are not already brought into account by the sale of assets in the period shall be brought into the income account at the end of the period as price variation adjustments;
- (d) there shall be charged against total revenues, in calculating net income, the amount of a capital maintenance adjustment, so that the amount of net income is a surplus by reference to the maintenance of the general purchasing power of the opening amount of net assets.
- (e) net income is the algebraic sum of the outcomes of transactions, price variation adjustments and the capital maintenance adjustment.<sup>1</sup>

#### Principal characteristics of CoCoA

Concept of capital maintenance: The capital to be maintained is the general purchasing power of the shareholders' equity.

Concept of profit: Profit is regarded as the increase in market value of an enterprise's net assets over the period reduced by the amount necessary to maintain the general purchasing power of the shareholders' equity.

Income for the period consists of two components:-

- (a) Realised gains following accrual and matching principles.
- (b) Unrealised gains resulting from changes in the realisable value of assets which have remained unsold at the end of the accounting period.

In other words profit for the year is total earnings including unrealised holding gains less provision for the maintenance of opening shareholders equity in the business.

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1. Para Ibid. 44.

Basis of valuation: Assets are valued in the accounts by reference to their current sales value. This valuation recognises changes in the market value as they occur without the need for a transaction to take place.

Valuation of assets and liabilities:

- (1) Inventories are valued at net realisable value. The normal cost of sales calculation would be adjusted by bringing the stock on hand at the end of the year to selling prices.
- (2) Plant and machinery are valued at net realisable value at the end of a period. If the item has no market value its valuation will be nil.
- (3) Land and buildings are valued at net realisable value.
- (4) Depreciation is the measure of the change in market value of an asset over the period being reported upon. If this value has increased then appreciation is recorded.
- (5) Investments are recorded at the net realisable value.
- (6) Liabilities are shown at the number of monetary units which are contractually due to be paid or which are expected to become contractually due regardless of the due date of payment.

An appraisal of CoCoA

The major advantages of CoCoA are:

- (1) In providing for the valuation of all assets and in showing the amount required to maintain the purchasing power of the shareholders' equity, the method faces up to two major problems arising under historic cost accounting in inflationary times.
- (2) The current realisable value of the firm's net assets provide a measure of the market opportunity cost of the firm retaining those assets and this information may be necessary for rational decision as to whether the firm ought to retain individual assets for further use or sell them. CoCoA provides relevant information as to the capacity of the enterprise to changing conditions and to change the composition of its

assets if present composition hinders its survival or growth. It provides useful information about the financial adaptability and liquidity of the firm and the risk of investment in its assets.

- (3) The basic idea underlying profit determination could be easily understood by users of accounts.
- (4) It has relevance to the users for information about the market value of the assets held by a company to which loan and credit has been extended, particularly if the security for loans and other forms of credit is represented by items or mortgages over such assets.

The major shortcomings of CoCoA are:-

- (1) CoCoA imply a short run approach to the analysis of business operations because they entail disposition and liquidation values being shown in the balance sheet. Hence, business operations would only indicate that it is worth staying in business in the short run, not that it is worth replacing assets and staying in business in the long run. The concept of profit gives limited guidance as to the future prospects of the enterprise if it continues in the same line of business. It assumes that management is constantly in the process of considering the value of resources at its command to decide if the assets should be realised and the funds invested elsewhere. This is clearly not the case.
- (2) It has been argued that the crucial test of the usefulness of net realisable value in financial report lies in the treatment of highly specific assets which may have very little value for any one except the present owner for whom they were constructed.<sup>1)</sup> The most extreme of such assets are mine shafts --- which being large hole in the ground have no realisable value. The acquisition of this assets would have to be shown as involv-

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1. David Solomons, "Asset valuation and income determination: appraising the alternatives" in Asset Valuation and Income Determination pp. 110

ing their owners in a considerable loss of capital. But in reality such an asset may be presumed to have been worth as much to the firm as their construction cost. Otherwise, it is clear that they would not have been constructed. The question is -- what would be the sense of writing such assets down to their current realisable value for information users?

- (3) One of the drawbacks of CoCoA lies in the problem of practicality. Use of CoCoA implies that an arm's length market is available against which assets can be valued. In the case of specialised assets in particular, such a ready market will rarely exist in practice. Indeed, there may be no market at all for certain assets. Popoff<sup>1</sup> argues that -- "The trouble with CoCoA is that it is based on the measurement of a single property of assets -- their selling price and the implicit conclusion of CoCoA supporters that the measurement of this property which may have some relevance to all business situations, is the relevant property to measure in all business situations."
- (4) A major problem of adopting CoCoA would be in relation to depreciation calculation, where it would be necessary to estimate the likely change in market value of a firm's assets before charging depreciation for the period. In the case of large special purpose fixed assets which may rarely if ever be sold, sales value may be at or near zero immediately after acquisition and such assets would therefore largely be written off against profit in the year of purchase. This heavy depreciation in the first year or complete writing off of the asset would give a new dimension to profitability of the enterprise. Profits could therefore be dominated by the pattern of fixed asset expenditure in capital intensive industries.
- (5) No distinction is made between operating profit and holding gains in CoCoA. Substantial changes in asset values could obscure the underlying operating profitability of the enterprise,

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1. Boris Popoff, "Chambers, inflation and COCOA addiction" Accountants Journal, June 1976 p. 161.



for example, where substantial expenditure is made on a new factory on plant and the net realisable value is appreciably below the amount expended or the present value of the facility to the enterprise. Conversely, under CoCoA an enterprise could be deriving profit through unrealised holding gains when net realisable value of assets shows appreciation in the market. Because of this, large elements of unrealised holding gains may find their way into profit for the year, when the value of assets (given by the increase in their sales value) rises at a faster rate than the index used to measure the change in the purchasing power of shareholders' equity.

- (6) It may be difficult in some circumstances to determine what level of aggregation should be used in valuing assets. For example, does one value individual machines, the production line, the whole plant or the specific divisions of the company? Clearly the answers to these questions could differ among enterprises.

#### Conclusion

CoCoA may be useful for users of accounts in some cases, particularly lenders and creditors. The purchasing power concept of capital maintenance provides information for shareholders in terms of general price level changes. The idea behind profit determination and capital maintenance following CoCoA could be understood by the users of accounts without difficulty. But overall, the dis-advantages and shortcomings of CoCoA are serious and substantial. We therefore, consider that as an useful model of inflation accounting in the context of developing countries, CoCoA would not be the right choice.

## Chapter 10: Current purchasing power accounting method

Only a few years ago, conventional historic cost accounts, adjusted for changes in the general level of prices had been widely favoured by the professional accounting bodies as the most appropriate approach to account for inflation. Official guidelines, discussion papers and standards has favoured such an approach in Argentina, Australia, Canada, Mexico, New Zealand, South Africa, U.K. and U.S.A.<sup>1</sup> The central feature of the purchasing power method is the adjustment of the accounts prepared under the historic cost basis; to reflect changes in the purchasing power of money by applying some kind of general price index. There are variations in the detailed proposals for implementing the purchasing power method in different countries, but the basic principles are similar throughout the world. The widest support of the purchasing power method has been given through the SSAP-7 - "Accounting for changes in the purchasing power of money" (May 1974) and its antecedent ED-8 - (January 1973) in U.K. and Ireland. We would discuss throughout this chapter on the basis of 'current purchasing power accounting' (CPP accounting) proposed in those documents.

### Principal characteristics

(1) CPP information is supplementary:

The main recommendations in SSAP-7 are:-

- (a) Companies will continue to keep their records and present their basic annual accounts in historical pounds, i.e., in terms of the value of the pound at the time of each transaction or revaluation;
- (b) in addition, all listed companies should present to their shareholders a supplementary statement in terms of the value of the pound at the end of the period to which the accounts relate;
- (c) the conversion of the figures in the basic accounts into the figures in the supplementary statement should be by means of a general index of the purchasing power of the pound;

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1. See Appendix - A to Introductory Chapter.

- (d) the standard requires the directors to provide in a note to the supplementary statement an explanation of the basis on which it has been prepared and it is desirable that directors should comment on the significance of the figures. <sup>1)</sup>

The result of the conversion process referred to in (b) and (c) above is that, the supplementary statement should present the accounts of the enterprise, in terms of a different unit of measurement from that used in the basic accounts. ( i.e., pounds ).

(2) Unit of measurement:

The unit of measurement in CPP supplementary statements consists of purchasing power units based on the general index of retail prices (RPI). The unit of measurement is a purchasing power unit instead of a monetary unit. CPP accounting is " ... based on the assumption that the the most significant problem arising for the preparation of company accounts during a period of high inflation is that the conventional unit of measurement -- money -- becomes unstable and itself changes in value too quickly to be any longer useful as a unit of measurement for company accounts." <sup>2)</sup> The central feature of CPP accounting as such is the adoption of a different unit of measurement the — 'purchasing power unit', in place of the monetary unit. The objective of the method, is to enable accounts, during a period of changing prices, to be expressed in a unit of measurement which has a constant value, and is therefore more useful than the monetary unit. Following the CPP - approach the balance sheet would show the amount of 'purchasing power' represented by the company's net assets rather than the amount of money; and the profit and loss account would show the amount of 'purchasing power' gained or lost during the year.

(3) Notations in accounts:

The use of the symbol '£H' (historic) to denote pounds in the sense of monetary units, and '£C' (current) to denote current purchasing

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1. ASSC, SSAP - 7: Accounting for Changes in the Purchasing Power of Money, London, ICAEW, 1974 - Para - 12 .
  2. Report of the Inflation Accounting Committee, F.E.P. Sandilands (chairman), London, HMSO, Cmnd Paper 6225, 1975, Para - 354

power units has been suggested.<sup>1</sup> Thus for example, when a company purchases an asset for £10,000. (When the RPI stood at 100), it would use the notations £H10,000 for historic cost and £C11,000 for CPP units (RPI has risen to 110) on drawing up its accounts one year later. If after a further year, the RPI had gone up to 120, the asset would be represented by £H10,000 for historic cost and £C12,000 in current purchasing power units.

(4) Concept of capital:

The capital to be maintained is the purchasing power of the monetary amount of the shareholders' interest in the enterprise, at the beginning of the year. CPP accounting -- "looks at the undertaking from the point of view of the purchasing power invested in it by its owners and of the maintenance of that purchasing power".<sup>2</sup>

(5) Concept of profit:

Profit is regarded as the gains arising during the year, which may be distributed while maintaining the purchasing power of the shareholders' interest in the enterprise at the beginning of the year. The operating profit of the enterprise under the historic cost method are subject to the following adjustments:-

- (a) Stock in trade: An additional charge is made, based on restating the opening stock in pounds of current purchasing power as at the end of the financial year. The historic cost of closing stock is to be adjusted on some such assumption as that they were bought evenly over the last (say) three months of the year, by using the average of the index number of the opening and closing dates of the (say) three months as the denominator and the index number of the balance date as the numerator. The 'lower of cost and net realisable value' rule is to be applied to the stock figure calculated and even further adjustments may be made if necessary.

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1. ICAEW - Accounting for Inflation: A Working Guide to the Accounting Procedures - 1973.

2. SSAP-7 op. cit., - Appendix 1 - para. 1.

- (b) Depreciation: Additional depreciation is charged based on the cost of the fixed assets, measured in terms of current purchasing power unit. The depreciation charge is obtained by applying the same depreciation rate as is used in the basic accounts.
- (c) Sales, purchases and all other costs: Sales and other receipts, purchases and other expenses are to be adjusted on some such assumption as that they occurred evenly throughout the year. If an even receipt and distribution is assumed, they are increased by the change in the index between the average date on which they occurred and the end of the year. If any other pattern of distribution is assumed, an appropriate weighted average index is to be used.
- (d) Monetary gains and losses: Gains and losses in respect of holding of 'net monetary items' is to be found out. "Monetary items are assets, liabilities or capital; the amounts of which are fixed by contract or statute in terms of numbers of pounds regardless of changes in the purchasing power of the pound."<sup>1</sup> Holders of monetary assets lose general purchasing power during inflation, conversely holders of monetary liabilities gain.<sup>2</sup> A gain or loss on net monetary items derived from a 'net monetary' assets account' is to be transferred to the CPP supplementary accounts.
- (6) Recognition of changes in values:
- Specific changes in the value of an item is not recognised until the item is sold or realised, except
- (a) Stock in trade is recorded at net realisable value if this is below the adjusted historic cost
- (b) fixed assets are recorded at their estimated value to the business if this is lower than the adjusted historic cost.<sup>3</sup>

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1. Ibid, para. 28.

2. Ibid, para. 15.

3. Ibid, para. 21.

(7) Basis of valuation:

A distinction is drawn between monetary and non monetary items, except for the total equity interest; which is regarded as neither a monetary nor a non monetary item.<sup>1</sup> Examples of monetary items suggested in SSAP-7<sup>2</sup> are cash, debtors, creditors and loan capital. "Non monetary items are all items which are not monetary items, with the exception of the total equity interest (i.e. share capital, reserves and retained profits)."<sup>3</sup> Examples of non monetary items are stock, plant and building.<sup>4</sup> The valuation process in CPP accounting is as follows:

- (i) Monetary items are recorded at their present contractual amount. By their nature, these items are already expressed in terms of pounds of purchasing power at the end of the period.
- (ii) Non monetary items are recorded at their historic cost, but are adjusted for changes in the purchasing power of the pounds since they are acquired or revalued. There are two exceptions:-
  - (a) stock in trade are recorded at net realisable value, if this is below the adjusted historic cost, and
  - (b) fixed assets are recorded at their estimated 'value to the business' if this is lower than the adjusted historic cost.

The Conversion process:

There are variant forms of CPP accounting, but in principle they follow the same general rules. A CPP supplementary statement may be prepared through a conversion process known as the 'net change method' based on Appendix - 3 to SSAP-7 as follows:

Step 1: Figures for items in the balance sheet at the beginning of the year are converted into current purchasing power units at the beginning of the year as follows:-

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1. Ibid. para. 19.
  2. Ibid. para. 15.
  3. Ibid. para. 29.
  4. Ibid. para. 18.

- (a) Non monetary items are adjusted by the changes in the RPI between the time of acquisition or most recent revaluation;
- (b) Monetary items are, by definition, already expressed in terms of CPP units at the beginning of the year, and therefore require no conversion.

Provided that in the case of non monetary items where the 'value to the business' of fixed assets or the net realisable value of current assets is less than the adjusted figures are conversion, these items should be written down accordingly in the supplementary statement.

Step-1 will only be necessary during the first year of introduction of the CPP method. In the second and subsequent years, the closing CPP balance sheet of the previous year will be taken as the opening balance sheet of the year of account without further adjustment.

Step 2: All items, both monetary and non monetary in the converted opening balance sheet for the year are adjusted by the change in the RPI between the beginning and end of the year in order to express the items in the opening balance sheet in terms of CPP units relating to the balance sheet date at the end of the year. This process is known as 'updating'.

Step 3: Items in the closing balance sheet of the basic accounts are converted into CPP units relating to the end of the year by:-

- (a) non monetary items are adjusted by the changes in the RPI between the time of acquisition or most recent revaluation and the end of the year;
- (b) monetary items are, by definition already expressed in terms of CPP units at the end of the year, and therefore require no conversion; subject to the same provision in respect of non monetary items as was applied in step 1.

Step 4: The difference between the total equity interest in the converted balance sheets for the beginning and end of the year, after 'updating' the opening balance sheet (and after allowing for dividends and the introduction

of new capital) is regarded as profit or loss for the year, measured in terms of current purchasing power units relating to the end of the year. Because the 'up dating' process described at step 2 above is applied to all items (including monetary items) in the opening balance sheet, the profit in terms of CPP units relating to the end of the year will include an element due to the change in the 'purchasing power' of monetary items. If the RPI has increased during the year, the 'updating' process will reveal a gain of 'purchasing power' to the shareholders due to the decrease in the 'purchasing power' of the company's monetary liabilities and a loss due to the decrease in the 'purchasing power' of monetary assets. The net gain (or loss) of 'Purchasing power' on monetary items will be included in profit expressed in terms of units of current purchasing power relating to the end of the year.



An Appraisal of CPP accounting

SSAP-7 played a pioneering role in formulating a practical means of accounting for inflation. It has performed a valuable function in focussing attention on the deficiencies of historic cost accounting during a period of changing prices. "In our opinion the proposals in SSAP-7 represent an important and constructive attempt to provide a practical means of accounting for inflation without changing the basic principles of historic cost accounting. The publication of SSAP-7 and the public debate that has followed, have made companies much more aware than previously that inflation can have serious effects on their results and that during a period of inflation historic cost accounts may have significant deficiencies. This itself is a vitally important achievement." -- observes the Sandilands committee<sup>1</sup>. Publication of SSAP-7 has aroused world-wide attention on the subject of inflation accounting and the professional accounting bodies showed much in favour of this approach.<sup>2</sup>

Major advantages of this method are:-

- (1) CPP accounting attempts to alleviate the major objection to historic cost accounting that, the unit of measurement (i.e. the pound) changes in value when price level changes. In CPP accounting, adjustments to basic accounts results in units of the uniform 'purchasing power' brought together in the measurement process. While abandoning the traditional assumption of a stable monetary unit, it preserves the essential elements of historic cost accounting. The object is to match revenues and costs through the realisation process within an accounting period in terms of CPP units instead of the monetary unit of conventional accounting.
- (2) It shows as profit, the amount that the company has earned after keeping up with the general level of inflation. Assets, liabilities and equity interests are all revalued in terms of changes in the CPP units which is more informative in periods of rising prices.

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1. Sandilands report, op.cit., para - 452

2. Local variants of CPP accounting in countries like Australia, Canada, New Zealand has much in common with SSAP-7.

- (3) The bases of adjustment are independent, objective and verifiable. "The degree of objectivity achieved by CPP accounting is not significantly less than that achieved by historic cost accounting."<sup>1</sup> The application of a single index (the RPI) to all items in the accounts do not introduce a substantially greater element of subjective judgement than is already present in historic cost accounting.
- (4) It could be implemented promptly. As the method is basically supplementary to the basic accounts, it lends itself to transitional arrangements.
- (5) The time and cost factors involved in producing CPP accounting information are not excessive. Complications are reduced by the use of RPI which will be used for the adjustments of all items in the basic accounts. As such this process can be undertaken after the basic accounts have been made. The additional calculations required for the adjusted accounting statements need only be made at the end of each accounting period and this procedure will not take up much time once the system has been established.
- (6) It highlights the impact of inflation on monetary balances in showing a loss in the case of net monetary assets because of declining purchasing power and a gain in the case of net monetary liabilities, since liabilities are to be repaid in pounds of depreciating purchasing power. This gain or loss provides a measure for assessing managements decisions to hold cash, extend credit to customers and obtain capital from short and long term creditors.

The very fundamental approach followed in CPP accounting as a method of accounting for inflation faces serious objections. The objections to CPP accounting is discussed in general and from the point of view of developing countries.

- (1) • Understanding and analysis: In SSAP-7, CPP statement is supplementary to the basic accounts and not a substitute to it. "In our view the

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1. Ibid., para - 440.

proposal in SSAP-7 the CPP statements should be supplementary to the basic accounts of a company is likely to detract significantly from any usefulness the CPP method may have. A statement which is supplementary in character will inevitably have less impact on the reader or on the directors of the company concerned than a change in the conventions used in the accounts themselves." -- observes Sandilands committee.<sup>1</sup>

SSAP-7 acknowledges the defects of historic cost accounting in a period of inflation and alarmed at -- "The need to show the effect of inflation on conventional accounts has become of pressing importance."<sup>2</sup> -- yet its principal base is the 'defective' historic cost. The historic cost statements are the 'basic' statements, the principal accounts; which will be said by the auditors to give a 'true and fair view' of results and financial position. But the CPP statements, though supplementary, are alleged to be superior<sup>3</sup> to the historic cost accounts; yet they cannot be said to give a 'true and fair' view of results and financial position without putting the auditor in the position of contradicting what he says about the 'principal' accounts. Has a reader to rely on the 'principal' statements or the 'supplementary' ones?

Users of accounts are likely to misunderstand the information presented in CPP statements, unless it is carefully interpreted by the company. Many of the figures in the CPP accounts are implausible and difficult, if not impossible, to interpret. Movements in significant ratios may appear to be at different rates and in different directions from those

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1. Ibid, para - 405.
  2. SSAP-7, op. cit., - para - 7.
  3. [Removed] 'the distorting effects of changes in the general purchasing power of money' SSAP-7 para - 11.

suggested by the historic cost accounts - confusing any attempt at analysis and interpretation of both sets of accounts.

Appendix-2 to SSAP-7 'Example of the presentation of a supplementary current purchasing power statement' gives some illustrative figures and some of the ratios which may be used in financial analysis. As the figures are in a sense 'semi-official' example, it will be useful to consider some of their features.

TABLE - 16

SUMMARY OF RESULTS AND FINANCIAL POSITION  
ADJUSTED FOR THE EFFECTS OF INFLATION

	Historic cost basis		CPP basis	
	1975	1976	1975	1976
	£'000	£'000	£'000	£'000
Sales	1,920	2,110	2,134	2,190
Profit after tax	123	129	106	89
Dividends	<u>60</u>	<u>60</u>	<u>65</u>	<u>61</u>
Current assets	907	1,007	983	1,012
Fixed assets (net)	<u>558</u>	<u>566</u>	<u>714</u>	<u>700</u>
	<u>1,465</u>	<u>1,573</u>	<u>1,697</u>	<u>1,712</u>
Current liabilities	417	451	450	451
Deferred liabilities	239	244	258	244
Owners equity	<u>809</u>	<u>878</u>	<u>989</u>	<u>1,017</u>
	<u>1,465</u>	<u>1,573</u>	<u>1,697</u>	<u>1,712</u>
Earnings (pence) per share (based on 500,000 share)	24.6	25.8	21.2	17.8
Dividend cover (times)	2.1	2.2	1.6	1.5
Return on equity (percent)	15.2	14.7	10.7	8.8
Net assets per share (£)	1.6	1.8	2.0	2.0

The ratios for the two years in the above example reveals contrasting situations. Under historic cost, earnings per share rose in the second

year; under CPP it fell. Under historic cost, the dividend cover rose; under CPP it fell. Under historic cost, the dividend cover rose; under CPP, it fell. Under historic cost, the return on equity fell by 3%, under CPP, it fell by 18%. Under historic cost, net assets per share rose; under CPP, it remained constant. If two sets of figures are calculated on different bases, such inconsistencies might be expected. But which of the two sets of figures should be used if one seeks an indication of the trend over the year? If both are 'correct' in some sense, an investor is very likely to be confused, rather than informed, by the indication that, for example, earnings per share both rose and fell. The working guide to SSAP-7 notes these contrary movements, but it ignores their capacity for confusing readers.

Now we concentrate our attention to the absolute figures. Did the sales rise by 9.9% (historic cost) or 2.6% (CPP figure). Did the net working capital rise by 66 units (historic cost) or 28 units (CPP figure). If both figures are 'correct' in some sense, which of the two is a reader to consider as 'more' correct? If a reader has the 1975 report before him, is he to take notice of 1975 CPP magnitudes for 1975, or the different 1976 magnitude for 1975? If a company publishes a five or ten year summary each year, the CPP figures would be changed each year for every year in the summary. What is a user to make of all these changes?

It seems reasonable to suppose that, users of financial statements need realistic and dependable indicators of solvency, gearing, rate of return, assets per share and so on -- a single ratio for each of the tests they wish to make of the financial state and progress of companies. To give two different sets of figures is of no help. It cannot reasonably be expected that lay persons can switch from one set to another with a clear understanding of the differences between them. Enquiries made at annual meetings or elsewhere could readily become abortive; for if attentions were directed at an apparently adverse movement in the CPP or the historic cost figures, the reply could be simply: "But look at the favourable movement in the other figure."

- (2) Maintenance of capital: The concept of profit adopted by CPP accounting is one which regards sums expressed in CPP units as distributable provided the shareholders' interest (also expressed in CPP units) is maintained. Although shareholders' interest is being maintained in one sense -- namely, that it commands the same generalised purchasing power as it did at the beginning of the year, the capital being deployed normally in a way, that makes the maintenance of generalised purchasing power irrelevant. As in the case of historic cost accounting, capital maintenance cannot be said to have been achieved in the sense that the firms operating capacity has been preserved. The full distribution of CPP concept of profit does not leave the firm as 'well off' in terms of its capacity to generate future income. "...it is difficult to attach a meaning to a concept which provides a measure of income which, if fully distributed leaves the firm worse off in terms of its capacity to operate profitably." -- observes the Mathews committee on inflation and taxation in Australia.<sup>1</sup>

The concept of profit and capital maintenance on which CPP adjustments are based is not one which maintains the service potentiality of capital. As in the case of historic cost accounts, there is a capital erosion effect, because shareholders' funds no longer commands the same quantity of the assets which the firm uses for purposes of its operation. A general price index like RPI will not be relevant to any business entity which needs to make adjustments to asset value changes in order to maintain the operating capabilities of its capital in the long-term. RPI is a weighted average, of the price changes occurring in normal household goods and services and to the consumption pattern of ordinary consumers. Items related to producers goods, industrial raw materials are not included in the calculation of RPI. Since the RPI does not cover any classes of fixed assets purchased by companies, and if the replacement cost of the firm's assets increases more rapidly than the general price level, the resulting CPP profit will be less than

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1. Report of the Committee of Inquiry into Inflation and Taxation in Australia, R.L. Mathews (chairman), Canberra, 1975, P. 671.

the amount that can be safely distributed whilst maintaining the firm's operating capacity, and its capacity to earn future income. Divergence between the general and specific price indices would be more pronounced and wide spread in developing countries, who have to import almost all of their plant, machinery, vehicles, etc., from abroad. Table - 7 in page 40 shows that export unit values in developed countries has been increasing steadily in recent years. Obviously this means that developing countries has been paying more for the imports, from advanced exporting countries.

Stock in trade is the major item of current asset. Survey conducted by Accountants International Study group reveal that, expressed as a percentage, stock is about 26% on average of total assets after depreciation in manufacturing firms.<sup>1)</sup> The movement in the price of stock, which in the words of Sandilands report "is notoriously volatile"<sup>2)</sup> is unlikely to be indicated by the movement in the RPI which does not cover the purchase made by companies. In all cases where the price of stock has increased faster than the RPI, a CPP system will fail to eliminate the element of 'stock appreciation' substantially from the reported profit figure. This means that if adjusted profit is to be fully distributed, additional funds must be brought into the business to finance the higher cost of holding the same volume of stock.

From the above analysis, it is clear that CPP profit concept does not meet the basic test of ensuring the continuity of business operations. Such a concept of profit and capital maintenance will produce windfall gains (Those who have substantial monetary gains for example) for some firms, while making it necessary for others to raise additional funds to maintain the existing level of their operations.

- (3) Resource allocation: "... a pre-requisite for any criteria applied to the allocation of capital resources is comparable accounting information

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1. See page 151 of chapter - 7  
2. Sandilands report, op. cit., para-426.

on the past performance and current position of companies, presented in a way that provides a basis for assessment of future prospects" -- is the observation of the Sandilands committee<sup>1</sup>. Resource allocation effects of CPP accounting with special reference to the consequences on economic growth in developing countries is the consideration of the following paragraphs.

In our discussion of the accounting information requirement in developing countries in chapter - 4, we have highlighted the importance of accounting information in the industrial development of developing economies. One particular issue is the process of allocation of capital resources in both micro and macro level of economic decisions. In the macro level, as the developing nations are in the threshold of economic growth, objectives of an accounting method should be the encouragement of resources into capital intensive basic and growth industries such as mining, iron and steel manufacturing and other heavy industries for sustaining industrial development.

The basic and growth industries demand large quantities of capital, which due to lower income and small savings cannot be raised from the limited market for equity capital. As we discussed earlier in chapter - 2, governments in developing nations has to play a key and leading role in the industrial development process, and inevitably therefore, these industries are financed by a relatively large proportion by borrowed capital in the form of industrial development assistance, long term loan or other types of financing through various government channels. As a result, these basic and growth industries if not totally sponsored or nationalised by the government, are financed by relatively large proportion by borrowed funds.

The private enterprise sector of most developing countries are very much weaker and as such, the necessary equity capital would not be forth-coming

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1. Sandilands report, op. cit., para - 737.



for the high risk, innovative and long 'gestation' industries.

These are very much important part of the economic infra-structure for industrial development. In such a situation, the government has to set up these industries on its own or help the private sector through arranging loan, foreign aid, long term borrowing facilities and play a pioneering role in their development. If government is not very much keen to control the economy through rationalisation and state enterprises, but willing to help the private sector through developing industries to gradually 'dis-invest' in the sense of handing over subsequently to private enterprises, the subsequent capital structure of the enterprise would represent a substantial amount of unpaid amount owed to government which are normally paid in instalments. Not only the basic and growth industries get the government loan and assistance, but others also; which government planning machinery thinks fit on the grounds of regional development, strategic importance, employment, etc. As the money and capital market are still under-developed, government organisations and institutions help the existing enterprises to meet their short and long term financial needs.

As obvious from the above discussion, industrial advancement in developing countries mostly depends on government funds and assistance. Business enterprises may have small equity capital and large amount of financing from different governmental and institutional sources and as a result may be regarded as highly 'geared'. The point we are driving at is that, under CPP accounting the change in the purchasing power of 'monetary items' like borrowed funds would be taken as a 'gain' arising out of reduced purchasing power payable on such loan and borrowing. This may well lead many enterprises to the adverse situation of showing substantial increase in profit in terms of CPP units, surpassing the historic cost profit. Empirical studies has highlighted this aspect of CPP accounting. An elaborate study by Cutler and Westwick<sup>1</sup> of 137

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1. R. S. Cutler and C.A. Westwick, "The impact of inflation accounting on the stock market", Accountancy March 1973, pp-15-24.

quoted companies in U.K., suggested that 104 companies or 76% of the total would have recorded lower CPP profits than reported profits in 1971-72, while 33 or 24% would have recorded higher CPP profits. For 57 companies, purchasing power gains on long and short term liabilities were the most important cause of the difference between the two measures of profit.

It will be seen from the table below of the audited financial statements of 10 British companies which reported in 1973 and 1974 on both conventional and CPP basis, that 7 of these companies recorded lower CPP profits, while 3 others recorded higher CPP profits, in some cases significantly so. In each case, CPP profits exceeded reported profits when net gains on monetary items were greater than negative adjustments on non-monetary items.

TABLE - 17

Historic and CPP Profits Ten British Companies 1973-74 (£ Million)

	<i>British Printing</i>	<i>Cunys</i>	<i>Distillers</i>	<i>Edgar Allan &amp; Co</i>	<i>Rank Orgs.</i>	<i>S. G. B. Group</i>	<i>Tratfagan House Inv.</i>	<i>Trust House Forte</i>	<i>Tube Invest</i>	<i>Wedgwood</i>
Historic cost profit	5.17	3.23	67.87	1.57	24.67	2.90	19.57	22.96	33.67	4.24
Stock adjustment	-1.17	-0.84	-17.40	-0.42	-2.68	-1.08	-7.89	-	-9.23	-0.74
Depreciation adjustment	-1.12	-0.27	-3.29	-0.22	-3.16	-0.74	-3.53	-2.33	-3.89	-0.62
Gains & loss on net short term monetary assets	-0.57	0.40	1.69	0.12	-2.89	1.41	42.04	11.44	7.51	0.16
Gains on long term liabilities	2.16		12.00	0.39	15.98			-	0.65	
Gains (loss) on sales and costs	0.10	-	-	0.01	0.57	-0.30	1.27	-	-	0.24
Adjustment to other items	-	-	-4.53	-	-	-	-	-	1.36	-
CPP Profit	4.57	2.52	56.74	1.45	32.49	2.19	51.46	32.07	26.05	3.28

Source:- C. A. Westwick and N. J. Ballanger  
 "How companies account for inflation"  
The Accountant  
 10th and 17th April 1975.

In highly geared firms, where outside finance is a major item in the total equity gains arising from holding net monetary liabilities would be very large, and if they were regarded as available for distribution, difficulties could arise. This would apply particularly to the nationalised industries who are largely financed by government borrowing. In the context of UK and Ireland, the findings of the Sandilands Committee is that - "One of the major nationalised industries submitted evidence to us indicating

that in 1972 - '73 they would have made a 'gain' in current (31st March 1973) purchasing power units of about £C400m, which could not be regarded as available for distribution in the form of reduced prices to consumer, since it was not a gain in monetary units."<sup>1</sup>

Apparently it may seem that, as a pre-requisite of 'comparable accounting information on the past performance and current position' underlined in the beginning of the discussion from a quotation of Sandilands report, the CPP figure of profit would be better suited in attracting investors in growth, basic and other important industries by revealing healthy profit and growth prospects and thus facilitate resource allocation process. But on a closer look, the distorting effect of CPP profit in proper resource allocation is very much in evidence. First, CPP accounting endeavours to protect the shareholders' interest in purchasing power units and not the real capital in the sense of its future operating and income generating capacity embodied in the assets of the company. Secondly, if CPP profit is taken as the base for taxation, the effective cost of borrowed money would be considerably increased in conditions of inflation. This would happen in two ways, (a) the interest payable to the lender on borrowed money would be charged at higher rate to cover the purchasing power loss during inflation and (b) the payment of additional taxes on 'gain' on borrowed money. The higher cost of borrowing coupled with tax on monetary gains would act as a dis-incentive to firms and their liquidity position would also deteriorate.

Developing countries are short in productive capital, so whatever limited capital they may have, an accounting method must help to ensure that at least same level of output and services could be produced out of it. Accounting in such a situation should delineate properly the part of profit which could be distributed without impairing the productive capacity of the economic entity. As we have discussed in relation to 'Maintenance of capital' earlier -- specific price movement of fixed assets of a company which are not taken into consideration of a consumer price index like RPI, would be very different from general price movement. So adjustment of

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1. Ibid, para - 435.

historic cost of fixed assets or charge of depreciation on the basis of purchasing power adjusted fixed assets would not protect the real capital in the sense of physical operating capability. CPP accounting would fail in protecting the long term operating capability of the productive assets in developing economies. From the point of view of developing countries, it is of primary importance to preserve the physical capital rather than the purchasing power equivalent of shareholders' interest.

In the micro level of resource allocation decision, the characteristics and advantages of CPP accounting needs close scrutiny as attention has been given to preserve the shareholders' interest in the firm. In our discussion in regard to the information needs of an individual shareholder in chapter-4, Page- 63 we have observed that the shareholders are essentially concerned with allocation of their capital as between the competing investment opportunities. Their decision making process centres around 'pay-offs' -- from owning the share in terms of: (a) dividend receivable and (b) selling price of the share. The appropriateness of CPP accounting in preference to other methods are discussed critically on this points in the following paragraphs.

- (a) Dividend: In making decision to subscribe shares in a particular company, an individual investor, makes comparison of dividends receivable in one company with others; as well as the present dividend with earlier ones and the prospect of receiving in the future. The shareholder is an investor who expects to make a financial return from his investment and as such would be interested to know whether the 'purchasing power' of the dividend he receives is being maintained from year to year.

In CPP accounting, cash flows in terms of dividends has no valid connection with price level changes. Expression of a profit figure in terms of CPP unit does not guarantee the dividends receivable to rise year after year as fast as the changes in price level. "Indexation in this sense would require the dividends of the company in cash terms to increase from year to year at least as fast as the RPI (if this index is used)" -- observed the Sandilands committee.<sup>1</sup>

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1. Ibid, para - 438.

(b) Selling price of shares: The shareholder is an investor who expects to be better off from holding shares or refraining from holding them. In making a decision to hold or dispose of shares, he has to consider the value changes in shares, in terms of price level changes. Presumably shareholders would find CPP accounting useful in this regard as "It [CPP accounting] looks at the undertaking from the point of view of the purchasing power invested in it by its owners and of the maintenance of that purchasing power."<sup>1</sup> However, on a more critical examination of this aspect of CPP accounting it would be evident that this information is of dubious usefulness to an investor.

CPP accounting equates the collective shareholders' investment with the shareholders' interest in the company and shows how far the latter has been maintained in terms of purchasing power. However, the shareholders' interest in the company is unlikely to be regarded by shareholders in a practical sense as their investment.<sup>2</sup> The shareholders' interest is not in the hands of the shareholders but in the hands of the company and is not available to the shareholders in realised form - and as such an individual shareholder would be unconcerned with any attempt at valuing the company's total equity.

Although CPP accounting aims at showing the extent to which a company has maintained the 'purchasing power' of its shareholders' equity, it does not change the amount the shareholder will realise by selling his shares, which is governed by the market forces. If the company is wound up, the return to the shareholder will depend on the realisable value of the company's assets and the extent to which other creditors hold prior claims. Investment in shares is a risk investment and the adoption of CPP accounting would not provide the shareholder any indexation of the capital value. So, it is apparent that CPP accounting is not in a better footing in comparison to other inflation accounting methods to guarantee a price level adjusted dividend or future selling price of shares held by an investor.

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1. SSAP-7 op., cit appendix 1 para. 1.

2. Sandilands report, op., cit para. 438.

The most important investment criterion in evaluating the different avenues of investment, is the information in regard to return on capital employed. The shareholders would be much interested in the future income generating capacity of the entity. The performance of the company and expectations of its future prospects are of much importance to an investor. The value changes of assets would much help the investor in his prediction of generating cash flows in terms of dividend and maintaining the capital value of his investment.

CPP accounting looks at the undertaking from the point of view of the purchasing power invested in it by its owners and of the maintenance of that purchasing power, but otherwise it accepts the existing conventions of financial accounting.<sup>1</sup> So the essential feature of CPP accounting is that it endeavours to protect the purchasing power of the shareholders' interest and do not venture in protecting the value changes in the assets of the entity. As CPP accounting accepts the existing conventions of financial account -- that means in regard to value changes (except proviso of paragraph 21) of assets, it also accepts the historic cost convention of not interfering with value changes in the accounts. So, it is apparent that by expressing historic cost in CPP unit, CPP accounting does not improve the quality of comparability that is embedded in the historic cost accounts.

From the above discussion it is clear that CPP adjusted data, like historic cost data, are largely irrelevant as a guide to the resource allocation decisions in the micro and macro level of the economy. As such from the point of view of developing countries, CPP accounting would not help much in critical areas of investment decisions and resource allocation in the economy.

- (4) Valuation of assets: The reference to 'current purchasing power' suggests that assets in a firm be shown in CPP accounts at their current purchasing power, adjusted for value changes. This is not the case and

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1. SSAP-7 Op., cit, appendix 1, para. 1.

subject to proviso in paragraph 21 of SSAP-7<sup>1</sup> a CPP supplementary balance sheet is not intended to be a statement of the value changes of a firm's assets. CPP accounting does not require the value changes in assets to be discovered independently of the book figures, it is a restatement of the amounts representing assets in the basic accounts expressed in CPP units. Where assets and liabilities are measured by reference to their historic cost in the basic accounts of the company, they will also be measured by reference to historic cost in the supplementary statement. But whether or not an original investment has been maintained cannot be discovered by making price level adjustments to original costs. The figure representing a fixed asset, for example, in a CPP supplementary statement is no more likely to be representing value changes of the fixed assets in terms of CPP units than is the historic cost of the assets in monetary units. Therefore, adjusting financial data for the effects of inflation is not the same as reporting value changes. Price adjusted data still represents costs or funds committed, these costs are merely translated into the equivalent costs in terms of current purchasing power units. CPP supplementary statement will show the historic cost figures restated in units of CPP not the value changes of assets, therefore, it will not overcome an important deficiency of historic cost accounting.

Paragraph-21 of SSAP-7, which we referred earlier, gives rise to the judgement of value changes to be made in restatement of the basic accounts in CPP terms. The paragraph states:

"In the conversion process, after increasing non-monetary items by the amount of inflation, it is necessary to apply the test of lower of cost (expressed in pounds of current purchasing power) and net realisable value to relevant current assets, e.g., stocks, and further to adjust the figures if necessary. Similarly, after restating fixed assets in terms of current purchasing power, the question of the value to the business needs to be reviewed in that context and provision made if necessary."

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1. This aspect of CPP accounting would be discussed later.



The Sandilands Committee and Chambers attacked the provision as illogical<sup>1</sup> and inconsistent<sup>2</sup> to the stated objective of SSAP-7 : "It does not suggest the abandonment of the historic cost convention, but simply that historical costs should be converted from an aggregation of historical pounds of many different purchasing powers into approximate figures of current purchasing power."<sup>3</sup>

Paragraph-21 incorporates in restatement of the basic accounts in a different unit of measurement, a valuation of an asset, which was not a feature of the basic accounts, and as such go further than the stated objective to 'simply' adjust the 'basic accounts' into approximate figure of current purchasing power. This means that CPP accounting is not strictly a form of price level adjusted historic cost accounting and that the statements it yields are not statements in terms of indexed costs. To make the situation clear, we take for example that a closing stock had (1) historic cost - £100 (2) net realisable value - £108 and (3) current purchasing value - £110. Under historic cost, the lower of cost and net realisable value would be -- cost (£100); under CPP accounting, the lower would be net realisable value (£108). This possibility is noted in the Working guide to SSAP-7 (Table 1-4, 'Application of lower of cost or net realisable value rule') but no defence is given, for the inconsistency between the two figures and two valuation bases in the historic cost and CPP accounts of the firm. In the light of this example, perhaps the 'value to the business of assets (referred in paragraph-21 of SSAP-7) would also be different for the two sets of accounts for a given year. In any case, such discretionary rules as the one in said paragraph-21 -- inevitably introduce ambiguities into the amounts and make their interpretation hazardous.

In the explanatory note to SSAP-7 the objective of the provisional statement is stated as -- "It is important that managements and other

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1. Sandilands report, op.cit., para-420.
  2. R.J. Chambers, Accounting for Inflation -- Methods and Problems, University of Sydney, 1975 p. 67.
  3. SSAP-7 op.cit., - Explanatory note, para - 3.

users of financial accounts should be in a position to appreciate the effects of inflation on the business with which they are concerned."<sup>1</sup> If 'management' has to 'appreciate' the effects of inflation of the business with which they are 'concerned' -- it seems that general price adjustment has little to offer and they should rather be 'concerned' with the specific adjustments facing their business. The mere indexing of original costs does not necessarily yield realistic amounts for assets. The generally adjusted values would be of little help in relation to the decisions that have to be taken by firms. It is not good enough, when accounting for particular firms, to assume that what happens on the average happens to each firm in particular.

General price indices have the limitation of averages. Only by coincidence will a change in the general price index corresponds with the change in the price of any particular items during the period. Indeed, there is no reason why it may not move in the opposite direction and there are ample instances of its happening in this period of rising prices. Hence, if the general price index has increased, many specific price changes will be running at a lower level than the general index, whilst many other will be running at a higher level and there may be some specific price decreases. In SSAP-7 it is assumed that -- "The retention of the historic cost concept requires that holders of non-monetary assets are assumed neither to gain nor to lose purchasing power by reason only of changes in the purchasing power of the pound."<sup>2</sup> The changes in the prices of non-monetary assets will only tend to compensate for changes in the purchasing power of money if the prices of the assets of any firm tend to move in the same direction and at approximately the same rate as the index of the general level of prices. Thus a general price index will not be relevant to any business entity which needs to make adjustments to asset valuations in order to maintain the value of its capital in the long term.

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1. Ibid, para - 3.
  2. Ibid, para - 18.

The 'purchasing power' of money is not an attribute of money quantifiable without a knowledge of what the money is spent on and it is meaningless to regard changes in the 'purchasing power' of money as an independent phenomenon unrelated to changes in the prices of defined combinations of goods and services. The 'purchasing power' of money depends on the items on which the money is spent and a unit of measurement based on the 'purchasing power' of money in relation to goods and services covered by the RPI will not be equally useful to all individuals or entities. While movements of the RPI may be representative of the changes in the 'purchasing power' of money held by individual shareholder they are unlikely to be indicative of changes in the 'purchasing power' of money held by institutional shareholders, companies or other organisations which make use of the annual accounts of companies. The RPI covers few items of goods and services normally purchased by companies and is not an appropriate index to use as an indicator of the changing 'purchasing power' of money spent by companies.

In the asset measurement and in general, the CPP accounting approach is concerned with -- "if an individual shareholder wishes to consider how inflation has affected his financial position as between two dates, he will be concerned with the effect on his power to purchase the goods and services he usually buys."<sup>1</sup> This motive of maintenance of purchasing power is extended in respect of the economic entity as an extension of the collective shareholders' concern about the maintenance of the purchasing power.

From the point of view of an individual, a RPI may be a measure of the 'worth' of money which he possesses now, compared with the same amount of money possessed at some time in the past. Now, the vital question is, whether an individual would use the index to measure the worth of the money he has already spent. Most consumers are aware

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1. Ibid, Appendix-1 para-4.

that, once it has been spent a sum of money cannot be looked upon as available for alternative purposes.

It is obvious that a company can not logically regard the money already spent on behalf of it's shareholders on any asset as still available to them for alternative purposes. But this is the type of alternative purposes implied by SSAP-7, since it regards non-monetary assets as representing the 'purchasing power' embedded in it<sup>1</sup> through the money already spent by a company. The stand taken in this regard by SSAP-7 is stated as -- "It [CPP accounting] looks at the undertaking from the point of view of the purchasing power invested in it by its owners and of the maintenance of that purchasing power."<sup>2</sup>

When a firm first commences business, its funds can be regarded as representing general purchasing power. At that time, its assets, mainly cash, are uncommitted and may be used for an infinite variety of uses. But once the firms funds are invested in specific assets and it engages in particular kind of economic activity, this condition no longer holds true. Items in the accounts no longer records the exchangeable general price level represented by them but specific expenditure incurred on acquiring them. Moreover, the fact that most operating assets are; to a large extent specific to the firm means that they cannot notionally be regarded as representing general purchasing power.

From the above discussion in regard to valuation of assets in SSAP-7, we do not feel that much useful information could be obtained by restating the assets in a company's balance sheet in terms of CPP units, especially using the RPI as the basis of conversion. We do not consider that the restatement of figures for assets is in itself useful, which do not reflect value changes which is of utmost importance for the better understanding of the users of accounts.

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1. "Holders of non-monetary assets are assumed neither to gain nor to lose purchasing power by reason only of changes in the purchasing power of the pound." SSAP-7 para-18.
  2. Ibid, Appendix-1 para-1.

- (5) The gain and loss on monetary items: One of the most controversial areas of SSAP-7 surrounds the treatment of gains and losses arising on monetary items in the conversion of basic accounts to CPP units. Monetary items are defined as -- "those whose amounts are fixed by contract or otherwise in terms of numbers of pounds, regardless of changes in general price levels. Examples of monetary items are cash, debtors, creditors and loan capital."<sup>1</sup> When accounts are drawn up in terms of CPP units, the value of the monetary item may change through time and as such 'gains' or 'losses' in terms of CPP units may arise independently of the use to which the money is put.

If a company borrowed £10,000; in the basic accounts no gain arises in isolation from holding this liability when the general price level increased and accounts are drawn one year later. In terms of monetary units, the liability is £10,000 both at the beginning and end of the year. Indeed, the liability to the creditor will always be £10,000 until the loan is repaid, whatever happens to the prices of goods and services. In the CPP statements, a gain in terms of CPP units could be shown when the price level increased following the logic that though the payment of the borrowed money is same in terms of numerical pounds, in fact it is repayable through pounds of decreased purchasing power. The implication of CPP approach is that, increases in the purchasing power equivalents of proprietorship funds resulting from decreases in the purchasing power of net monetary items make it possible for the enterprise to be better off to the extent of gains arising in this respect. Price level gains and losses arising from changes in the purchasing power of monetary items should be included in the supplementary CPP accounts following SSAP-7.

However, whether or not such gains should be regarded as profit of the year is a controversial matter of interpretation of SSAP-7. In paragraph-15 of SSAP-7, it is stated that, "A company with a material

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1. Ibid, para-15.

excess on average over the year of long and short term debt (e. g. debentures and creditors) over debtors and cash will show, in its supplementary current purchasing power statement, a gain in purchasing power during the year. This is a real gain to the equity shareholders in purchasing power but it has to be appreciated that there may be circumstances in which it will be accompanied by a dangerously illiquid situation or by excessively high gearing, and for this reason any such gain should be shown as a separate figure." It is not directly recommended by SSAP-7 that gain on monetary items should be regarded as distributable profit, although it seems that no objection has been raised on such an action and indirect approval has been given through the following citations:

- (a) "It is inconsistent to exclude such gains (monetary gains) when profit has been debited with the cost of borrowing (which must be assumed to reflect anticipating of inflation by the lender during the currency of the loan) and with depreciation on the converted cost of fixed assets."<sup>1</sup>
- (b) The 'semi official' (Expressly stated not to be part of the standard itself but included for general guidance) Appendix -2 to SSAP-7 -- "Example of the presentation of a supplementary CPP statement" shows a 'gain' on net monetary liabilities as part of profit for the year in CPP terms. Sandilands committee interpreted the stand taken in SSAP-7 in this regard as favouring the treatment of such gain as part of the profit of the firm and also received submissions corroborating their interpretation.<sup>2</sup>

A company's pre-tax profit will be dramatically changed according to the nature of its financial structure, before and after the adjustments for gains (losses) on monetary items have been made. Companies with high

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1. Ibid, para-17
2. Sandilands report, op.cit., para-433.

geared financial structure is sure to make a large gain in a period of rapid inflation such as the present. Property companies whose largest balance sheet item is borrowing would find their adjusted income showing exceptionally good results. So would be the companies like entertainment and catering, Breweries, shipping, office equipment, food retailing, etc. The following table compiled by the London Stockbroker de Zoete and Bevan<sup>1</sup> shows the relative changes in the basic and CPP earnings in different groups of industries based on 1973 accounts figures.

TABLE - 18

Changes between basic and CPP earnings  
in U.K. industries

1. Entertainment & Catering	+61.4%
2. Breweries	+37.7
3. Shipping	+30.5
4. Office equipment	+10.2
5. Food retailing	+ 8.4
6. Tobacco	+ 2.2
7. Contracting & Construction	+ 2.1
8. Consumer goods (Non durable)	+ 0.6
9. Miscellaneous (other groups)	+ 0.4
10. Building materials	+ 0.3
11. Chemicals	- 6.2
12. Food manufacturing	- 7.9
13. Light Electronics, Radio & TV	- 8.1
14. Packaging & Paper	- 8.8
15. Stores	- 8.9
16. Hire purchase	- 9.9
17. Newspapers & publishing	-10.7

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1. A.P. Thompson, Inflation Accounting for the Investor - Supplement No. 4, London, de Zoete and Bevan, 1974, P.8

18.	Wines & Spirits	-17.7
19.	Capital Goods Group	-23.5
20.	Textiles	-26.1
21.	Banks	-29.2
22.	Engineering (Heavy)	-29.9
23.	Consumer goods (Durable)	-32.2
24.	Miscellaneous (capital goods)	-33.5
25.	Engineering (general)	-34.0
26.	Electricals	-45.7
27.	Household goods	-48.3
28.	Motor & distributors	-58.7

The gains resulting from the CPP adjustments do not increase sums in terms monetary units and are expressed in a different unit of measurement i.e. CPP units. They could only be distributed in full by drawing on existing cash resources or by borrowing. Even if they are not treated as distributable profit but following paragraph -15 (referred earlier) of SSAP-7, shown as a 'separate figure' in the CPP supplementary statement- the confusion arising from the divergence of measurement of profitability with the measurement of liquidity which is one of the basic shortcomings of historic cost accounting in a period of inflation would not be mitigated by CPP accounting.

It cannot be said categorically that the borrower gains by borrowing. Whether he gains or not depends on what he does with the borrowed money. In terms of monetary units a monetary item by definition cannot change in value and a company cannot gain or lose in terms of monetary units through the mere act of holding a monetary item. Thus in terms of monetary units (pounds) the value of £10,000 cash is always £10,000 and no gain or loss arises in isolation from holding it through time. Similarly in terms of monetary units the liability arising when a company borrows £10,000 is always £10,000 and no gain or loss arises in terms of monetary units from holding such a liability. In terms of monetary units, gains or losses can only arise on monetary items when some use is made of the money involved. Thus



if a £10,000 borrowing on which interest is payable at 12% is invested at 15%, a company will make a gain, ignoring any other expenses that may arise. If this gain is greater than the gain which would have accrued through financing its activities from another source, the company may be said to have gained through financing its activities by borrowing.

Gain or loss on net monetary items has no determinate independent meaning. As such the argument in paragraph-17 of SSAP-7 that gains on net monetary liabilities should be included in profit, when the cost of borrowing is debited against profit seems to be irrelevant. Interest charges are a cost in monetary units to the company. 'Gains' on monetary items arise only in terms of CPP units and are not available in terms of monetary units. Hence, if the net gains on monetary items are regarded as available for distribution, the users of financial reports could be misled.

- (6) Liquidity: The most immediate problem which inflation gives rise for most companies is a chronic shortage of cash as the price of inputs go higher. In such a situation, we observed that historic cost accounting fails to give a profit figure which can ease off the liquidity crisis of the company. The CPP accounting in this respect seems not to be an improved one and in some cases may be worse off. Survey conducted by Accountants International Study Group, which we referred earlier in Chapter 7, showed that stock and work in progress generally constitute after fixed assets, the largest balance sheet item in the financial reports of manufacturing firms. So it is very much in evidence that stock turnover rate can have much repercussion on the liquidity situation of a company, particularly the manufacturing ones. Cash generated by the sale of processed goods must be used to re-purchase inputs at higher prices in a period of inflation. Inadequate recovery of cash flow for stock along with increased cost for other inputs may lead the company to serious liquidity problem.

A CPP supplementary profit figures does not exclude 'stock appreciation' from profit calculation unless the price of stock increases at exactly the same rate as the RPI, which will only happen by chance. The RPI does not cover the purchases made by companies and it is unlikely that volatile movement in the price of stock would be indicated by the movement in the RPI. In all cases where the price of stock has increased faster than the RPI, the profit figure in a CPP supplementary statement will fail to eliminate the element of stock appreciation which is not covered by the movement of RPI, and distribution of this profit would accentuate the liquidity problem of the company.

The treatment of gain on net monetary items may also lead to liquidity crisis following CPP accounting. A company with a highly geared financial structure is sure to make a large gain in CPP terms in a period of rising prices. Since any net gain arising on monetary items is a gain in terms of CPP units, it is unlikely to be available for distribution in terms of monetary units. It could be only distributed by drawing on cash resources or by borrowing. In such a situation it is difficult to justify the resulting profit figure following CPP accounting, as it may well lead to liquidity crisis which can be avoided by retaining historic cost. In the words of Sandilands committee -- "We believe this [treatment of net gains on monetary items] is a practical and serious problem, since we have already drawn attention to the possibility that the distinction between monetary units and CPP units may not be fully appreciated."<sup>1</sup>

- (7) The unit of measurement: "We consider that CPP accounting in conceptually the most difficult method of inflation accounting suggested to us in evidence. The main reason for this is the use of a unit of measurement other than the monetary unit on which to base the published accounts of companies." -- stated by Sandilands Committee.<sup>2</sup> The central feature of the CPP accounting is the adoption of a different unit of measurement -- the 'purchasing power unit' -- in place of the monetary unit (pound).

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1. Sandilands report, op. cit. , para-435.

2. Ibid. , para-406.

It is based on the assumption that the most significant problem arising for the preparation of company accounts during a period of high inflation is that the conventional unit of measurement -- money -- becomes unstable and itself changes in value too quickly to be any longer useful as a unit of measurement for company accounts.

“Accounting for Inflation: a working guide to the accounting procedures<sup>1</sup>” published by the English Institute suggests the use of the symbol £H (Historic) to denote pounds in the sense of monetary units and £C (current) to denote CPP units.<sup>2</sup> Two sets of units of measurement in CPP accounting is likely to be difficult for most users of accounts to understand. As for example, the historic cost of an asset is £10,000 in CPP units in the balance sheet, one year later it would be £C11,000 when the index has increased to 110 and two years later it would be £C12,000 if the index has increased to 120. Similarly, in the converted profit and loss accounts in CPP units -- sales of £2,000 would be £C2,200 in the CPP supplementary statement (assuming the index to be now 110).

These apparent differences emphasise the distinction between monetary units and CPP units. The numerical difference between £2,000 sales figure in the historic accounts of the company and the £C2,200 in the CPP supplementary statement does not represent an increase in the company's receipts in monetary terms. So, the CPP method of accounting introduces a new set of problem of proper understanding by expressing company accounts in a new unit of measurement. Moreover, the symbols '£H' and '£C' in CPP accounting confuses users of accounts by implying that £ is the measuring unit, in both a company's basic accounts and its CPP supplementary statements, which is not the case. The use of the symbol '£C' does not convey information on the date to which the CPP unit relates.

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1. ICAEW, op. cit.
  2. Described as 'pounds of current purchasing power' in the working guide.

- (8) Economy and practicability: It has been said that CPP accounting is relatively easy to put into practice.<sup>1</sup> Going through the worked examples in the working guide, it is evident that it could entail a set of complicated calculations. The hypothetical company in the working guide had 15 items in the historic cost balance sheet. In the seventh year of existence, the CPP supplementaries required 28 calculations in the process of updating, conversion and purchasing power adjustments along with 4 accounting statements or summaries to highlight the process.

Practical problems like age analysis and determination of value to the business (following paragraph-21 or SSAP-7) of fixed assets, classification of an item as monetary or non-monetary one in a particular circumstance etc., could also entail difficulties and additional work in the part of accountants at least in the initial state of implementation of SSAP-7.

#### Conclusion

A CPP adjustment of historic cost accounts may be preferable to taking the historic cost accounts at face value. Applied with discretion, it could provide some useful information for users of accounts in relation to the maintenance of purchasing power invested in the enterprise. But it is not a long term solution to the problems faced in historic cost accounting in terms of changing prices and money values. The usefulness of the information given in CPP supplementary statements will always be constrained by the deficiencies of the basic historic cost accounts to which they are attached.

The use of the RPI, which is a wide ranging index of prices of goods and services purchased by domestic consumers, will in many cases give a misleading indication of the effects of inflation on individual companies, which should be the main function of inflation accounting. The CPP method also introduces a new set of problems by expressing company accounts in a new unit

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1. ASSC, Discussion Paper - Inflation and Accounts, London, ICAEW - 1971, Para-14.

of measurement -- units of 'CPP' -- instead of in monetary units (pounds). The unit of CPP is likely to be conceptually difficult for most users of accounts to understand. The proposal that CPP statements should be supplementary to the basic accounts is likely to weaken their impact. The important resource allocation decision in macro and micro economic level ~~would not~~ be much facilitated by CPP accounting. Liquidity situation of an enterprise following CPP method would not be much improved and in certain circumstances may be deteriorated. We do not consider CPP accounting as the most appropriate approach to inflation accounting in the context of developing economies.

### Chapter 11: Current Cost accounting

Following the deliberations of the Sandilands committee in the U.K., the Richardson committee in New Zealand, the Australian Accounting Standards Committee, Security and Exchange Commission (SEC) in U.S.A., Morpeth and finally the Hyde committee in U.K.<sup>1</sup> value based accounting is presented as the accounting professions answer to the problem of accounting during periods of rising prices.<sup>2</sup> Though definitive standards on value based accounting have not been pronounced yet, consensus of principle has been reached and standards are soon to materialise. The Sandilands and Morpeth committee proposals are the most elaborated method of value based accounting and in our subsequent discussions, current cost accounting (CCA) as introduced in these deliberations would be followed as a standard model.

#### Brief guide to CCA

"The essence of the CCA system is simple: the charge against income in arriving at profit for stocks consumed and fixed assets used is based on current replacement costs and not on out of date and irrelevant historic costs. Similarly the balance sheet shows up to date values in place of historical costs."<sup>3</sup>

In summary CCA as described in ED-18 has the following main feature:

- (a) accounts should continue to be drawn up in terms of the monetary unit (the pound);

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1. A brief description of world wide development in value based accounting is given in Appendix - A at the end of the chapter.
  2. Reversion against the main stream of value based accounting is taking place in the Netherlands, the country which has been most often quoted in the literature for developing such accounting method and particularly the Philips company as a pioneer in this field. A comprehensive report, Inflation -- Neutral Taxation, chaired by Professor H. J. Hofstra favoured the general purchasing power adjustment for companies' profits and assets for financial reporting and tax purposes. Conceptually it is a form of general purchasing power accounting whereby the eroding effects of inflation on the company's capital is adjusted through an entry aimed at maintaining the general purchasing power of the opening capital. 'Hofstra Committee' also rejects current value accounting on an optional basis -- see "Dutch Inflation Accounting -- super for some", The Economist, 11th March 1978, P. 110 and Jules W. Muis, 'The Hofstra Report -- Inflation Accounting for Tax Purposes' The Accountant's Magazine, May 1978, PP. 207-208.
  3. ASC, ED-18: Current Cost Accounting, 1976, Para-7.

- (b) fixed assets are to be shown in the balance sheet at their value to the business and not at their depreciated original cost. Stocks are to be shown in the balance sheet at their value to the business and not at the lower of their original cost and net realisable value;
- (c) depreciation for the year is to be calculated on the value to the business of fixed assets concerned;
- (d) the cost of stock consumed during the year is to be calculated on the value to the business of the stock at the date of consumption and not at the date of purchase;
- (e) the effects of the loss or gain from holding monetary assets or owing liabilities will be shown in the "statement of the gain or loss in the value of the shareholders' net equity interest" after allowing for the change in the value of money;
- (f) the distinction between real and apparent growth in so far as the equity interest is concerned is made clear in the "statement on the gain or loss in the value of the shareholders' net equity interest" after allowing for the change in the value of money;
- (g) directors may appropriate to a revaluation reserve amounts required to maintain the scale of the business. The main components of this appropriation are likely to be:-
  - (i) increased replacement cost of fixed assets and stock
  - (ii) increased requirements for monetary working capital.
  - (iii) depreciation under-provided in the past on fixed assets because prices have risen since the depreciation was provided.

Concept of capital:

The capital to be maintained is the assets resources of the entity on the assumption that capital is related to the entity assets. However, it regards capital not as the physical assets of the entity nor as the amount of purchasing power invested in the assets to the entity. No sums are regarded as profit until a charge has been made representing that part of the value of the company's assets which has been consumed during the year. So far as the monetary assets are concerned, their value in terms of the monetary unit are assumed cannot change and no provision is required to preserve their value to the business in terms of the monetary unit.

Concept of profit:

The current cost profit or loss for the year is the 'operating profit or loss' for the year after accounting for interest payable and receivable, taxation and extra-ordinary items. The general principle followed in determining profit is that current revenue should be charged with the value to the business of the asset used up in producing that revenue. All holding gains, whether realised or unrealised should be excluded from the computation of 'operating profit'. The main revenue items requiring adjustment (when compared with historical cost accounts) are the cost of sales and depreciation.

The format of accounts:

The accounts should comprise:

- (a) A balance sheet;
- (b) A profit and loss account, which discloses
  - the operating profit or loss for the year before interest.
  - interest payable less interest receivable.
  - the current cost profit or loss before taxation
  - taxation
  - the current cost profit or loss before extra-ordinary items
  - extra-ordinary items
  - the current cost profit or loss for the year
- (c) An appropriation account, which discloses:
  - the current cost profit or loss for the year
  - revaluation surplus or deficit for the year, as adjusted by the amount appropriated by the directors to or from the revaluation reserve.
  - dividends
  - the transfer to or from general reserve
- (d) Notes to the accounts, incorporating a statement showing the effect of the change in the value of money.
- (e) A statement of the source and application of funds. (For companies falling within the provisions of SSAP-10)
- (f) An audit report.



The basis of asset valuation:

The CCA concept of valuation of tangible assets is value to the business. The value to the business of a company's asset is identical in amount with the adverse value of the entire loss, direct and indirect, that the company might expect to suffer if it were deprived of the asset i.e., the value to the business is equal to its deprival value. In the majority of cases, this will be taken as the current purchase price i.e., the replacement cost (RC). For fixed assets which are in use, this figure must be net of depreciation. The replacement cost sometimes may be manifestly in excess of the value to the business and in such cases the value to the business is taken to be as the higher of:-

- (i) the net realisable value (NRV) and
- (ii) the present value (PV) of the expected future earnings from the asset i.e., the economic value.

The basis of valuation to be adopted in different situations is shown in the following table.

TABLE - 19

The basis of valuation of assets

	Situation	Value to be used
1	$NRV > PV > RC$	RC
2	$NRV > RC > PV$	RC
3	$PV > RC > NRV$	RC
4	$PV > NRV > RC$	RC
5	$RC > PV > NRV$	PV
6	$RC > NRV > PV$	NRV

The application of the above principle to the valuation of say six machines would be as follows:

TABLE - 20

Valuation of machines

Machine	RC	NRV	PV	Value to the business
A	£4,000	£2,000	£5,000	£4,000 (RC)
B	6,000	1,000	2,000	2,000 (PV)
C	6,000	2,000	1,000	2,000 (NRV)
D	6,000	7,000	8,000	6,000 (RC)
E	6,000	8,000	7,000	6,000 (RC)
F	6,000	8,000	5,000	6,000 (RC)

The treatment of fixed assets other than property:

Fixed assets other than property should normally be stated at their net current replacement cost (NRC), which is the gross current replacement cost (GRC) less depreciation. GRC should be determined using one of the following factors (listed in order of preference):

- (a) Suppliers' official price list, catalogues etc., with appropriate deductions for trade discounts;
- (b) the company's own replacement cost estimates, based on expert opinion;
- (c) an index compiled by the company from its own purchasing experience;
- (d) authorised external price indices analysed by asset type;
- (e) authorised external price indices analysed by using industry.

Where no identical asset is available the gross current replacement cost should be calculated by taking the replacement cost of a modern equivalent asset and making allowances for any changes in output, useful life and running costs.

Depreciation should be based on the average value of the assets during the period. 'Backlog depreciation' will be charged against the revaluation surplus in respect of the opening balance of depreciation, and in addition an uplift should be charged against the revaluation surplus to take the years charge from an average to a

year end basis for balance sheet purposes. Disposals should be depreciated up to the date of disposal, and additions should be depreciated from the date of purchase. The estimated remaining useful working lives of assets should be reviewed on an annual basis and especially during the initial introduction of CCA in respect of fully written-off items or items with low book value. Where the basis of calculating current value is being changed from replacement cost to economic value or net realisable value, depreciation should first be calculated on the replacement cost values. A write-down should then be made to economic value or net realisable value and should be charged in the profit and loss account, and disclosed as an exceptional or extra-ordinary item if appropriate.

The treatment of stock and work in progress:

Stocks and work in progress should be incorporated in the balance sheet at the lower of current cost and net realisable value. The charge against operating profit for the cost of sales should be based on the value to the business at the date of consumption of the stocks and work in progress consumed during the period. The date of consumption is the date on which the stocks and work in progress become specific to the requirements of a particular customer as a result of a contract. Normally, this will be the date of delivery to a customer, but for contract work in progress it will normally be the date on which items are specifically allocated to a contract.

Current replacement cost should be calculated on the basis of the cost of replacements delivered at the date of consumption, rather than on the basis of orders placed at that date. The factors that should be used in calculating the current replacement cost are listed below in order of preference:

- (a) the costs currently incurred by the company;
- (b) suppliers' official price lists, catalogues, etc;
- (c) an index compiled by the company based on information of its own costs of purchases;
- (d) an authorised external price index for the cost of each type of stock.

The following revaluation surpluses or deficits should be regarded as special cases and should be treated as part of operating profit:-

- (a) where the whole business, or an identifiable part of the business, consists of the purchase of assets solely with a view to gain the benefit of an increase in market value (as, for example, with a company dealing in commodities);
- (b) where there is a significant departure from normal buying practice by purchasing stock in advance of normal requirements in order to avoid an expected increase in price;
- (c) where stock is purchased at a price substantially below or above the relevant market buying price;

For balance sheet purposes only, if a stock turnover rate is sufficiently fast, a first in first out (FIFO) method of valuation may provide an adequate approximation to current replacement cost. The balance sheet value of contract work in progress will represent cost of such work in progress at the date of consumption, rather than at the balance sheet date. The value to the business of purchased seasonal agricultural products should be calculated as the lower of the cost of bulk purchases made from the most recent relevant harvest, and their net realisable value.

The treatment of monetary assets and liabilities:

Monetary items (for example, cash, debtors and creditors) should be incorporated at their 'face value'<sup>1</sup>. Interest paid and interest received should be shown separately in the face of the profit and loss account as a deduction from, or addition to, operating profits or loss. The note to the accounts should detail the market value of any liability which is a listed security.

The effect of change in the value of money:

In order to show the effect of the change in the value of money on the shareholder's

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1. No adjustment will be made in the profit and loss account in respect of these items but the gain or loss on holding net monetary assets, analysed into its principal components, will be shown in the notes to the accounts.

net equity interest, a statement should be incorporated in the notes to the accounts. The statement will compare:-

- (a) the sum at which the net equity interest would need to stand at the end of the year in order to have a purchasing power equal to that which it had at the beginning of the year, with
- (b) the actual amount of the net equity interest at the end of the year.

The former amount is obtained by multiplying the opening net equity interest by the RPI at the end of the year and dividing by the RPI at the beginning of the year.

The composition of revaluation reserves:

A revaluation surplus or deficit is the difference between the cost of an asset, and its value to the business at any given point in time. The revaluation reserve should comprise the accumulated amount of revaluation surpluses less deficits, plus any amounts appropriated by the directors having regard to their assessment of the needs of the business, or less any amounts which the directors consider to be in excess of what is needed. If the amount transferred to or from the revaluation reserve is not equal to the revaluation surpluses or deficits for the year (e.g; due to the effects of monetary assets or liabilities) the directors should give the reason for this.

The Appropriation Account:

This account is a vehicle for bringing together all gains and losses for the year, and explaining their appropriation or distribution. In addition to current cost profit, it therefore includes all valuation surpluses, realised or unrealised, viz:-

- (i) cost of sales adjustment;
- (ii) depreciation adjustment;
- (iii) unrealised revaluation surplus on stocks, fixed assets, investment;
- (iv) exchange translation differences.

These surpluses may be dealt with, in whole or part, in the following ways:-

- (a) transferred to revaluation reserve;
- (b) distributed as dividends;
- (c) held as un-appropriated amounts or transferred to reserves other than revaluation reserve (e.g. revenue reserve).

#### An appraisal of CCA

In appraisal of CCA as an alternative to historic cost accounting, we start with the probable impact of value based financial reporting in meeting users' need. In the next stage, a critical analysis would be made of certain aspects of CCA and it's possible modifications in the context of developing economies.

- (1) Allocation of resources: We see the introduction of CCA as having an important long run influence on the allocation of economic resources in developing economies. The allocation of resources in the economy would improve as the effect of changing price levels are incorporated in the accounts of business enterprises. The capital market is an important means of allocating resources. The ability of companies to raise equity and loan capital facilitates the financing of existing projects and new ventures and gives the general public access to share ownership. One important factor in the individual's decision to invest is his assessment of the past results as an indicator of the expected future profitability of an enterprise. The information provided in current cost accounts will allow a reasonable assessment to be made of the current value of capital resources employed by each enterprise and the efficiency with which they are used. This must encourage and enable a more rational allocation of new equity and loan investments than occurs at present where decisions are based on information provided by historical cost accounts. In the long run this should result in the more profitable and more efficient industries receiving an enhanced flow of equity and debt capital. The improved allocation of resources and the superior decision making information produced by CCA should result in a more productive and efficient business

sector with a consequent upward trend in share price levels. This, in fact, is essential because of the relationship between share prices and the ability of companies to raise capital. Share prices are widely regarded as indicative of the confidence of the business community and the buoyancy of the economy.

Private capital investments are channelled into the various industries by decision based largely on accounting data. Therefore, the optimum allocation of resources depends to a marked degree on sound accounting information. The responsibility for this falls squarely on the shoulders of accountants who must take care to produce useful data to permit the correct flow of capital into capable hands and away from unneeded and inefficient industries and firms. A pre-requisite for any criteria applied to the allocation of capital resources is comparable accounting information on the past performance and current position of companies -- CCA on this score stands in better position to satisfy user needs in comparison to alternative inflation accounting methods. The measures of cost and income are both in current value terms and hence the rate of return represents realistic figure. CCA provides a reliable measure of the rate of return on investment and as such the use of CCA should restore the credibility of financial statements and improve investor's confidence.

Reliable and contemporary measures of income, financial position, investment and rate of return on investment are required by investor as well as management. Investors can make varied comparisons of the income, financial position, investment and rates of return on investment between companies as they are all in current value terms and based on the same capital maintenance concept. Companies with the better profit performances and financial positions can be readily seen. This information is critical for the decision of share investors and long term creditors. They can evaluate the performance of each company by comparing the rates of return earned by each and by comparing these rates of return with the yields required by investors to induce them to invest. They are provided

with a better basis to predict future rates of return on investment likely to be earned by each company and its potential dividend stream, and these in turn mainly determines the value of their shares in capital market. They can more readily ascertain if the company is an economic going concern or whether it is a sick company which either requires some good medicine or winding up.

The basic objective of CCA is to ensure that, having regard to changes in specific prices, the results and resources of an entity, as reported in its financial statements are so measured as to reflect the realities of its operations and thus are relevant and of maximum value to the users of such information. CCA therefore provides better gauges of position and performance of companies. The resultant information cannot fail to be of increased use to providers of capital, be it equity or loan, who until now have been aware of capital erosion and artificially inflated profits without being able to quantify the extent of the distortions. Positive knowledge, even if at times unpalatable, should help to restore confidence.

As management appraisals are conducted on the basis of current cost, greater efficiency in resource use will be encouraged in the long run. Operating efficiency occurs when the maximum output is produced at the lowest possible current cost. The costs relevant for the measurement of efficiency are the current market cost of the resource inputs used in operations. Firms must adapt their operating techniques to changes in relative prices to remain efficient. CCA encourages firms, because relevant information is reported to management. It will encourage greater efficiency in resource use in several ways:

- (a) Fixed assets whose buying prices rise must be used more intensively.
- (b) Fixed assets promising lower unit operating costs will progressively replace existing type assets.
- (c) Development of new lower cost techniques will be encouraged.



- (d) Inefficient aspects of operations will be highlighted and corrective action encouraged to improve the operating technique or eliminate the activity.
- (e) The constant re-appraisal of fixed assets focus attention on obsolete, surplus or under-utilized assets and so on.

These changes in operating techniques won't take place overnight; rather the emphasis is on progressive improvements over time so that in the long run, improvements in efficiency are noticeable. In addition, CCA will improve efficiency of operations through facilitating more accurate forecasting of future budgetary magnitudes -- operating costs, plant replacement costs, profit magnitude, cash requirement and so on. The CCA method of accounting by measuring the return derived from the employment of resources in current terms provides a good indicator of the profitability of an enterprise. When an enterprise has this information, it will be able to discern with greater accuracy which activities are profitable and thus make sounder judgments as to future policy.

We must admit that, whilst CCA will draw investment towards effectively managed companies, it will also expose the underlying chronic ill health of others and discourage further investment in them unless they take actions to improve their condition, CCA hastens the process of survival of the fittest. CCA accords with Paton and Littletons assertion that:

"Capital should flow into those industries which serve the public interest, and within an industry into those enterprises in which the management is capable of using capital effectively. If capital in an enterprise is earning a return over a considerable period, this probably indicates that the capital is being capably employed in an industry serving an existing demand; if the capital is not earning a return over a period of time, this probably indicates that capital is lodged in incapable hands or an industry whose service is not in continued demand. The

social importance of accounting therefore is clear---"<sup>1</sup>

Business operating efficiency in turn has implications for the allocation of productive resources in industry. Only the more efficient business will find it profitable to purchase the new resources and hence there would be a steady re-allocation of resources in their direction. Likewise, these firms would release any valuable resources that they cannot effectively use, for use by other firms. Firms which cannot adapt their operating techniques to changes in market conditions would become progressively less efficient and less profitable and ultimately they would collapse. Fixed assets whose replacement prices rise will need to be used more intensively while development of new lower cost techniques will be encouraged. Obviously as only the more efficient business will find it profitable to purchase new resources, there should be a steady re-allocation of resources in their direction. Consequently, there will be re-allocation and more effective use of productive resources within the business entity and between entities with business investing in what they can do well and giving up what others can do better.

In the long term, improved allocation of resources arising from superior decision making information provided by CCA should result on the one hand in a more productive and efficient business sector, on the other in a more discerning utilisation of capital resources. If the expectations about improved resource allocation and superior decision making information produced by CCA are realised, a more productive and efficient business sector could result. However, it should be recognised that the initial introduction of CCA will obviously involve a period of major re-adjustment and re-orientation of business sector to economic realities. While the reporting of current income will place greater pressure on less efficient firms or their less efficient segments of operations to close down more quickly than otherwise. The effects of increased business efficiency in the long run are very beneficial to the

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1. W. A. Paton and A.C. Littleton, An Introduction to Corporate Accounting Standards, American Accounting Association, 1940, p. 3

economy -- it raises productivity in industry and hence reduces unit operating costs. This improves the competitiveness of domestic industry against import competition, contains the rise in unit labour costs, improves profitability of firms and thereby stimulates further industrial investment.

- (2) Maintenance of capital: It is much in the interests of all concerned -- be they shareholders, providers of loan capital, employees or tax gatherers -- for companies to be kept alive and healthy. The objective should be profit in perpetuity. "None can protect it [the entity] from bad management or the risks of free enterprise, but it is not the task of accounting to so define profit as to aid the demise of the entity even though it is well managed and performing a socially and commercially useful function."<sup>1</sup> Inflation accounting was forced before us because of capital erosion, due to under depreciation and stock profits --- rectification of these shortcomings of historic cost accounting through value accounting should be welcomed by developing countries.

The capital maintenance concept underlying CCA is that of maintaining intact the productive capacity of the business. By ensuring that sufficient funds are recovered from revenue to enable replacement of the stock and plant services consumed in generating the revenue, the net stock of productive assets can be maintained and the business can maintain its volume of future operations. Funds sufficient to replace stock and plant used up in operations are recovered in the profitable business by basing the depreciation and cost of goods sold charges on the current replacement costs of the same or equivalent assets. Maintenance of productive capacity is a necessary attribute of the going concern. By maintaining its monetary and physical assets intact from internally generated funds, the business avoids the serious financial and operating problems. It is not sufficient for survival of the entity just to maintain the purchasing power of shareholders equity as emphasised in the CPP approach -- but over all maintenance of capital should be the objective.

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1. D.R. Rickard, "Current cost accounting" The Australian Accountant, May 1976, P. 194.

The cornerstone of any income measurement system is the capital maintenance concept. Current income is defined as the gain in the net assets of the business over the period after maintaining intact the stock of net assets. The whole amount of current income so determined, if so desired can be distributed without impairing the stock of net assets and hence the productive capacity of the business. Its total distribution will not cause subsequent financial problem. To the extent that current income is retained, the stock of net assets is increased. Due to the protection under CCA of the potential continuity of the business entity, through avoidance of its operating capacity being unwittingly eroded, the long term effect would be beneficial to the economy. The real physical asset backing of the entity will increase and thus assure continuing earning potential in the future.

There is a failure to realise that -- "Today's profit is tomorrow's investment and the day after's new jobs."<sup>1</sup> The principal source of investment in business should be internally generated funds, that is to say, retained cash flow. But with inflation this source of fund has been drying up through payment of dividend and higher taxes on exaggerated profit following historic cost accounting. It is vital to the economy that the trend be reversed. If many firms paid out dividends in excess of real profits over a number of years, their weakening condition could only result in instability in the economy. CCA will arrest and reverse this trend, it will prevent dividends being paid unknowingly out of capital, it will force efficiencies and hence increased real profits available for retention. Improved retention of funds will help to make continuing businesses more stable and eliminate the need for them to obtain more equity or loan capital for asset replacement, merely to stay in

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1. D.R. Rickard, "The impact of CCA on company equity and loan capital raisings" The Australian Accountant, March 1977, P.100.

business at existing levels of operating capability. With improvement in future prospects, internal investments will be encouraged, when external funds are required for genuine expansion or loan re-financing, the stronger internal base will aid in obtaining them.

- (3) Liquidity: An important consequence following from the adoption of CCA should be, in most cases, an increased cash flow as a result of basing depreciation charges and cost of sales on current cost. On the assumption that pricing policy, taxation and dividend payments are related to the CCA method, this should lead to an increased flow of internally generated funds by companies to finance new investments in development projects, plant and stock replacement.

As a consequence of a harder and more realistic assessment of capital outlay opportunities by investee companies, efficient companies should be able to pay adequate return to the providers of equity capital and possibly effect earlier replacement of any high cost borrowings. In the medium to long term, viable going concerns should not have to raise new loans and new equity just to re-finance their existing levels of operations, as is taking place at present. It can be argued that under CCA, this greater ability by companies to distribute what profit is declared along with the increased flow of internally generated funds should also lead in the long run to more prosperous companies and thus to the payment of higher dividends, with consequent improved benefits for the investors.

One of the Sandilands committees basic premises is that -- a business is better off under an alternative accounting system which retains increased cash flow but reports lower earnings, than with one which does the opposite. All else being the same, CCA stands in a firm footing than other alternative accounting methods in this respect. Current cost profit reveals the cash flow figure, which the business would have generated in the course of the year had it neither expanded nor contracted the scale of its operations. A liquidity measure of this kind is a useful indicator to have in any accounting measurement process. A firm which has a high current cost profit is not going rapidly broke --- rather it will be able to undertake some positive investment, to make some distributions, to pay some

taxes.<sup>1</sup> CCA will eliminate the need of paying dividends in reality out of capital, after being taxed on apparent accretions to it under historical tax accounting, and then asking the shareholders for re-investment through rights issues in order to maintain operating capability. Equity issues will be for what should have always been their purpose, namely for expansion.

Within reasonable limits, irrespective of the actual tax rates imposed on a CCA calculated taxable income base, the levying of taxes on current cost income should ensure that, where a company has made a profit, pressures on such a company to borrow to pay taxes and dividends are reduced. In the long run, this should make for a healthier industry, from which not only investors but also government revenues will ultimately benefit. As a consequence of this increased flow of internally generated funds to finance new investment, the increase in capital formation should result in a moderate shift of resources to the corporate sector.

One of the major determinants of business investment is the supply of internal funds i.e., 'depreciation funds' and retained profits. The adoption of CCA should help to arrest and reverse the trend of negative company savings,<sup>2</sup> companies which are temporarily unprofitable on a CCA basis are likely to trim their dividend payments and improve their profitability prospects. The supply of internal funds will be substantially increased as economic recovery accelerates and hence facilitate increased investment expenditures. But it should be noted as Richardson committee<sup>3</sup> in New Zealand has pointed that an increased flow of internally generated funds will not, of itself, ensure an increased flow of funds into fixed and working

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1. J.A.Kay, "Inflation accounting -- a review article" The Economic Journal, June 1977, P. 306.
  2. See Tables 2 & 3 in chapter - 1 on company profitability and liquidity situation in U.K. and U.S.A. in recent years.
  3. Report of the Committee of Inquiry into Inflation Accounting, I.L.M. Richardson (Chairman), Wellington, 1976, Para - 26.23.

capital investment. It could, for example, lead to a repayment of high cost borrowing, an accumulation of cash resources and/or an increased dividend distribution. Enterprises must have reasonable confidence concerning the future, before investment will take place. But in making available an increased flow of internally generated funds for most enterprises, CCA should result in an increased proportion of GNP being allocated to capital formation.

The adoption of CCA should encourage business savings and investment by efficient firms who see they have a future in their industries. Going concerns will be more self sufficient in financing their operations as asset replacement expenditure can be financed from revenue recoveries. They will not have to raise new loans and new equity to re-finance their existing level of operations, as may happen following historic cost accounting. Going concern businesses will become financially more stable -- this in turn will improve their ability to make new share issues and to borrow to finance profitable expansion programmes. Firms and the economy are much healthier if firms are self financing at a given scale of operations. The problems and the costs involved in making new share issue in a depressed capital market and of over gearing are then overcome and the state of business confidence which is so essential to economic prosperity will be better maintained. Thus the adoption of CCA should make the economy more self-sustaining.

- (4) Management decisions: In a period of rapidly changing prices, historic cost information is at best of little value to management and at worst is misleading.<sup>1</sup> In their introduction, the Accounting Steering group (popularly known as Morpeth Committee after its Chairman, Douglas Morpeth) emphasised the management accounting aspect of CCA in the following words -- "Management needs up to date information on costs and values for the proper running of the business. The system of CCA described in the exposure draft will help to provide such information in the management accounts of companies and in their published annual accounts."<sup>2</sup>

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1. Report of the Inflation Accounting Committee, F. E. P., Sandilands (chairman), London, HMSO, Cmnd paper 6225, 1975 - Para-723.

2. Introduction by the ASC to ED-18 para-2.

To the extent that CCA represents the company more revealingly, published CCA accounts therefore make this more realistic information available to outside as well as to inside users. In companies where management practice is less sophisticated, the need to separate operating profit from holding gains may be a discipline which leads management to provide itself with more relevant information than it might otherwise have had. CCA may affect the following management policy and decision area:

- (a) Cost control: Economic efficiency is defined as the production of a given output at the least possible cost. For this purpose costs must be measured in terms of the current market costs, of the resources used in production. As relative resource prices change, businesses must adapt their operating techniques as such that a smaller quantity of the now dearer resource is used in production of a given output. In other words, the dearer resource must now be used more intensively than formerly for the business to remain efficient.

With rapid inflation, relative resource prices can change quite rapidly and businesses must keep on adapting their methods of operating in accord with the changing conditions in the factor markets. Inefficiency means that costs are higher than they need be, and hence profits are reduced. Given vigorous competition and/or a depressed product market, inefficiency is a feature which the going concern must avoid. Current cost accounting provides management with relevant and timely information on the current market costs of physical assets owned by the business and together with rate of return on investment data, this puts pressure on management to revise their operating methods in line with current supply prices of resources. Use of out-dated historic cost data removes the pressure on management for improved efficiency and deprives it of relevant costing information. In addition, maintenance of operating capacity enables the business to avoid inefficiency resulting from unplanned use in the scale of its operations.



- (b) Pricing and output policies: A business having some market power can fix either the selling prices of its products and then sell as much as possible at these prices or it can pre-determine its sales volume and then sell this volume at the highest price possible. However, it cannot do both. Whether it adopts either option, information on the current supply prices of its products is required. The current supply price of a product is that price which is necessary to induce and maintain the supply of a product to the market. It covers the current buying prices of all resource input in production plus a normal profit margin. Current cost accounting provides this information to management. The sales revenue which is a consequence of a given pricing policy must take account of the need to generate sufficient cash to finance the on going existence of the company. A going concern will sell products so long as their selling prices exceed or equal the products supply prices and it will expand sales up to the point at which the two are equated in order to maximise profits. Any rise in the current buying prices of resources used by the firm raises the supply price of its product and management must adjust either the selling price or sales volume accordingly.
- (c) Asset investment decisions: Current market price data for asset must be used in making all decisions about fixed asset purchase, retention and disposal, along with present value data following CCA. The 'deprival value' concept underlying in CCA would enlighten management to the fact that assets should be purchased or replaced so long as the present values of expected cash surpluses from their future operations in the business exceed or equal their current buying prices. They should be retained in use so long as their present values

exceed their current selling prices. This last rule indicates when an asset becomes unproductive or obsolete. The same principle applies to analysing the business as a whole -- it is merely a collective asset. The business should continue as a going concern and replace assets as required so long as the present value of the business, which summarise its profit prospects exceeds or equals the current value of its profit prospects. It should continue operations in the short run if its present value is less than current market value of its net assets but exceeds their current realisable prices, while it should cease operations if its present value falls below the current realisable value of its net assets.<sup>1</sup> Current value information is always part of the data required for rational investment and operating decisions; historic cost information is not so relevant.

- (d) Dividend decisions and financial planning: CCA provides a better basis for dividend decision; as the dividends can be paid from profits without impairing the financial viability or productive capacity of the enterprise. Any profits to be retained in the business can be used to finance growth in the scale of operations rather than merely to replace assets used up in operations because the measure of profit automatically provides the financial capacity to replace assets. Historic cost accounting on the other hand can lead to dividend decisions which erode the physical capital of the business. "While on a historic cost concept of profit and capital companies may have been 'covering' their dividends apparently satisfactorily, on the concept of profit and capital companies may have been 'covering' their dividends apparently satisfactorily, on the concept of profit and capital underlying CCA a significant number of companies have probably been

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1. A. D. Barton, 'The macro-economic effects of current cost accounting' The Australian Accountant, March 1977, P. 86.

making dividend distributions out of capital in recent years. Such companies have not been maintaining the 'value to the business' of their assets. Erosion of capital in this sense is, we believe, an important matter" -- observed the Sandilands committee<sup>1</sup>. CCA would improve the accuracy of long range forecasting, and more accurate estimates of additional financial requirements would be made. This will lead to improved financial planning and financial structure decisions. The internal allocation of resources and distribution policy in so far as these are affected by the distinction between operating profit and holding gains, can help better financial planning. When holding gains are not shown separately, the trend figure of profits may fail to disclose the point at which operating performance has begun to decline or improve and necessary management action may not take place. A manufacturing company, whose gains consist largely of holding gains arising on its assets, needs to think very carefully about its future, and in the long term its prospects may be considerably worse than a similar company whose gains consist largely of 'operating profit'. CCA by distinguishing between 'operating profit' and 'holding gains' will provide important information to which management will need to re-act.

- (e) Responsibility accounting: For a successful operation of the responsibility accounting concept, where decisions and resources are delegated to responsibility points or centres -- the performance of the responsibility centre (point) will need to be judged by the rate of return on the funds invested in the point (centre) concerned. In order to evaluate or make useful comparisons with other such centres (points) it is important to distinguish between the operating gains and holding gains

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1. Sandilands report, op.cit., Para-733.

generated by each centre in order to distinguish the profits arising from the operating process of a company from the gains arising through increases in the value of fixed assets or stock.

Following ED-18, the working life of fixed assets has to be reviewed regularly<sup>1</sup> and valuation has to be put on a fully written-off asset<sup>2</sup>. As such CCA would provide realistic depreciation charges, and it may happen as Barton<sup>3</sup> envisaged "The divisional manager who for years has been turning in good profit results because much of his plant has been written-off will need to understand why all of a sudden his profitability takes a nose-dive, as values are attributed to the previously fully depreciated plant".

The realistic depreciation charge following CCA would be very much helpful in Inter-firm comparison of industries. In Bangladesh, for example, Jute industry is nationalised and different firms have different vintages of machines. Following CCA, as each individual firm would have to charge depreciation not on historic cost but on estimated replacement cost basis, (which would be similar for different firms) the calculation of operating profit and other comparative figures could be on a similar scale and as such evaluation and policy formulation would be much more realistic and effective.

- (f) Forecasting and budgeting: As the result of recording changes in the market prices of assets as they occur, management can analyse the extent and frequency of such price changes and identify those assets for which the greatest changes occur.

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1. ED-18, op.cit., Para-10.
  2. ASC, The Inflation Accounting Steering Group's Guidance Manual on Current Cost Accounting, Tolley and ICAEW, 1976 Para-7.25.
  3. A.D. Barton, op.cit., P.87.

This information is of great assistance in all long range forecasting required for the formulation of business strategies and investment projects. CCA enables more accurate forecasts of future capital requirements and cash budgeting. Historic cost accounting provides only intermittent and spasmodic information about asset prices for budgeting purposes.

- (5) Information dissemination: One of the advantages that should be obtained by a move away from historic cost accounting to CCA, is increased dissemination of information for users of accounts. Earlier<sup>1</sup> we have followed that there are many, other than shareholders and management, who have reasonable right to information -- creditors, government, employees, to mention a few. CCA accounts would be of most use because of its superior comparability between entities. CCA represent an attempt to draw up accounts in terms of the current costs and values appropriate to the business concerned at the date of account. The results of different companies drawn up on this basis would be comparable in terms of current costs and values. The use of different indices and methods of valuation appropriate to each company is what makes the results comparable<sup>2</sup>. Among other things, return on capital employed will again become a credible criterion -- as comparisons are made meaningful, following CCA on asset bases and capital consumption charged on a uniform and similar convention.
- (6) Macro economic effects: Macro economic figures are national aggregates, which reflect the sum of the figure for all individual firms. What they show, therefore, depends upon the actions of the individual firms. In general, following CCA industry would operate more efficiently and there would be a more efficient allocation of scarce capital and physical resources between firms. The declining efficiency of some firms could not be hidden by the asset holding gains component of historic cost income. Costs expressed in current prices would enable decisions, which are

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1. In chapter -4

2. Sandiland report, op.cit., para-489.

more correct, to be made concerning tariffs, government price controls and wage awards in various industries. National income statistics would be more accurate and thus permit greater efficiency in the management of the nation.

Developing countries are heavily dependent upon imports for much of the capital and semi-manufactured goods. It would be advantageous to the Balance of Payments if the current costs of imported goods and not the historical costs, were passed on to consumers, since generally speaking, this should tend to decrease demand for those items. There may be changes in export patterns of many enterprises because lines previously thought to be profitable may under CCA, be shown to be un-economic.

The state of the economy as a whole stands to improve. At present, accountants tend to overstate profits when prices are rising and thus add to business confidence and the inflationary spiral. This occurs through company expansion, and spending of higher dividends by shareholders. Chambers observed: -- "High apparent or reported profits, thought to be real profits, tend to force up the prices of company shares. Share prices are widely regarded as indicative of the confidence of the business community and the buoyancy of the economy. Investors are ready to invest and companies are willing to expand. But high apparent profits also prompt workers to demand higher wages- and they may prompt suppliers to raise prices and customers to take longer credit. If the appearance of higher profitability is illusory however, all these pressures may bear heavily on companies which are poorly geared to meet them. Liquidity strains and crises may follow; the tail of every boom period is marked by liquidations and receiverships of companies which grew too fast for safety and stability"<sup>1</sup>.

The use of historic cost profit measurement has greatly exaggerated

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1. R.J. Chambers, Accounting for inflation -- Methods and Problems, University of Sydney, 1975, p.7.

the extent of profits in demand inflation and losses in recessions and distorted their timing. This has caused unwarranted expansions during boom periods and added to inflation; and conversely in recession the size of apparent losses has caused excessive cutbacks in production and employment and has thereby aggravated depressions. These exaggeration in profits are caused by the inclusion of holding gains and losses in historic cost profit. CCA excludes such gains and losses from current income. The greater stability of current income over the trade cycle should reduce substantially the incentive for business boom or bust; and thereby encourage greater stability in business operations and employment and the general level of prices over the long term.

A study of profitability of U.S. industry over the 20 year period (1929-'48) illustrates how accounting losses were exaggerated in the 1930s depression and profits were overstated in the modest post war boom. The large losses incurred in the depression and the gains made in the boom were to a large extent holding losses and gains rather than operating ones. Business pricing, output and investment policies on operating rather than on accounting profits would have substantially reduced the scale of the great depression.<sup>1</sup> The production of current information can assist in the creation of the right business climate at the right time and this is most important in an economy.

Elimination of the holding gains and losses from the measure of income should reduce the rate of business expansion during inflationary boom periods and curtail the extent of business gloom and cutbacks during a recession. As a consequence, the price level would become more stable and there would be less unemployment over the trade cycle and less disruption to industry. This factor again improves the efficiency of the economy. The problem of serious malnutrition in industry would be substantially mitigated

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1. E.O. Edwards and P.W. Bell, The Theory and Measurement of Business Income, University of California press, 1961, p. 228.

in a depressed economy. Hence for these reasons CCA should enable industry and the economy to function more efficiently.

Some industries in developing countries get protection from foreign competition through higher tariff and/or import restrictions, following the argument, "Nurse the baby, care the child and free the adult." CCA financial information would be proper and relevant in this regard and such information would also be more realistic for use in quantifying levels of protection. It will help any assistance commission in sorting out the viable from the non viable ones. The Commission will be able to distinguish more clearly between efficient and inefficient manufacturers and hence to make more informed recommendations. In that it will improve the effectiveness of industry and make it more competitive. The disclosure of higher operating costs under CCA will increase the pressure by some manufacturing industries for increased protection from overseas competition. It is hoped that the introduction of CCA should not lead to higher tariff levels as the use of the CCA will lead to improved industrial efficiency and hence enable efficient manufacturers to compete more effectively against foreign imports.<sup>1</sup>

In the next stage of the appraisal, we would be discussing the specific problem areas, their implications, and also probable modifications to suit the requirements of developing economies.

- (1) Complexity: "It is claimed that the essence of CCA is simple. That is true, but its implementation is extremely complex. If it is not complex then, why does the exposure draft run to 93 pages and why is there a need for Guidance Manual of over 400 pages? why are some of the areas dealt with in ED-18, specifically qualified as being 'interim only' and requiring modifications in the light of experience? and why have the guidelines on some of the most

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1. Barton, op. cit., P. 87.



important proposals of ED-18 been left deliberately vague"<sup>1</sup> -- is an example of the complexity foreseen in accounting practice following the publication of ED-18 in U.K. and Ireland. At a special meeting of the ICAEW on 6th July 1977, there was a 54.1% vote<sup>2</sup> in favour of the following motion:-

"That the members of the ICAEW do not wish any system of current cost accounting to be made compulsory."

Attack on ED-18 was made among other things that it was too complex and trying to achieve too much in too short a time period. Following the voting, Reid<sup>3</sup> observed that, "Undoubtedly some of the support for the anti-current cost accounting resolution is a specific criticism of the complexity of ED-18, some of it represents a reaction against accounting standards in general, and some reflects a basic distrust of any method of accounting other than historical cost system."

There are countless obstacles to the introduction of a radical accounting system. Any deviation from the familiar conventional accounting method would entail complexity and newer problems to tackle in the process of implementation. It has to be admitted that in some cases no easy solution to a complex problem may readily be found out and it should follow a path of gradual development and standardization. A completely satisfactory system of inflation accounting may be unattainable; there must in any case be a series of compromises between theoretical merit and practicability. To quote Sandilands, "The important criterion for judging any system of accounting is the extent to which it meets

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1. A.K. Burns, "CCA - an illegitimate concept" Accountancy-Ireland, February 1977, p. 27.
  2. ICAEW, Special Meeting Held at Moorgate Place on 6th July, 1977, London Palantype organisation, 1977, p. 60.
  3. W.Reid, "Picking up the pieces of CCA," The Financial Times, 13th July 1977, p. 15.

the requirement for information of users of accounts. This judgment should not be affected by the fact that the principles of value accounting have not been subject of the same detailed practical research and promulgation of standards and guidelines as those of historic cost accounting."<sup>1</sup> It has taken many years for the accounting profession to develop acceptable compromise solutions to the more complex problems of conventional accounting. In meeting the new problems raised by a system of current costs and values, it is necessary to accept that compromise solutions are typical of accounting practice and that it is better in the interests of meeting the information requirement of users of accounts to be approximately 'right' than be precisely 'wrong' in financial reporting.

Accounting is a means towards an end and not an end in itself. Any method of accounting is essentially an information system, designed to produce relevant and useful information about the enterprise and the economic reality. The truth though being that, it is not how we account that really alters the course of the economy, but the underlying economic realities which we are attempting to report upon. If these underlying realities are unfairly reported in financial statements, the enterprise and the economy suffer and fails to accord and act with realities. As economic relevance is of primary importance, if changes in the environment of business and economy is taking place, it means that existing structures to provide relevant information is inadequate and it must be changed.

If we agree on the basic premise that historic cost accounting in a period of persistent inflation is useless for information needs of users of accounts and devoid economic reality, a search has to be

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1. Sandilands report, op. cit., Para-463.

made for accounting methods to accommodate for inflation in satisfying users needs. Our analysis of inflationary process in developing countries<sup>1</sup> has revealed that -- inflation would be a way of life for foreseeable future as inflation has ramifications as 'growth' and 'structural' factor in economic development process. So, if developing countries has to 'live with inflation', accommodation has to be made in accounting structure to reveal the evil effects of inflation and portray economic realities behind accounting figures.

In our discussion of accounting information requirement in developing nations in chapter-4, we have seen that the relevant economic information is increasingly becoming the important factor in various macro economic analysis like economic planning, resource allocation, capital market development etc. In our study it has been stressed that accounting has to follow a 'system approach' i. e. , it is subservient to overall economic system. Accountants as such have to pay more attention to the macro economic consequences of their accounting statements and can no longer satisfy the public interest by performing the technical tasks of accounting and auditing devoid of economic reality.

We could repeat as earlier stated -- "In the acquisition of accounting knowledge the developing countries possess the same advantage of being late comers that they have in obtaining productive techniques which were perfected earlier in the developed nations."<sup>2</sup> Developing countries would not need to set up 'Sandilands' or 'Morpeth' committees to build up the basic framework of current cost accounting -- it is already there. They could draw upon authoritative guidance from the extensive literature built upon such methods as well learn from the experiments and mistakes in the process of their implementation. Following Cowan<sup>3</sup> "Our profession

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1. Chapter - 2 pp. 35-45
  2. Chapter- 1 pp. 20-21
  3. T.K. Cowan, "ED-14: Accounting in terms of current costs and values --- objectives, objections, obstacles" Accountants Journal, November 1976, p. 353.

in New Zealand has had very limited resources to devote to research into the conceptual soundness and the practicability of the alternative departures from historical cost based accounting that have been put forward. It has followed the lead of the U.K., the U.S.A., Canada and Australia..." -- developing countries likewise can save on resources and research work to implement value based method there.

From Appendix-A of this chapter (development of value based accounting all over the world) it is very much in evidence that, value based accounting is going to be the accounting system of major English speaking countries around the world. This would have an important impact on the accounting thinking of developing nations. In our earlier discussion<sup>1</sup> of the necessity of inflation accounting in developing countries, we have seen that accounting development in any region is bound to influence other regions and would be carried through multi-national corporations, international audit firms and most importantly nowadays, through the sanction of IASC to standardise and unify the accounting system of different member countries.<sup>2</sup> The fact that developing countries get extensive private capital, loan and venture fund<sup>3</sup> from investors abroad; these investors with initiation of value based accounting in their home countries would like to see such development for risk, profitability and alternative prospect judgment of their invested capital necessitates development of accounting practices in that direction.

It cannot be denied that to move away from historic cost to value accounting would need over all change in the education, organisation and development of accounting profession in that direction. It would be time consuming, expensive and disruptive. But if the basic consensus is that during persistent high inflation, as Table - 5 in p.34 shows it to be in most developing countries, historic cost accounting is useless and has to be substituted by a new improved

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1. Chapter - 1 pp 22-27
  2. See chapter- 1 p. 21
  3. See chapter - 1 pp.24- 25 discussion.

method -- value based accounting presents ideal goal in that respect. As any new method of accounting would cause upheaval in information generating process, it is better to follow the method which presents economic reality and capable of satisfying majority of users needs and moreover the way international accounting development is taking place. A less disruptive and less comprehensive method, which may adjust for some of the effects of inflation should not be chosen as temporary measure again to be abandoned for a comprehensive one. What we would like to see in developing countries is that accounting development should follow the economic reality and ultimate development and not any intermediate objective. The objective of the proposed standard on value accounting should be one which gives more useful information to users, while remaining practicable, acceptable and reasonably simple. "A great deal of careful thought and work has gone into establishing ways of adjusting historical cost accounts to allow for price changes. The danger to be avoided is that small areas of real difficulty are used as a basis for arguing that nothing should be done at all" -- observation by Reid<sup>1</sup> seems to be the appropriate answer to the allegation that value accounting is complex.

- (2) Cost: Without doubt, CCA would be the most costly one so far we have seen of the alternatives to historic cost accounting. The extra skills required to implement CCA will in a great many cases only be available from professional accountancy firms; there is also the effort and cost of obtaining annually the prices for a large volume of items -- all these would add to the cost of record keeping and audit fees.

One of our criteria of judging the alternative accounting systems has been the economic cost of introducing the method of inflation

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1. Reid, Op. cit., p.15.

accounting. CCA is obviously in a dis-advantageous position in this respect. But if we look at the cost-benefit analysis of the various methods as done in any economic analysis, where there are alternative prospects, the relevant point would be whether in terms of information dissemination and economic utility, it is relatively costlier than others. We should not be thinking only in terms of cost but in terms of 'value for money' of alternative proposals. In the debate on CCA at ICAEW, one commentator said -- "I have also been told it is going to cost a lot of money and presumably Luca Pacioli had the same problem with double entry, I suppose it cost twice as much [then]"<sup>1</sup>

As it is evident that the sheer effort of obtaining price data for various items of assets would add to the major cost of valuation process, ways to reduce cost on implementation of CCA should be sought out, if it is to be economically implemented in developing countries. As we have followed in our discussion<sup>2</sup> that governments has to play a dominant role in the economic growth process in developing countries -- government services has to be extended in the field of collection and construction of index numbers of major categories of assets and raw materials. The use of index numbers for estimating value will play an important role in the formulation and development of any standard accounting practice.

Valuation of individual items of fixed assets and stocks will in many cases impose an unacceptable and unnecessary burden on individual enterprises. The government can come forward to aid individual enterprises to make CCA economic and practicable. Following the Sandilands proposals<sup>3</sup> fixed assets and stocks may be

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1. Special meeting, Op. Cit., P.34.
  2. Chapter- 2 pp. 35-37
  3. Sandilands report, op.cit., para-576.

adjusted using price indices which are related to the specific assets held. Valuation facilities for property are not very much extensive in many developing countries, in this field also government can come forward for training and extending facilities.

Obviously, government's effort to alleviate the increased cost of account keeping of individual firms would keep the cost of switch-over to CCA within reasonable limit.

- (3) Kindling inflation: One of the terms of reference of the Sandilands committee has been --" the need to restrain inflation in the United Kingdom"<sup>1</sup>. The effect of adoption of any inflation accounting method upon the rate of inflation in the economy is of prime importance. As accounting information will have repercussions in various spheres of economic life, an inflation accounting method which accommodates but at the same time accelerates the rate of inflation itself -- is very much undesirable. The adoption of CCA with its consequent disclosure of higher operating costs, (through higher cost of sales and depreciation charges), will encourage firms to raise product selling prices so as to re-coup the higher costs. In turn this kindles inflation and makes CCA undesirable from this point of view.

Some price increases will undoubtedly follow the introduction of CCA, especially in the short term. This will follow as a consequence of the disclosure of higher operating costs and as firms endeavour to maintain or even improve business profitability. However, the over all extent of such price rises is likely to be small for various reasons:-

- (1) Many companies which know their real situations will not need to change their pricing policies when adopting CCA;
- (2) Higher stock prices will normally only be brought forward by a few months;

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1. Sandilands report, op. cit., Terms of reference p. iv.

- (3) The spreading of the extra depreciation charges in most cases will have only a small impact on unit product prices;
- (4) Reduced consumer demand or import competition will provide some brake on the prices of domestically produced goods;
- (5) Rationalisation of product lines and even dis-investment in un-profitable activities are possible and even likely alternatives to price increases.
- (6) Cost increases could easily be absorbed as excess capacity is used up and productivity improves;
- (7) Finally, in the long term, a more efficient industrial structure could result from the use of CCA and keep selling prices below what they might otherwise be.<sup>1</sup>

Taking up the issue of accelerating inflation by adoption of CCA, Kirk<sup>2</sup> states that 'If we are saying that it is wrong to introduce CCA -- if the effect will be inflationary, what we are really saying is that we must expect companies to continue to sell products at prices which are showing a hopelessly inadequate return. When present taxing and dividend policies are taken into account this return will often be inadequate to prevent the erosion of the real capital base that represents the operating capability of the company. Surely the only prognosis of such a situation is the progressive collapse of the private sector as resources of entities run dry and become exhausted. . . . The introduction of CCA on the other hand will warn the 'marginal' company more quickly of the problem and will give it time to move to diversify --- or even liquidate voluntarily. It will see problems before it is forced down the drain.'

The Richardson committee in New Zealand suggested that the adoption of CCA for price and profit controls is likely to lead to:-

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1. Barton, op. cit., P. 88.
  2. G.S.Kirk, 'Current cost accounting developments in Australia' The Chartered Accountant in Australia, April 1977, p. 59.



- (1) An initial price adjustment by some industries, so as to give an adequate profit margin on a current cost basis. This adjustment could be a once and for all change, or preferably, spread over several years.
- (2) No price change at all in some other industries. Industries which are over-capitalised or inefficient may not be able to pass 'cost increases' on to consumers and may have to seek a return to profitability through rationalisation and disinvestment.
- (3) Some change in the pattern of community response to subsequent price changes. Pricing on a current cost basis removes what could be regarded as the "buffer" provided by existing stocks where pricing is based on historical cost.

Under current cost accounting increased and decreased costs will be passed into prices more quickly. Where prices are increasing but the rate of increase is slowing down, this slowing down will be reflected in prices more quickly than when historical cost pricing is used.<sup>1</sup>

We can conclude by saying that, there are likely to be some price increases following the introduction of CCA but this adverse effect is far out-weighed by the advantages following from the change and in the long run the improved efficiency of the economy resulting from the use of CCA will keep selling prices below what they would have been otherwise. "In the long run an accounting system which clearly indicates the effects of inflation and leads to a greater understanding of the extent of the problems caused by it is likely to be of greater assistance in bringing inflation under control than one which does not clearly indicate its effects" --- observed the Sandilands committee.<sup>2</sup>

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1. Richardson report, op.cit., para-26.27.
  2. Sandilands report, op.cit., para 752.

It could be theoretically argued that, adoption of CCA in the long run would help to lower down the inflation rate. The argument being that, in the long run CCA should lead wage and salary demands becoming more rational being based on facts, this in turn should dampen industrial unrest and thus eventually reduce the rate of inflation. Though the Sandilands committee did not refute or accept this proposition --- the stand being taken that, the relative depressed profitability portrayed in CCA accounts could be effectively presented as a basis of wage and salary negotiations in terms of economic reality.<sup>1</sup>

- (4) Reduced profitability: Since CCA charges against revenue in times of inflation costs which are greater than those which would arise under historic cost, the conversion from a historic cost to a CCA basis of profit calculation will in most cases reduce reported profits substantially and in some cases quite dramatically. Although the underlying facts will not change, the overall recorded profitability will be reduced by virtue of the substantially higher charges for depreciation and for increases in the replacement cost of stocks. One estimate<sup>2</sup> suggests that current cost profit for the year 1976-'77 in U.K. would have been half the level of conventional profits, with higher depreciation and cost of sales accounting for the reduction.

The following table shows the sectoral effect of conversion to CCA estimated by Gibbs<sup>3</sup> for pre-tax profits in U.K. industries for the financial year ending 1976.

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1. Ibid, Para-749.
  2. M. Gibbs et al, "ED-18 - Morpeth's Proposals" Philips and Drew Review, - 1976 - P. 2
  3. Martin Gibbs, "CCA and the investor" Trident, March 1977, P. 8

TABLE -21

The effect of CCA on different industry groups in U.K.

(Pre-tax Profit for 1976)

SECTOR	DECREASE
1. Banks	10%
2. Contractors	25
3. Stores	30
4. Tobacco	35
5. Building materials	45
6. Chemicals	45
7. Office equipment	50
8. Wines and spirits	50
9. Breweries	50
10. Food manufacturing	55
11. Miscellaneous (unclassified)	55
12. Miscellaneous (capital goods)	55
13. Food retailing	60
14. Oils	60
15. General Engineering	60
16. Light Electronics	60
17. Electricals	65
18. Motors	70
19. Entertainment and Catering	70
20. Paper and Packaging	75
21. Household goods	85
22. Heavy Engineering	85
23. Shipping	100
24. Textiles	175
Total Industrial and Commercial	<hr/> 53% (Decrease)

It is evident from the above table that CCA can be expected to have profound effects on the apparent relative profitability of various sectors of commerce and industry. Profitability in different sector of the economy will have divergent prospects following its nature of business and overall stock and depreciation to profit ratio. Prospects are that profitability in the financial sector will not change very much.

The service and labour intensive industries will also show relatively little impact on profitability terms. The effect appears most unfavourable to highly capital intensive manufacturing industries. As most capital intensive manufacturing companies have slow stock turnover rate and high depreciation charges --- following CCA they will have to charge higher operating costs and reduce profit substantially. So, capital intensive industries are likely to show a proportionately greater fall in profits than labour intensive industries. There is likely to be a shift of profitability as recorded by company's accounts from the industrial sector to the service, from highly capitalised industries e.g., chemical to more labour oriented industries e.g. construction.<sup>1</sup> This is certainly an area which is crucial and it is inevitable that there will be reaction against those capital intensive slow stock-turn companies which seem likely to see the biggest fall in their CCA operating profit.

From the above discussion of relative changes in profitability of different sector of industry following CCA-- the important point emerges that -- profitability of capital intensive manufacturing industries will be gloomy. We have followed that developing countries are by definition short of capital. To have a balanced growth, the stress in the initial stage of industrial development should be on heavy and capital manufacturing industries. This aspect of depressed profitability of capital intensive manufacturing industries accepting

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1. K.J. Sharp, "Current cost accounting" The International Accountant, Volume 47 No. 1 - 1977, p.15.

CCA method for developing economies needs closer attention. Before trying to get an outlet for suggesting ways to improve profitability figure in CCA method, let us first follow the key position of capital intensive manufacturing industries in developing economies.

The importance of the need to increase industrial investment and protection of the existing one cannot be over stressed in the context of developing economies. Capital intensive industries like iron and steel manufacturing chemical, heavy engineering machine building etc. forms the 'industrial infra-structure' and often termed as 'primary industry' on which the future industrial development will build up. Along with high capital expenditure, these primary industries are also characterised by long 'gestation period' in the sense that they take long period to be fully operative and profitable. The rate of capital accumulation through primary industries would largely determine the quantity of capital per worker and hence productivity per head in developing economies. In so far an accounting system encourages greater investment in primary industries, it would increase the industrial capacity and productivity in the economy.

The capital market is naturally an important means of allocating resources in an economy. The ability of companies to raise equity and loan capital to finance existing and new ventures is a crucial factor for a particular sector of the economy. The capital market system revolves around the premises of profitability. The most attractive sectors would be the one, which investment decision makers finds profitable in the short and long run. A knowledge of past and prospective results will be useful in forming expectations about future profitability of an economic sector. Shareholders and investors' involvement would be significantly revolve around the profitability shown in the accounts of a particular sector of the economy. Most significant decision criterion as such would be attached to changes in profitability in decision making process following a change in method of conventional accounting.

The problem with CCA's gloomy view of performance is that, external finance for investment may not be so readily available on account of generally diminished prospects in the manufacturing sector. This has also special reference to equity finance since present share holders will be asked to accept the full burden of financing future replacement investment by way of a formal restriction on profits currently earned and potentially available for distribution. In our earlier discussion we have followed that, the high inflationary situation in Latin American countries has shown that new investments were mostly attracted towards the speculative, real estate and construction industries as these showed healthy profitability, whereas manufacturing industries failed to attract sufficient investment with lower normal operating profit.<sup>1</sup>

It is these considerations which suggest the need, not only to modify the CCA concept to take account of a company's financing and asset structure, but also to provide additional indicators of performance to record achievements; before any adjustments are made to maintain the capital of the business in the context of developing economies. This does not de-mean the importance of capital maintenance, but a way to promote in the long run a more balanced industrial structure with prospect of developing manufacturing industries and receiving an enhanced flow of capital in the productive sector of the economy. It is an essential calculation for the purpose of determining profits potentially available for distribution. Without this adjustment as one author has said -- "There is a danger that CCA will promote too narrow a view of the function of business activity i.e., the capacity to reproduce operations in their current form to the exclusion of aspects such as growth, liquidity, solvency and adaptability to new situations in a dynamic environment."<sup>2</sup> Standish also sees the issue

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1. Chapter 1 p. 9.
  2. S.J. Gray, "The defects of ED-18 and the way ahead for CCA" The Accountants Magazine, July 1977, P. 292.

as -- "The political pressure on business and by association, the accounting profession, are basically concerned with wealth distribution, an issue for which profit measures are an important data source. Whatever may be the advantage of CCA for managerial decision making or for security pricing in the capital market, CCA should be seen primarily as an instrument of persuasion in the political market place about the desirability and conditions of corporate survival."<sup>1</sup>

- (5) Value ascertainment: The introduction of values in financial statements has been resisted because of the fear that they lead to subjectivity in accounts and has been one of the major stumbling block in the way of general acceptance of value based accounting. It is highly desirable that accounts should be as objective as possible in the sense that the figures in them should be capable of independent verification. The process of valuation would inevitably be more subjective than factful historic cost.<sup>2</sup> The important question not considered in such objections to the use of values is whether the objective information provided by the historical cost financial statements is more useful than some alternative subjective information, ED-18 had been very sharp in saying that -- "It has been argued that CCA will increase the degree of subjectivity in annual accounts. If this is so, then this is part of the price that has to be paid to make accounts more relevant in a period of rapidly changing costs."<sup>3</sup>

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1. Peter E.M. Standish, "How can financial reporting survive Morpeth" Accountancy, September 1977, p.41.
  2. Sandilands observation on this point is "...it must be emphasised that the modifications to and different methods of treatment allowed within the historic cost principle have substantially increased the element of subjectivity in practice exercised in drawing up conventional accounts in their existing form. It is incorrect to suggest that existing accounts are entirely 'objective' while value accounting is entirely 'subjective' (Para-461).
  3. ED-18, op. cit., para-14.

In the context of development of value based accounting method in developing countries, certain aspects of asset valuation needs careful consideration, particularly net present value as a criterion of judging value to the business, modern equivalent asset, and 'changes in technology' in official price indices. The criterion of 'net present value' as a valuation method has been attacked on many grounds. In Australian, New Zealand and South African official pronouncement, this criterion of judging value to the business has been avoided. The need for valuing assets on this basis may arise in minority of cases. In case of other 'difficult' assets where a significant element of judgement is involved ways have to be found out to tackle the exceptional problems. In our introductory discussion, we have followed that due to abundance of low cost labour, scarcity of capital, low income of the people, older technology may be as profitable as the improved ones.<sup>1</sup> Many fixed assets would be in operation long after the expiry of their economic life, a proper basis and guideline would be needed for calculation of modern equivalent asset to reflect changes in technology in official price indices.

- (6) Practicability: It is obvious that the implementation of a value based accounting would face formidable obstacles. The accountants themselves are a barrier. The sheer effort of extending the CCA education would need a great drive. Efforts has to be made to educate all who will use CCA, of its nature and implication. It is a great dilemma --- we have followed in our discussion of accounting profession in developing countries,<sup>2</sup> that they are very under-developed and unsophisticated, but at the same time we are going to support a system which is apparently difficult to implement though not so difficult to understand in principle.

Now the fundamental issue being that, an accommodation to inflation has to be made in developing economies as they have to live with it for foreseeable future -- then an appropriate general strategy for

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1. Chapter 1 P. 27  
2. Chapter 3 P. 51-53



this should be to identify the distortions or inequities to which inflation leads and search being made for an inflation accounting method to portray the economic reality to rectify the distortions. As earlier said, there are innumerable issues with any method of inflation accounting and not only with CCA --- to move away from the familiar conventional historic cost accounting. As such, any method of inflation accounting and not only CCA would require a great drive to be practicable. The clear choice would be the one which portrays economic reality, being in tune with international thinking and which leads to the desirable goal of diminishing inflation rate. The question of cost and practicability should be properly weighted before supporting a method of intermediary nature, devoid of portraying economic reality fully and which may need to be changed eventually to value based accounting.

The most important issue being that value based accounting is utmost required for protection of capital resources of the economy and has much to offer for future development, and developing countries has to live with inflation in foreseeable future. Sandilands committee in its deliberation of CCA insisted that it is 'evolutionary rather than revolutionary'<sup>1</sup>, CCA should be seen as a long term goal for developing economies. They should approach the method in an evolutionary way --- consolidating its implementation through understanding and move step by step. The accounting profession should come forward to take a great drive to educate accountants and users of accounts in that direction. As in many countries the introduction of Metric system of currency and measurement has been preceded by a long planned process of education and public understanding, so that accounting curriculum of prospective accountants can be oriented towards CCA and the post qualification education of accountants also can be moulded in that direction. Well qualified and experienced accountants can be brought together to

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1. Sandilands report, op.cit., Para-524.

act as a 'think tank' and advice indigenous accountants on matters of practical difficulty. As Reid warned <sup>1</sup> "...small areas of real difficulty are used as a basis for arguing that nothing should be done at all" though in the context of CCA in U.K. and Ireland -- same may be said about the developing countries.

The developing economies would be fortunate in one way that with initiation of value accounting in developed countries, the guidance manual, standards, study guides, formats, company accounts and expertise through international auditing firms would ease much of their difficulties in implementation of value based accounting.

But they should be on guard that, the principles and practices are not accepted without the test of particular needs and environment of the economy.

#### Conclusion

The introduction of CCA will certainly have an impact on the economy of developing countries. The major long term macro economic results will be to encourage more industrial investments, improved efficiency, improved allocation of physical and financial resources and encourage greater stability of the economy. In turn, these will promote the achievement of the major economic policy objective of reduced inflation, greater employment and economic growth, greater stability in the balance of payments and over all higher standards of living.

A system of value accounting has many important advantages for the users of accounts. It provides necessary financial information for maintenance of a firm's production capacity, the efficient management of the going concern, optimum pricing and dividend policy, forecasting and budgeting, financial planning and a whole range of asset investment decisions. The credibility of financial statements should be improved as CCA provides reliable measures of income, financial position and rate of return on investment.

The immediate impact of value accounting will be to cause some disruption in industry and capital market. Less efficient firms and segments of operations

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1. Reid, Op. Cit. P.15.

will be hit most by CCA and some will be forced to close down more quickly than would otherwise be the case. This would cause some temporary disruption and re-adjustment. However, the efficient firms will be encouraged to expand and this expansion should quickly absorb the resources without causing needless unemployment and business bankruptcy. There is sufficient absorption capacity in a developing economy as it has just started its industrial development process.

The adoption of CCA would facilitate government policy making for the economy. The Government would have better information available about the actual state of the economy, on such things for example, as real investment, profits, company tax rates and capital maintenance. It will be better able to formulate its monetary and fiscal policies in a form which enables the achievement of the policy objectives. High inflation rates and an unstable economy are very costly to business and to workers --- investment is discouraged and unemployment becomes widespread.

Finally, now is a most opportune time to introduce CCA. The misleading nature of historic cost income and capital maintenance measurements have been highlighted and the need for change is recognised. An expanding economy and a declining inflation rate will minimise the short term disruptive effects of switching over to value accounting. The higher operating costs disclosed could easily be absorbed by an expanding developing economy.

Appendix - A

World-wide development of value accounting

Country	Capital maintenance	Valuation basis	Holding gains (loss)	Monetary items
Australia - Provisional Standard, October - 1976	Operating capability	Current cost - market	Transferred to Revaluation Reserve	No treatment
Canada - Discussion paper, August - 1976	General purchasing power	RC and NRV - market price on indices	Separate disclosure required	Monetary assets at DCF value
Germany - Standard October - 1975	Productive capacity of equity financed assets	RC for equity financed assets - from indices	No separate disclosure	No treatment
New Zealand - ED-14 August - 1976	Operating capability	Current cost - market price on indices	Transferred to revaluation reserve	Effect on equity stated in note
South Africa - Discussion paper, January - 1975	General Purchasing power and Productive Capacity	RC - Official indices	Transferred to revaluation reserve	Purchasing power equivalent of equity transferred to Revaluation reserve
U.K. and Ireland - ED-18, November - 1976	Substance or scale of business	Value to the business - market price, internal or official indices. Professional valuation of land & buildings	At discretion of directors	Effect on equity stated in note
U.S.A. - SEC rules March - 1976	Current productive capacity	RC (selected items) - Official or internal indices	No separate disclosure	No treatment

Chapter 12: Inflation accounting in Latin America

Latin America seems to be the natural habitat of inflation. At one time or another, almost every type of inflation has thrived somewhere in the region. There have been slow to mild inflation, intermediate inflation, run away inflation, chronic inflation, galloping inflation, hyper inflation, stagflation. Table 5 in page 34 would highlight the extent of inflation persisting in Latin American countries for many years. In such an atmosphere of persistent high inflation extending several decades, the economic as well as accounting system had to be modified to co-habit with inflation in those countries. In this chapter we would be looking at the accounting innovations brought into practice in major Latin American countries. In analysing the inflation accounting methods, we would be looking for the broad economic perspective, the environmental settings and see how much relevant the experience should be for other developing countries in Asia and Africa.

ARGENTINA

In Argentina, officially sanctioned accounting principles vary between different geographical areas.<sup>1</sup> In practice of inflation accounting there are differences between the city and the province of Buenos Aires and the rest of the country. We discuss their approach separately.

Buenos Aires: Effective with financial years ending on 30th September 1976, the independent auditors of Argentine companies having principal offices in the Federal capital of Buenos Aires are now obliged to take exception in their reports when the companies do not include certain supplementary current purchasing power disclosures in their published accounts. Effective with financial years ended on 1st July 1977, the independent auditors of companies domiciled in the province of Buenos Aires incur the same obligation.<sup>2</sup>

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1. In each province and the federal capital, a Professional Council of Economic Sciences has the authority to require its members, the great majority of whom are public accountants, to abide by technical recommendations issued by the accounting profession. These Councils are empowered by law to regulate the profession in their respective jurisdictions --- as such accounting practice may differ on geographical regional basis.
  2. "Argentina -- supplementary CPP disclosures required "World Accounting Report, August 1977, p.23.

The required supplementary disclosures may take the form of a second column in the basic financial statements, an extensive foot-note or a complementary set of financial statements. The system is based on an accounting principle issued in 1972 by the Argentine Technical Institute of Public Accountants. Current purchasing power restatement takes the form of a comprehensive restatement of the historic cost of non-monetary items, expressed in terms of current purchasing power. When items are first restated in this way, the adjustments are to be shown in the profit and loss account as separate 'non operating profit (loss)' item. In most instances, companies use the whole sale price index (exclusive of agricultural component). It is anticipated that following one or two years of experience with supplementary disclosures in Buenos Aires, the authoritative accounting bodies --- or perhaps even the government by means of legislation --- may require that all future financial statements in Argentina be issued on a current purchasing power basis.<sup>1</sup>

Rest of Argentina: In the rest of Argentina, financial statements issued are required to be based on historic cost except for adjusting fixed asset values by the use of a general price index. Under a 1972 'Updating of Account values' law, all Argentine companies, wherever domiciled, must restate their fixed assets and depreciation by a general wholesale price index published periodically by the Securities Commission. The revalued fixed assets are recorded in the conventional financial statements and annual depreciation is calculated on the revised amount. This revised depreciation charge is allowed as a deduction in computing the profit assessable for tax. Furthermore, if the company, because of its size, is exempted from compulsory revaluation of fixed assets it may, nevertheless, adjust depreciation for tax purposes. The surplus on revaluation is not regarded as a profit, available to shareholders, and the company's legal ability to distribute dividends is not affected by the revaluation except to the extent that the increased depreciation on the revalued assets must be charged against profits before arriving at the amount available for dividend. The revaluations are normally mentioned in the notes to the accounts.

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1. Ibid p. 23

BRAZIL

Inflation accounting in Brazil is a part of the broad based 'monetary correction' (indexation) system developed there to live with high persistent inflation. The essential features of inflation accounting in Brazil are:-

- (i) Revaluation of all fixed assets and related depreciation is considered a generally accepted accounting principle in Brazil. The monetary restatement of all fixed assets and related depreciation is computed by the use of the co-efficients established by the Ministry of Planning and a single index is used for all fixed assets. The Ministry of Planning co-efficients, which are published annually are intended to reflect the internal rate of inflation that occurred during the year prior to their publication and these co-efficients are generally in line with the wholesale price index.

The annual provision for depreciation is computed on the revalued amount of the fixed assets. Accumulated depreciation is also revalued. A footnote to the balance sheet shows historic cost and the monetary correction. The resulting credit corresponding to the net fixed asset write up is used:

- (a) first, to increase the carrying value of any foreign loans obtained to finance fixed assets addition and
- (b) second, to form part of the shareholders investment.

A Brazilian company usually increases its capital stock with these reserves by issuing additional shares in the form of stock dividends or for the increase of nominal values of existing shares.<sup>1</sup> Brazilian law requires that all commercial and industrial companies revalue their fixed assets within four months of the end of their fiscal year. As the official co-efficients are available only once a year, in most cases, the price level adjustment of fixed assets is recorded one year in arrears. Furthermore, as the co-efficient available at any point of time refers to the preceding financial year, no recognition is given to the effect of inflation during the current year. The revaluation of historic cost lags behind, as acquisitions of one year are not revalued until the second succeeding year. For instance, a company

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1. George Graham, "The Brazilian response to inflation -- monetary correction", Trident, Summer 1976, p.19.

with a calendar fiscal year, that acquired an asset in 1973 will not record revaluation on that acquisition in 1974. The first revaluation of the 1973 acquisition will have to be recorded within the first four months of 1975, provided the item is still on hand and recorded as part of the fixed assets at 31st December 1974.<sup>1</sup>

- (ii) A yearly provision is made to maintain working capital. The provision is calculated by applying a general index issued by the Government -- but it is not the same index that is used for fixed asset revaluation purposes. It is calculated at the start of the year. Items are not adjusted individually; the index is applied to the net overall value of working capital held at the beginning of the year. Only one index is used for the working capital adjustment for all types of companies.

There are some procedural guidelines as to how working capital is to be determined in Brazilian income tax law. Working capital for this purpose is considered to be all assets, except fixed assets, deferred charges, investment in shares of other companies and other assets having their own monetary correction clauses (such as adjustable treasury bonds or receivables stated in dollars) less all liabilities except foreign currency loans for financing fixed assets additions. Inventories although not monetary asset as such, are included in the calculation of working capital. In other words working capital provision comprises of net monetary assets and inventory.<sup>2</sup> The entries are a charge against income and a credit to a working capital maintenance reserve. The reserve is considered a capital account and is classified in the shareholders investment section of the balance sheet. It is frequently incorporated formally into capital by the issuance of new shares.<sup>3</sup>

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1. Martin Altman, "The Brazilian experiment --- accounting for inflation in Brazil" The Accountant, 5th December 1974 p. 751.
  2. Robert W. Comer, "Brazilian price level accounting" Management Accounting (NAA) October 1975 p. 42.
  3. Ibid p. 42.



There are tax implications of maintaining working capital in Brazil. A tax benefit is obtained equal to the amount of the provision of working capital determined at the beginning of the year. The amount of tax deduction is limited to the income for the year and if the calculation of working capital results in a negative amount, the 'negative provision' must be charged to retained earnings or a capital surplus account and credited to taxable income. If there are no surplus accounts available, the amount is carried to a deferred charge account for absorption by reserves created by future provisions.

- (iii) An adjustment of monetary assets and liabilities contractually subject to monetary corrections; e. g. , long and medium term loans. The corrected amounts are reported in the balance sheet and the amount of the correction is included in the profit and loss account.

As stated earlier, inflation accounting is a part of the whole system of 'Monetary correction' in Brazil. A number of devices were engineered and gradually implanted in the economic system since 1964 to neutralise the main evils of inflation. The essential components of the system are:-

- (a) Generalised indexation: Nominal values of such instruments as bond principals, savings accounts, mortgage payments, rentals, medium and long term acceptance papers etc. , are indexed by formulas employing recent inflation rates. As a counter part, medium and long term loans are also indexed.
- (b) The wage formula: This formula, enacted by law ensures that wage re-adjustments be spaced at intervals of one year. The wage increases are based on re-composition of the average real wage of the preceding 12 months, plus a productivity coefficient estimated by the Government to represent the average increase in the productivity of the economy; and finally a coefficient representing the inflationary residual, that is half of the expected rate of inflation in the ensuing 12 months period.

- (c) Tax reform: Taxes, profits and depreciation allowances are computed on capital assets revalued according to official indices of monetary correction. The same principle applies to the tax exemption threshold of low income groups.
- (d) The mini devaluation system (the 'crawling peg'): Parallel to the internal monetary correction, there is a periodic devaluation of exchange rate, at uncertain intervals and in mini steps, so as to avoid speculations in foreign currency. In the 'crawling peg' system the rate of the Cruzeiro to foreign currencies, in particular the Dollar has been adjusted ranging from 0.6% to 2.7% at about once every six weeks providing a more or less continuous devaluation.
- (e) The saving bias: Both for anti-inflationary and development purposes, the system is biased in the direction of stimulating savings.
- (f) Free enterprise: Although there are exceptions (public utilities and oil industry in particular) most of the economy is in private hands. Taxation is low (30%) and foreign investment is much encouraged.

Economists, businessmen and government planners throughout the world have watched with considerable astonishment; how Brazil has in recent years responded to the very real menace of inflation. In his address to the London Stock Exchange, Roberto de Oliveira Campos, one of the architects of the 'Monetary correction' system said --- "If the Brazilians have not the merit of inventing indexation, they discovered the need for cohabitation with inflation and acted rather boldly to generalise its application, in an effort to convert sin into virtue." <sup>1</sup>

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1. Inflation in Brazil -- the Principles of Monetary Correction, London Stock Exchange, The Chairman's lectures (1st) 1974.

The Brazilian 'economic miracle' can be highlighted with the following table comparing the inflation and economic growth rate in Brazil with that of U.S.A.

Table -22

Inflation and growth : United States compared with Brazil

Year	United States		Brazil	
	Inflation	Growth	Inflation	Growth
1964	1.6%	5.5%	91.9%	2.9%
1965	1.8	6.3	34.5	2.7
1966	2.8	6.5	38.8	5.1
1967	3.2	2.6	24.3	4.8
1968	4.0	4.7	25.4	9.3
1969	4.8	2.7	20.2	9.0
1970	5.5	(0.5)	19.2	9.5
1971	4.7	2.7	19.8	11.1
1972	3.0	6.4	15.5	10.4
1973	6.2	5.3	15.7	11.4
1974	11.0	(1.8)	35.0	10.0
1975	9.1	(2.0)	30.5	4.2
Average	4.8	3.2	30.9	7.5

Source:- United Nations Statistical Yearbook - various issues.

The Brazilian economic miracle is quite impressive. The rate of inflation abated gradually, from near 100% in early 1964 to 15% to 20% in the 1970s. The real success however lies not so much in the deceleration of inflation, but in reconciling it with a very high rate of growth -- over 10% in real terms for several years. Even in 1974 when the rest of the world was forced into low growth by the oil crisis, Brazil managed to expand its

economy by 10%. In 1975 when OECD member countries<sup>1</sup> recorded negative growth, Brazil managed 4.2% growth<sup>2</sup>. On several different tests -- deceleration of inflation, acceleration of real growth, export expansion and reserve accumulation, the economic performance of Brazil is quite remarkable.

Brazilian inflation accounting system has proved useful in co-habiting with inflation which has been mandatory since 1964. In an evaluation of Brazilian inflation accounting system as a model for other developing countries, the discussion should centre around the broad 'monetary correction' system -- as inflation accounting is a part of the whole package. The impact of only inflation accounting on the Brazilian economy cannot otherwise be fully appreciated. The extent to which Brazilian economic and accounting experiment is exportable and what has been the role and character of indexation in economic performance is discussed in the following paragraphs.

As costs and prices increased at a very high rate over a long period, it became desirable in the national interest to introduce indexation in order to preserve the basis of economic life. Indexation helped in preventing bottlenecks in the financial sphere by preserving the supply of savings and in physical output, by preserving the capability of the corporate and public sector to invest in basic manufacturing and infra structural service essential for overall economic survival and expansion. Government deliberately created persistent high inflation and institutionalised it through indexation to achieve faster economic growth. The decision to learn to live with inflation through indexation had been necessitated by administrations attempt to maximise economic growth without undergoing the strains of suppressing inflation. The motto being 'with a bigger pie everyone benefits!'<sup>3</sup>

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1. Belgium, Canada, Denmark, France, Germany, Italy, Ireland, Japan, Netherlands, Norway, Sweden, U.K. and U.S.A.
  2. Victor Keegan "Brazil - Battle of imports and exports mars impressive growth" The Guardian, 4th May 1976 p.13)
  3. Raymond F. DeVoe, "Under the Southern cross -- the role of 'Monetary adjustment' in Brazil's economic miracle" Financial Analysts Journal, September-October 1974 p.40.

Now whether a monetary correction system for other developing countries are at all needed or could be made to work depends largely on the overall level of dis-satisfaction with inflation in terms of loss on savings, reduced standards of living and pure economic survival. Indexation is in no way designed primarily to reduce the rate of inflation but to neutralise some or most of the distortions caused by it. Its effectiveness in helping to control inflation lies in the curtailment of 'inflationary expectations' that is, the benefits or losses that some sectors or individuals tend to expect from an inflationary situation. "The condition in Brazil which made generalised indexation both possible and desirable were chronic inflation which created deeply ingrained expectations that prices would continue to rise; indexation was a way to discipline those expectations and avoid dis-orderly impact on different sectors of the economy".<sup>1</sup>

A question often posed is whether indexation conflict with overall social, political and economic objectives: since such a policy may rather stimulate and perpetuate rather than apply brakes on inflation. Indexation is an admission that everything else has failed and that politicians and economists would not do anything to attack the root causes of inflation. Indexation tantamount to absolute surrender to inflation and it assumes that accepting an evil removes it as a problem. Indexation, again is no formula for economic growth --- "The Brazilian development boom has required several co-ordinated pieces of policy to increase savings, rationalise management and render the economy more extrovert and competitive through the promotion of exports and the absorption of foreign capital and technology".<sup>2</sup> Whether circumstances in other countries can meet these pre-conditions and are eager to institutionalise inflation is a matter of public policy of the government there.

Another important point in relation to Brazilian monetary correction is that it has been formulated and administered by authoritarian military government. In the political viability, indexation has been shock absorbers

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1 Campos, Op cit.

2 Ibid.

that prevented inflation from becoming explosive. "In Brazil, suppression of inflation is based on Draconian measures, including elimination of agitators. A military dictatorship has greatly facilitated keeping wage rates under restraint. Because no one votes, there are no promises to be made or kept".<sup>1</sup> "Wage and price controls administered with an 'off with their heads' attitude has intimidated both business and labour and restrained inflation to some extent."<sup>2</sup>

The construction and inclusion of items in an index is always a controversial matter. It appears that the 'monetary correction' in Brazil may be quite misleading in relation to the real rate of inflation --- as it has been observed to be based on controlled prices and often eliminated rapidly escalating items from the index. The measure of inflation, used for 'monetary correction' (except for corporate sector and rentals) is a general wholesale price index, which includes only commodities, although services account for more than half of income originating in the economy in Brazil.<sup>3</sup> The comparable figure of services included in U.K. RPI is 31.8%.<sup>4</sup> "A 'Statistical Watergate' appears to be a fact of life with Brazilian index. With most prices rigidly controlled, indicators are virtually meaningless. Certain items, particularly in the food area, are not subject to controls, so these have to be treated differently. Recently when the prices of milk, rice and meat doubled the solution was simple --- they were dropped from the cost of living indicator. Of course, this does help keep the reported rates of inflation down to respectable levels."<sup>5</sup>

This should be an important lesson for enterprises and accounting theoretician in developing countries. Though we are not suggesting that governments will temper with index construction to keep them presentable or serve their purpose, the important point is that if indexation or adjustment is done through a single index for all assets and for all companies, it may give scope or chance for the government to manipulate

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1 DeVoe, op cit p.41.

2 Ibid p.87.

3 Albert Fishlow, "Indexing Brazilian style: inflation without tears?" Brookings Papers on Economic Activity, No 1 - 1974 p. 263

4 "Inflation" Money Which? December 1974 p.190.

5 DeVoe. op cit p.40.

or direct the indices to suit its purpose. A single index for all assets and all companies would be an important tool in the hands of government agencies to direct or manipulate the swing of index to favour its policies. The use of several specific indices for different assets and the choice of a comparison with market prices could be an important safeguard for enterprises so as not to be vulnerable to be playing in the hands of government agencies.

It is not possible to anticipate what part inflation accounting played in overall 'monetary correction' to achieve economic miracle in Brazil. But evidently inflation accounting system certainly improved significantly the survival and growth of corporate sector in Brazil. Maintenance of capital in indexed form were necessary for enterprise survival, not least in reducing taxation to a reasonable level. The essential feature of Brazilian inflation accounting system can be broken into two parts --- indexation of fixed assets and indexation of working capital component of the enterprise. Revaluation of fixed assets is permitted and normal accounting practice in many developed and developing countries.<sup>1</sup> The Brazilian approach makes it annual and compulsory through the use of government supplied coefficients.

One aspect of Brazilian inflation accounting as noted by Simonsen<sup>2</sup> is that resource allocation has been mis-guided as general price level 'indexation' manufacture exaggerated growth trends by showing high profit in certain sectors of the economy resulting from holding and monetary gains, which are not segregated from normal operating profit. New investments were mostly attracted towards the speculative, real estate, inventory investment, luxury housing or other less productive uses --- and manufacturing industries failed to attract sufficient investment with lower normal operating profit.

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1. See chapter 7 on Partial adjustment methods.
  2. H. Simonsen, Management under Inflation; the Brazilian Experience, London, Economist Intelligence unit, 1975, p. 4-6.

The basic innovation in Brazilian inflation accounting is that of adjustment of working capital which should be a useful lesson for other developing countries to follow. The maintenance of working capital results in restricting profit that otherwise might have been distributed had they been determined only through adjusting fixed assets component of the enterprise. The ability to maintain working capital in a period of inflation is of vital importance in the integrated effort to survive and prosper. If businesses can retain funds for working capital, they would be able to replace the existing stock as well as finance expansionary stock. It should however, be noted as Baxter <sup>1</sup>, has pointed out, as provision is made in Brazil for the maintenance of working capital calculated at the beginning of the year, the adjustment is imprecise as it does not allow for changes in the asset size during the year.

In conclusion, we can say that, the Brazilian system of inflation accounting forms part of a national strategy for lessening the harmful effects of inflation and involves indexed 'monetary correction' of the entire economy. Inflation accounting practice is straightforward and simple --- "All its fans claim that it can be worked even by illiterate; and certainly its book-keeping entries are few." <sup>2</sup> The basic innovation of working capital maintenance should be an important lesson for other developing countries and could form an integrated part of an inflation accounting system. But the adoption of an indexed accounting system in Brazilian model involving fixed and working capital adjustment roughly through government supplied general index would clearly raise significant questions of public and economic policy of the nation and of equity of treatment as between the corporate and other sectors of the economy.

#### CHILE

In 1973 and 1974, Chile experienced rates of inflation of 508% and 376% respectively. The very high rate of inflation led to the formulation of

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1. W.T. Baxter, "Inflation accounting in Brazil and Chile" Accountancy Age, 17th June 1977, p. 19.
  2. Ibid p. 19.



'monetary correction' system as in Brazil. In 1975 a comprehensive system of monetary correction in financial reporting was initiated for commercial, industrial, mining and other enterprises. In this system of indexation, tax payers who submit income tax returns based on financial statements, are required to restate their owners' equity and assets and liabilities, other than net monetary assets at the end of each year.

Under the comprehensive inflation accounting system, all non-monetary items in the accounts are to be restated -- but not all in the same way. Invested capital, roughly equivalent to the stockholders' equity or to the proprietorship in the case of a limited liability partnership, to be restated by the proportionate increase in the consumer price index. The amount of the revaluation is charged against income, via a monetary correction account, and credited to the 'invested capital revaluation reserve; which is not distributable in the form of dividends but can be used to issue stock dividends, or allocated proportionately to capital and reserves.

The opening amounts of fixed assets, including investments and intangibles, and the additions during the year are restated by the proportionate increase in the consumer index. The revaluation surplus is credited to the profit and loss account, again via the 'monetary correction' account. Depreciation is calculated on the high closing values.

Inventories are revalued at replacement costs and the surplus is dealt with as income through the monetary correction account. The revaluation of stock-in-trade at the end of each financial year is achieved by applying the highest purchase price actually incurred by the company during the last half year to the number of units on hand. For goods, for which no invoices or purchase agreements are available for the last half year, the direct cost is to be adjusted by the change in the consumer price index during the last half year or year, depending on whether the goods were acquired during the first half of the year or were carried forward from the preceding year. For manufactured goods, current replacement cost will be arrived at by valuing raw material in the manner described above and the cost of labour according to wage rates during the most recent month of production.

Assets and liabilities expressed in foreign currency or contractually subject to monetary correction, e. g. indexed linked loans, are revalued to their equivalent at the closing rate of exchange or corrected value and the amounts of the revaluation transferred to the monetary correction account.

The effect of these adjustments is to restate all non-monetary balance sheet items at their new values and to charge or credit the net amount of the monetary correction account to the profit and loss account for both accounting and tax purposes. Since the restatements and revaluations are to be entered in a 'monetary correction account' the final net income or loss for the financial year is found by adding or subtracting the balance in the 'monetary correction account' to the net income or loss before such adjustments. The published report shows the financial position by using three columns -- for historical costs, the adjustments and the corrected figures.

#### MEXICO

In September 1975, the Instituto Mexicano de Contadores Publicos published an exposure draft, "Proposal for restatement of financial statements for changes in the general price level." The exposure draft requires that all companies present financial statements stated in terms of general purchasing power at the end of the period. These financial statements are supplementary to the historic cost financial statements. A national index of consumer prices should be used in the conversion process.

With devaluation of Peso on 31st August 1976, the Accounting Principles Committee of the Mexican Institute made a recommendation 'Peso devaluation and inflation' (issued November 1976). The recommendation was issued to emphasise the need to restate financial information to reflect the effect of changing prices. It strongly urged restatement of fixed assets and related depreciation by determining current costs through independent

appraisals or by applying a general price index to historic cost accounts.<sup>1</sup>

#### PERU

There is no consistent basis of inflation accounting in Peru other than occasional revaluations of fixed assets. The income tax rules permit revaluations of fixed assets but additional depreciation charges are not normally allowable for tax on voluntary revaluations. Occasional government regulations make compulsory the revaluations of assets and sometimes the revaluations permitted is in line with the devaluation of the Peruvian Sol vis-a-vis the U.S. Dollar.<sup>2</sup> Peruvian companies exceeding a certain size are obliged to have their annual financial statements audited. In accordance with the related statutory regulations and practice, the basis of asset valuation and other accounting practices must be disclosed in the financial statements, thus details of revaluations are normally available.

#### URUGUAY

Revaluations of fixed assets is a normal accepted practice in Uruguay. Prior to December 1973, fixed assets were revalued on a biennial basis --- presently they are revalued annually. The revaluation co-efficients are based on the cost of living indices published by the government. All business entities are included in the revaluation legislation which is mandatory for tax computations. For accounting purposes the revaluation is optional, but has been adopted as a current practice in most financial statements, including those of non-profit making organisations. In certain instances, auditors have qualified their reports because companies have failed to revalue their fixed assets using the prescribed co-efficients.

A company's legal ability to distribute dividends is affected by revaluations only to the extent that the increased depreciation on the revalued asset must be charged against profits under the normal depreciation proceed when the revaluations have been recorded in the

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1. R.W. Scapens, The treatment of inflation in the published accounts of companies in overseas countries, ICAEW, Research committee occasional paper no-1 1975 p. 59.

2. Ibid p. 69.

annual financial statements. From time to time, provisions for the maintenance of working capital have been allowed as deductions from taxable income. This provision has normally been computed by specified percentages of opening or closing inventories. Such provision normally implies a restriction of dividends although these could be declared out of the reserves created by such revaluations, provided the income taxes plus retroactive surcharges are paid thereon.

The revaluation methods and their effects are normally disclosed in the notes to the financial statements. These notes describe the date of the revaluation, the amount of the increment and treatment of the corresponding capital surplus, and also the effect of the revaluation on the depreciation charges for the year.

### Conclusion

The above survey of inflation accounting practices in Latin American countries shows that the historic cost accounts have to be abandoned in the wake of persistent high inflation. Obviously, inflation accounting developed there has been useful to the survival and growth of corporate sector.

The Latin American practice of inflation accounting may on a very broad basis be divided into two groups. First, sporadic or systematic revaluation of mostly fixed assets to update them in line with general price level changes and secondly partial or comprehensive fixed and current assets adjustment based on a broad general index.

The occasional or recurring revaluation of fixed assets have limited scope of portraying economic reality and forms a partial inflation adjustment method. Other developed and developing countries as we followed in chapter 7 also occasionally or regularly revalue the fixed asset component in the balance sheet.

The more full blooded inflation accounting approach has been made under the broad 'monetary correction' in Brazil and Chile. Assuming that other developing countries are not going to implement 'monetary correction' in their economy; the integrated Brazilian or Chilean system would be of limited use. Without monetary correction, we doubt whether the Brazilian

or Chilean system of inflation accounting can be taken as useful model for other developing countries as a comprehensive accounting system.

But one important lesson for other developing countries to be learnt from Brazil; would be to formulate an integrated inflation accounting method which takes into consideration the working capital component in adjustment for inflation.

One aspect of Brazilian inflation accounting should catch attention of other developing countries. As no segregation is made of normal operating gain and that of holding gains in general price level indexation, resource allocation may be mis-directed. We stressed throughout this study that an inflation accounting system should be conducive of better resource allocation in the economy for future industrial development.

Another fact that a government supplied general index for all companies could be deliberately tempered by government agencies should be an eye opener for other developing countries. Use of several specific indices with choice of comparing actual market price would be an important safeguard in this respect.

Inflation accounting is not at a dead end in Latin American countries. They are changing and adapting with change in internal circumstances and would change with international thinking on inflation accounting. The world stampede towards current value accounting may not be ignored there to portray more economic reality and dissemination of information for users requirement.

If inflation accounting is not seen essentially as a tool to reduce income tax and curtail dividend payment, the information need of a wider group has to be catered to. This is not possible as the limited scope of information dissemination permitted following the model of any Latin American inflation accounting development. The approach should be towards development of a more comprehensive method of inflation accounting.

Chapter 13: Choice of an inflation accounting method  
for developing countries

The experience of inflationary conditions in recent years has highlighted the deficiencies of historic cost accounting. Conventional financial statements have lost much of their significance and seriously distorts the position of the business enterprise. In the context of developing economies, the erosion of capital, distribution of inflationary profit and deterioration of liquidity situation threatens the long term viability and short term contraction of operations of the business enterprises. The inaccurate and inappropriate historic cost information also hampers and mis-directs the resource allocation process in developing economies.

In recent years, various inflation accounting methods have been widely discussed as alternatives to historic cost accounts to accommodate for inflation. In a very general sense it can be said that there are advantages and disadvantages of each of these inflation accounting methods. In chapters 7 to 11, we have evaluated the partial adjustment, cash flow accounting, continuously contemporary accounting, current purchasing power accounting and current cost accounting methods on the basis of criteria established in chapter 6; which are maintenance of capital, macro economic effects, resource allocation, liquidity, information dissemination, practicability and economy. The partial adjustment methods like acceleration or additional depreciation charges, revaluation of fixed assets, additional reserve maintenance etc; though widely practised in developing countries, they are not based on any systematic approach to maintain the existing operating capabilities of the enterprise. The partial adjustment methods are favoured in most cases for the essential simplicity and minimum of changes they require. The fact that partial adjustment methods concentrate on a single financial statement, normally the profit and loss account and that they may lull many users of the financial statements into a false sense of security without actually accounting for the overall distortions created by inflation in an enterprise -- necessitates that we look for more comprehensive inflation accounting methods.

Cash flow accounting has very important qualities like being extremely simple,

most objective, capable of directing proper resource allocation, effective management decision etc., and which could short circuit the many knotty problem of conventional cash cum accrual basis accounting. But any accounting method based solely on cash inflow and outflow would have serious limitations. First, following cash flow accounting, there could be no financial statement showing the asset structure, financial liabilities and other multitude of financial changes taking place in an enterprise -- it would limit the use of accounting statement to portray the economic reality of business entity. Secondly, liquidity situation is an important concern in a period of inflation, but when it becomes the only criteria of an accounting system -- it becomes self-defeating. Shareholders and management must be tempted to distribute in cash form, the huge cash surpluses (which would be generated without charge of depreciation of any kind) without an adequate provision for maintenance of the underlying capital structure or scale of operations in the entity. This in turn would jeopardize the whole economy as shareholders would chase scarce goods and services with cash dividends. Moreover, if for simplicity and practicability developing countries go along with cash flow accounting -- they would be very much in seclusion from the international financial markets, as accounting is the 'language of business'. So, we would recommend cash forecasting as an important part of any accounting system but not the sole financial statement.

The continuously contemporary accounting (CoCoA), though a value based accounting system, it is severely constrained by its narrow focus only on a single base of value determination -- i.e., by its relevance to assumed realisable value.

A current purchasing power (CPP) accounting method may be preferable to taking the accounts at face value. But CPP accounting introduces a different unit of measurement, It is not a long-term solution to the problems faced in using historic cost accounts in a period of inflation -- a CPP based accounting statement would always be constrained by the deficiencies of the basic historic cost to which they are attached. The current purchasing power maintenance

of shareholder's equity is of dubious usefulness and in the context of developing countries, important resource allocation decision would be mis-directed and liquidity situation deteriorated.

The Latin American practice in inflation accounting has highlighted the close connection between an economic and an accounting system sub-servient thereto. Much interest has been shown in the Brazilian inflation accounting practice as a part of 'economic miracle' taking place there. The obvious problem with Brazilian type of inflation accounting as a model for other developing countries is that -- it cannot be taken apart from the wider 'monetary correction' system of which it is an essential part.

In the evaluation process, it has been revealed that a system of value based accounting like CCA as pronounced in U.K. and Ireland would meet in far greater degree the information requirement of developing countries than any other inflation accounting method. Though to be economic and practicable in the context of developing economies there need to be a series of compromises and adaption -- the basic principle and framework could be that of CCA.

The objective of an accounting method is to meet the relevant information needs of users of financial statements in a realistic way. In chapter-4, we reviewed the requirements for information of users of accounts both in micro and macro economic level in the context of developing economies. We showed that accounts are used for many purposes and that a useful figure of profit is important to the majority of users of accounts. In our discussion in the context of developing economies it was clear that, information should be disseminated both in micro and macro level of the economy. An accounting method has to be favoured in the context of developing countries which through preparing general purpose financial statements, can reflect the needs of various kinds of users of accounts in micro and macro economic level.

The underlying concept in CCA is that, in measuring the performance and position of an enterprise, the financial statements should reflect the economic concept of profit, as being the amount which is left after having maintained intact the operating capacity of the enterprise --- has much relevance for the protection of productive capacity of the enterprises in developing economies. We believe that the most useful basis of measurement of assets as well as to reflect operating profit and capital maintenance is current cost accounting. The current cost



operating profit (loss) of the enterprise is the difference between the enterprise's earnings from providing goods and services and the current cost of the inputs used or expended by the enterprise in generating these earnings. It is this amount, which in terms of the well offness concept in economic income, should be regarded as the primary measure of profit of the enterprise for the year.

Developing countries are short in productive capital, so whatever limited capital they may have, an inflation accounting method should help to ensure that at least same level of output and services could be produced out of it. Inflation accounting in such a situation should delineate properly the part of profit which could be distributed without impairing the productive capacity of the economic entity. The capital maintenance concept underlying current cost accounting is that of maintaining intact the productive capacity of the business --- as such it is the system which has very much relevance to the requirement of developing economies. The operating profit of the enterprise following current cost accounting would be the amount which can be paid in tax and to the providers of equity capital without impairing the operating capacity of the enterprise. Current cost accounting alone would provide:

- (a) A calculation of operating profit of the enterprise, in which, items are expressed in current terms.
- (b) A calculation of the profit which could be distributed and still maintain the operating capacity of the enterprise.
- (c) A measurement of assets at their current cost to the enterprise as a continuing entity.

There can be little prospect of real economic growth in developing economies until resources are distributed and utilised more efficiently. Sustained economic growth is dependent upon more efficient utilisation of productive resources, a shift from expenditure on consumption to savings, and an adequate return being made by providers of equity capital. The adoption of current cost accounting should have an important and beneficial long run influence on the allocation of economic resources in developing economies.

Current cost accounting should be of significant benefit to the capital market both individual and institutional investors will have more relevant and comparable information available as a basis for decision making. In the long term, the improved allocation of resources and the superior decision making information produced by current cost accounting should result in a more productive and efficient business sector sustaining economic growth.

Current cost accounting proposals result in the provision of a more up to date measure of the resources and results of operations of an enterprise. The effect is to preserve operating or productive capacity and their provisions are identified as providing the users of financial statements with information essential to an assessment of the past performance and future prospect of an enterprise.

In our discussion in chapter 4 , we have followed that -- the resource allocation decisions of investors, management and governments are all affected by accounting information. These allocations process and their effect on economic development have been described in detail in chapter 4 . It is to be noted here that the significance of the use of current cost and values in business accounts is that it enables a more proper evaluation of the real results of operations as well as better information concerning the extent to which the real capital position of companies has been eroded, maintained or increased over time. This permit income to be compared to capital resources utilised in the generation of that income and the calculation of a rate of return in economic terms. These calculations, assist proper allocation of resources by management of company resources, and by investors, to those companies and industries which provide the highest economic use of investment capital.

In the macro economic level, national accounting information would also be benefited by current cost accounting. The conceptual unity between national income accounting and private enterprise external reporting would be realised with current cost accounting. Government would also be provided information useful to its own allocation decisions.

Appendix A to chapter- 11 shows that a move towards current cost accounting is very much in evidence all over the world. We envisage that current cost

accounting would become the basic and universally practised accounting method in the near future. So, it is very much essential that inflation accounting introduced in developing countries should be equally accepted and understood in other countries. It is impossible in the present day for one country or region to operate in isolation from other regions and countries. It is essential that the figures produced by complying with any inflation accounting method should be capable of being recognised world wide. Value based accounting involve the extraction and use of information not formerly required in developing economies, the experience gained in the transition process world wide would help much to overcome the problem of implementation of standards and guidelines in developing economies.

We are convinced that, the utility which would be provided to all users of financial information by some form of current values as the basis of measurement in the accounting process, should be recognised in developing economies. The major point is that the high rate of inflation which is typical in many developing nations, the measurement of company operations in terms of current values as opposed to historic cost has important implications for the vital resource allocation decisions, corporate survival and other aspect of economic development and these would be greatly facilitated by adoption of current cost accounting. The case for adopting a method of current cost accounting for information dissemination and economic development far outweighs the initial difficulties to be faced and increased cost in the process of implementation of such an inflation accounting method.

To formulate an approach to inflation accounting based on current cost principles, in the context of developing economies, there need to be a series of compromises. These being necessitated by the fact, as we have followed in chapter 2, that in developing countries accounting profession is not well developed, there are no proper valuation facilities and various specific indices are non existent. Compromises have to be made in:-

- (1) The approach should be simple and understood by a wide range of users of accounts, but at the same time useful to management and financial specialists.
- (2) Balance theoretical exactitude and practicality. The pursuit of a more accurate solution has to be weighted against the cost and effort of attaining it.

- (3) To formulate valuation principles which are simple and easy to implement but at the same time capable of independent verification.
- (4) Meet as far as possible, the strongly held but diverging views of different methods and approaches based on current cost accounting which have been argued in the accounting world.
- (5) Provide a common basis for the preparation of both external and management accounts.
- (6) Permit continuing development towards greater accuracy over time but initially involve relatively few adjustments.
- (7) Portray economic reality as a means of enhancing economic growth and better utilisation of economic resources but without excessive expenditure.

Chapter 14: Recommendation of an inflation accounting approach in the context of developing economies -- discussion

The purpose of this discussion is to outline the conceptual framework and implementational aspects of important issues in current cost accounting which is favoured as an approach to inflation accounting in the context of developing economies. Before we embark upon suggesting a final approach, the underlying principles and various alternatives open would be carefully evaluated to find the best approach to suit the environment of developing economies.

Capital maintenance and profit measurement:

The appropriate approach for developing economies would be to adopt the capital maintenance and profit measurement concept favoured by the Sandilands committee i.e., "Profit for the year is regarded as any gains arising during the year which may be distributed after charging for the 'value' of the company's assets consumed during the year. Capital is regarded as the value to the business of the company's assets".<sup>1</sup> This concept regards capital not as the physical assets of the company nor as the amount of purchasing power invested in the assets but as the 'value' of the assets to the company. No sums are regarded as profit until a charge has been made representing that part of the value of the company's assets which has been consumed during the year. There is no provision for the replacement of fixed assets. The objective is to strike profit after charging for the value of assets consumed. It is not concerned with the replacement of assets. Recognition is given to the normal attempts of a business to achieve continuity of its operations in the form of maintaining operating capability by ensuring that charges to revenue for assets consumed are based upon a current input price.

The value to the business of an asset is to be equated with the amount of the loss suffered by the company concerned if the asset is lost or destroyed. In practical valuation terms, value to the business is defined as "... the

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1. Report of the Inflation Accounting Committee, F.E.P. Sandilands (Chairman), London, HMSO, Cmnd Paper 6225, para.128.

value of an asset to a company is its written down current replacement cost (current purchase price), except in situations where the written down current replacement cost is higher than both the 'economic value' and the net reliable value, in which case the value of this to the company is the 'economic value' or the net realisable value, whichever is the higher."<sup>1</sup>

Though we are satisfied that the appropriate choice for developing economies is to follow the current cost accounting concept of profit and capital maintenance, but there are some areas which need closer study to be most useful on that context. The value to the business as stated above needs to be modified in the context of developing economies to meet the dominant requirement that valuation rules should be simpler, easy to implement and practicable.

In current cost accounting, following the 'deprival' principle<sup>2</sup> the theoretical alternatives for asset valuation are replacement cost (RC), net realisable value (NRV) and present value (PV). Following deprival principle in CCA, all these three valuation bases i.e., RC, NRV and PV has to be evaluated to find out the right base of valuation of a particular asset. In particular circumstances PV would be the current base for asset valuation.

As our predominant concern is that valuation rules should be simpler and practicable in the context of developing economies --- we find that PV represent the most difficult base of valuation. Normally PV estimates of asset value would seldom be required, the base is insufficiently objective and calls for much refinement in forecasting and discount calculations, which we are apprehensive to be deterrant to the practicability of CCA in the context of developing economies. PV as a base of valuation has always been a controversial area in value based accounting. The Sandilands Committee called it 'notoriously difficult',<sup>3</sup> the Morpeth Committee prescribed it for only exceptional cases and in Australia<sup>4</sup> and in New Zealand<sup>5</sup> official

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1. Ibid, para. 219.

2. "The 'value to the business' of an asset is to be equated with the amount of the loss suffered by the company concerned if the asset is lost or destroyed" - Sandilands report, para. 529.

3. Sandilands report, Op, cit, para. 582.

4. The Institute of Chartered Accountants in Australia and Australian Society of Accountants, Statement of Provisional Accounting Standards - Current Cost Accounting, Canberra 1976.

5. New Zealand Society of Accountants, Accounting in Terms of Current Costs and Values, Wellington, 1976.

pronouncements, it has been abandoned altogether.

As we would prefer to eschew PV for practical reasons, the deprival principle underlying CCA would not hold true, which needs consideration of all the three bases of valuation. Nevertheless, we would favour that assets should be shown at a valuation without taking PV as a valuation base. This could be done through the principle of 'continuation or termination of use' of an asset's service potential in near future. A going concern business to carry on its normal operations needs assets to be replaced. Assets representing operating capability has to be replaced, so that the appropriate base to value existing assets required to be carried in business is to be valued at RC. But in certain cases, certain assets or stock in trade need not be replaced as they represent surplus or excess capacity to the enterprise. For these assets and stock items, the appropriate value is NRV. In other words, to permit valuation to be properly related to the expected role of the particular asset in the entity's operations in the foreseeable future, the criteria for asset valuation would be 'continuing use' or 'termination of use' of an asset's service potentiality.

Following the above discussion, we would recommend that the value to the business of an asset should be considered not on the basis of 'deprival' principle but on the basis of 'continuation' or 'termination of use' and therefore the two bases of asset valuation would be RC or NRV in appropriate circumstances. As we would prefer to eschew PV and value assets on the basis of either RC or NRV, it might happen that there would be certain categories of assets which would be shown in the balance sheet at unrealistic values. This would arise in circumstances where a particular asset would not be replaced in near future in the one hand but on the other hand is also not earmarked to be terminated and would continue to be used until they are worn out. It may not be un-common for the NRV of a large industrial asset to be virtually zero while its realistic value to be a large figure. In such circumstances, it would be misleading to assume that NRV is the correct measure of the value to the business.

In particular cases when an asset would not be replaced with similar or other assets and the NRV is unrealistic in that particular context and the asset has not reached its maturity in economic or technical terms - we would recommend

that the particular asset should not be shown at a valuation but continued to be shown at historic cost until the end of their economic life. If any enterprise is capable of or intending to measure any particular asset at PV, they should be encouraged to do so and may be required to explain the basis and assumptions in reaching such PV in a note to the accounts in the CCA standard.

We have given much thought in favouring the value to the business approach instead of the productive capital maintenance concept in an approach to inflation accounting in the context of developing economies. In this study we have stressed that in developing countries an endeavour should be made to keep intact the physical operating capability or capacity of companies at least to produce same volume of goods. As such productive capacity of capital maintenance should have been the appropriate choice. Capital maintenance in terms of charging to the revenue, value to the business of assets consumed seems to be a round about process of maintaining capital. It has not as its major objective the productive capital maintenance of the company. But on a critical analysis of the conceptual foundation of productive capital maintenance and practical operational difficulties, the logic and appropriateness of value to the business would be much in evidence. In the following paragraphs, we analyse in detail the productive capacity maintenance approach to capital and profit.

In the productive capital maintenance concept --- "profit for the year is regarded as any gains arising during the year which may be distributed while maintaining the productive capacity of assets held by the company. Capital is regarded as the productive capacity of the company"<sup>1</sup> The basic premise underlying this concept of capital maintenance is that, the value of all resources used in the period should be the first charge on revenue derived to the enterprise from its operations before any surplus can be reckoned. In other words, there must be a recovery of capital consumed or used up so as to maintain a constant stock of resources or wealth. As it is put in the Exposure draft no. 14 "Accounting in terms of current costs and values" issued

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1. Sandilands report, Op., cit, para. 115.



in August 1976 by the New Zealand Society of Accountants --- "Operating capability will be impaired if distribution reduce the level of asset resources both physical and monetary, below that needed to retain the existing or pre-determined potential of the business for providing goods and/or services. Maintaining operating capability does not mean that assets and expired services will be, or would have to be, replaced with identical assets or services; it means that the overall holding of resources at the end of a period is the same as at the commencement of the period, leaving the same overall ability to provide goods and services. The notion of maintaining capital in terms of operating capability is a bench mark used for measuring operating and distributable profits." <sup>1</sup>

The existing productive or operating capacity of the enterprise is difficult to define in the context of today's environment. Enterprises continue as going concerns but frequently expand into new areas or products and discontinue other areas or products. Though going concern assumption is recognised, the best interests of shareholders would be achieved in certain cases by winding up inefficient operations or the enterprise itself. More or less capacity may be needed for long run survival, e. g. it may be necessary to replace an existing asset with one that has a larger productive capacity because that is the only one available. To do this, it is to maintain more than present capacity. In some cases the company might not intend to replace its assets, or might plan to replace its existing assets by assets of a different type, perhaps changing the nature of its business altogether. In such a case, there may seem little useful purpose in regarding as non-distributable sums set aside to replace assets which will not in fact be replaced.

This concept of profit and capital maintenance does not recognise that a substantial proportion of assets is often financed by debts and loans. This leads to a charge to equity which is greater than that necessary to maintain the equity financed portion of productive capacity. The German approach to inflation accounting differentiates between equity financed and non equity

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1 ED-14: Accounting in Terms of Current Costs  
Op., cit. para 45.

financed assets for valuation and depreciation purposes.<sup>1</sup> Maintenance of productive capacity is only one factor in survival of an enterprise, there might be such circumstances where only this consideration will not be sufficient e.g. an enterprise may be holding its own on a productive capacity basis and yet its survival is threatened because of lack of cash to pay creditors.

The productive capacity concept of capital maintenance does not have universal application. How can this concept be meaningfully be applied to a service enterprise, having minimal investment in physical stock and fixed assets, how can it be applied to a producing mine which will wind up operations when the ore body is extracted, or how can it be applied to enterprises such as banks having substantially all their operations in monetary assets and liabilities.<sup>2</sup>

Another difficulty which arises with productive capacity of profit and capital maintenance is the treatment of depreciation charge and particularly that of backlog depreciation. Under productive capacity basis, depreciation provision are usually based on the current purchase price of the asset at the end of each year, but if this price increases steadily throughout the life of the asset the provision of depreciation calculated as an appropriate proportion of the value of the asset in each year will still fail to lead to an accumulated provision for depreciation equal to the gross undepreciated value of the asset at the end of its last year of life. This leads to the problem of adjustment for backlog charges which is calculated by subtracting the accumulated depreciation each year from what would have been the accumulated depreciation if the replacement cost of the asset had been at its current level since the time of its purchase.

Productive capital maintenance would require the provision of backlog depreciation charged against the profit and loss account. A depreciation charge based on the current replacement cost of asset involves making a charge for

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1. See Appendix - 1 to chapter - Current cost accounting
  2. Accounting Research Committee, Discussion Paper - Current value Accounting, Canadian Institute of Chartered Accountants, Toronto, 1976, p. 57.

depreciation in the year which includes that year's portion of the current cost of the asset used as well as the backlog depreciation. If this treatment is not followed, sufficient funds will not be set aside to finance the replacement of the asset as they are used up.

The debiting of backlog depreciation to retained earnings provides for eventual full recovery of all increases in replacement cost during the life of an asset and in this respect the method focuses on the future replacement cost and not the current costs. It also means that the distributable profit transferred each year to retained earnings is not in effect the final profit for the year, because it is subject to subsequent adjustment in the preceding year. The effect of adding the backlog provision to the normal provision for depreciation in the year in the profit and loss account would be to alter the nature of the depreciation provision. It would no longer represent the proportion of the value of the asset assumed to be used up during the year, but would be a provision designed to set aside out of profits sufficient sums to replace the asset at the end of its useful life. If backlog is charged against the profit and loss account, the charge for the depreciation for the year will exceed the value to the business of the assets consumed during the year.

The purpose of value to the business concept of profit and capital maintenance is to charge against revenue the value to the business of assets which have been consumed in the year. It does not set out to charge the total amount required to finance the replacement of assets. It attempts to match revenue and costs of the period in current terms, so as to provide a measure of profit and a more accurate indication of the value to the business of the assets consumed in the year in generating it. In this method depreciation is the current cost of using the assets; current costs are matched with current revenues and backlog depreciation follow treatment in the balance sheet and not in the profit and loss account.

We are of the opinion that, the maintenance of physical assets is an over-rigid concept of capital maintenance. We can conclude, as did Sandilands report - "In order to determine whether sufficient funds will be available to finance the purchase of fixed assets the management of a company should make forecasts of future cash requirements on the basis of the price of the

assets which are actually to be purchased, not the replacement cost of the assets currently held. In times of rising prices directors will act prudently if they take account of the increasing costs of assets which are to be purchased when deciding their dividend policy." <sup>1</sup>

The basis of valuation of assets:

The principle of valuation underlying current cost accounting is value to the business, which in relation to an asset is the measure of the direct loss suffered if the business is deprived of or disposes of that asset. The basic requirement in determining valuation of assets in the context of developing economies is that it should produce relevant information and that there should be a reasonable balance between accuracy, objectivity and the cost of obtaining the information.

In academic writings of Bonbright, <sup>2</sup> Solomons, <sup>3</sup> Parker and Harcourt, <sup>4</sup> Stamp <sup>5</sup> and professional pronouncement like the Sandilands report, <sup>6</sup> the Trueblood report, <sup>7</sup> The Corporate Report, <sup>8</sup> the Richardson Report, <sup>9</sup>

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1. Sandilands Report, Op., cit para. 478.
  2. J.C. Bonbright, The Valuation of Property, Virginia, The Michi Co., 1965 - Ch. IV.
  3. David Solomons, "Economics and Accounting Concepts of Cost and Value" in Modern Accounting Theory, Morton Backer (Ed) New Jersey, Prentice-Hall, 1966 esp. 122-125.
  4. R.H. Parker and G.C. Harcourt, "Introduction" in Readings in the Concept and Measurement of Income, R.H. Parker and G.C. Harcourt (Editors) Cambridge University Press, 1969, esp. pp 17-19.
  5. Edward Stamp, "Income and Value Determination and Changing Price - level : an Essay Towards a Theory", The Accountant's Magazine, June 1971, esp. pp 565-567.
  6. Sandilands report, Op. cit, esp. paras 208-224.
  7. AICPA, Report of the Study Group on the Objectives of Financial Statements - Objectives of Financial Statements, Robert M. Trueblood (Chairman), New York 1973, esp. pp 41-43.
  8. ASSC, The Corporate Report, London, 1975, esp pp 68-71.
  9. Report of the Committee of Inquiry into Inflation Accounting, I.L.M. Richardson (Chairman), Wellington, 1976, esp. paras 15.02-15.20.

the Canadian Discussion Paper,<sup>1</sup> the value to the business of an asset is arrived at by considering the theoretical alternatives of replacement cost (RC), net realisable value (NRV) and present value (PV). In this approach there are six possible situations in relation to any asset:

TABLE - 23  
The basis of valuation of assets

Situation	Value to be used
1. $NRV > PV > RC$	RC
2. $NRV > RC > PV$	RC
3. $PV > RC > NRV$	RC
4. $PV > NRV > RC$	RC
5. $RC > PV > NRV$	PV
6. $RC > NRV > PV$	NRV

While in the great majority of cases the value to the business following the above matrix is current replacement cost, in certain circumstances all the three values have to be considered in order to decide which of the three is to be used. This situation would arise in cases 5 and 6 of the above table, where RC is greater than PV or NRV. Our main concern relates to the practical problems that would arise if assets are to be shown at a valuation in the balance sheet and to have wide application in the context of developing economies. The effort and expenses involved in considering the three bases of valuation when only one is to be used, compels us to think that a search for some basis of compromise between the theoretical exactitude and the practical problem of implementation; to make it more economic and practical, should be explored.

The major reason for our concern relates to the significance of the present value to determine value to the business of asset in the enterprise. To arrive

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1. Discussion Paper - Current Value Accounting, op. cit, esp. pp 28-29.

at the present value figure, it is necessary to make an estimate of the expected flow of future receipts from the assets and determine an appropriate discount rate. Estimation of future receipts flow is a highly subjective notion based on expected future events. Present value calculations may play some part in the decision to acquire such assets, because at that stage it is necessary to attempt to estimate the extent to which the purchase of an asset will increase the cash flows of the enterprise. However, after acquisition it is seldom possible or even practicable to determine with any degree of accuracy the future flows to be produced by an asset. This is notoriously difficult to estimate since it is often impossible to forecast earning for more than a year or two ahead with any degree of confidence.<sup>1</sup> In many cases, the present value of an individual asset cannot be determined in isolation from that of other assets in conjunction with which it is used. The cash flow attributable to jointly used assets is rarely, if ever, determinable.

Determination of an appropriate discount rate is another major stumbling block to the adoption of present value. Guidance given in ED-18 in respect of choice of a discount rate is "an appropriate rate of discount to be applied in arriving at the present value of future cash flows would be the particular company's money cost of capital i. e. , the estimated or actual rate at which the company could raise finance in the market for the same period as the cash flows are anticipated."<sup>2</sup> From the above guidance it is evident that there would be built in the valuation process a judgement about the required return on capital. The higher the return required, the lower the asset value will be.<sup>3</sup> This seems to be an entirely circular process of profit determination and asset valuation.

Present value may in very exceptional circumstances be the value to the business. The Sandilands committee envisaged that the most common reason for

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1. Sandilands report, op.cit., para-582.
  2. ED-18, op.cit., para-283.
  3. Because of the inverse relationship of discount rate to present value, i. e. , the higher the discount rate the lower the present value.

using economic value as the basis of valuation of an asset or group of assets would be that the asset no longer produces an adequate return, either because of low capacity usage or because the activity for which it is used is no longer profitable.<sup>1</sup>

In the context of developing economies, the chance of present value being the value to the business, provided the three alternative bases are applied is much more remote than in the context of advanced economies. Due to the fact that in a capital starving situation of developing economies and due to abundance of cheap labour, old technology is still profitable. The threat of technological obsolescence due to rapid and continuous change in taste and fashion as may be the case in advanced economies are not so acute a problem in the context of developing economies.

For these reasons we would favour omitting present value as a criterion of estimating the value to the business of an asset in the context of developing economies. The appropriate criteria for estimating the value of assets would be net replacement cost unless the enterprise has made a firm decision to dispose of an asset and not to replace it with an asset or assets with the same or greater operating capacity --- in that case appropriate value to the business of that asset would be net realisable value. In other words to permit valuation to be properly related to the expected role of particular asset in the entity's operations in the immediately foreseeable future, the criterion for valuation would be continuing use or termination of use of an asset's service potentiality.

Examples of assets which may be valued at net realisable value are:-

- (a) Investments other than those in associated or subsidiary companies.
- (b) Assets surplus to operating requirements.
- (c) Real property not used for normal operations but held as an investment.

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1. Sandilands report, op.cit., Para-221.

In relation to stock in trade, examples of items which would not be replaced in their present form are:-

- (a) Goods which are defective, damaged or which have deteriorated.
- (b) Materials and parts for use in the manufacture of goods, the production of which has ceased.
- (c) Materials and parts for use in manufacture but considered to be in excess of foreseeable future production requirements.
- (d) Materials and parts for use in manufacture affected by substitution of some other materials and parts.

The continuity criteria has to be modified in certain circumstances as it is anticipated that the assets which are needed for continuing use purposes may be valued at replacement cost. But in certain circumstances the rule would not be suitable for certain types of assets. As we would prefer to eschew present value, and value asset on the basis of either replacement cost or net realisable value, it might happen that there would be certain categories of assets which would be shown in the balance sheet at unrealistic values in circumstances where these would not be replaced in the one hand but on the other hand also not earmarked to be terminated, and would continue to be used until they are worn out. It may not be uncommon for the net realisable value of a large industrial asset to be virtually zero while its economic value may be a large figure. In such circumstances it would be misleading to assume that net realisable value was the correct measure of value to the business. In cases when an asset would not be replaced with similar or other assets and the net realisable value is unrealistic in the particular context and the asset has not reached its maturity in economic or technical terms --- the principle of replacement cost or net realisable value would not be suitable basis for valuation.

Where it is fairly evident that the current and foreseeable cash flow are insufficient to justify the replacement of the capacity in any form were the company to be deprived of the asset, but where there is nevertheless an intention that the asset should continue in use or be available for use in the



business, in such circumstances valuation of an asset would present difficulties of realistic valuation. If replacement cost is greater than present value and net realisable value, and if we omit present value from asset valuation process it might be that, we would be left with the choice of only selecting net realisable value --- which for special types of assets may be zero or near zero, so it would not portray the realistic value of the asset to the business. In such a case in our opinion the asset should not be shown at a valuation but continued to be shown at historic cost, until the end of its life. To show highly specific assets at their net realisable value, would tantamount to showing a considerable loss of capital in the enterprise. In reality such an asset may be presumed to have worth as much to the firm as their historic cost.

We consider that the approach to value asset only on the bases of replacement cost and net realisable value is simpler than the valuation of an asset through evaluating the alternative bases of replacement cost, and it has the further advantage of normally requiring only one valuation for any particular asset and so it would be much more practicable in the context of developing economies.

The adjustment in respect of net monetary items:

A wide range of views has been expressed in respect of the vexed question of adjustment in respect of monetary items. The views range from the conclusion of the Sandilands committee that no adjustment to the current cost profit is required in respect of monetary items --- to the recommendation of the Hyde guidelines<sup>1</sup> that without it 'incomplete' and 'potentially misleading picture' would be given to shareholders and other users of accounts.<sup>2</sup> In the context of developing economies, adjustment in respect of monetary items is also an important issue as it would have far reaching repercussion in industrial development and resource allocation process.

Before dealing with different approaches suggested in regard to monetary items - let us follow the arguments of incorporating them in current cost accounting.

Monetary items are cash and claims to cash, the amounts of which are

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1. ASC, Inflation Accounting - an Interim Recommendation, London 1977 better known as the Hyde Guidelines.
  2. Ibid para. 5.

fixed in terms of number of pounds regardless of any changes in price levels. It is an essential outcome of inflation that monetary items are changing with price changes. If a firm has held investment through a period of inflation then there has been a loss in purchasing power as a consequence of holding investment during that period and conversely in case of liabilities a gain in terms of purchasing power.

Monetary items represent a part of the 'capacity' of the business. Unless an adjustment was made for such balances, the value to the business of its assets, in the sense that they represent operating capacity would be diminished. In order to maintain capital, in the sense of the existing operating capacity of the enterprise to provide goods and services, it is necessary to maintain not only non-monetary assets but also an appropriate pool of monetary assets. Rising prices will result in an enterprise requiring an increase in monetary assets to service its operations in the same way that the increased price of stock requires a continually higher level of investment in that asset. This pool of monetary assets which is required to be carried by an enterprise to service its normal operations is circulating in character. If the ability of the monetary assets to carry out their functions is affected by changes in prices; we believe that this should be measured and taken into account in arriving at the current cost profit of the enterprise.

Certain amounts which are expressed in cash terms, for instance debtors and operating cash balances; represents temporary positions where cash is held only until it is converted again into non-monetary assets. These items represents a part of the 'capacity' of the business. Unless an adjustment is made for such balances, the value to the business of its assets in the sense that they represent operating capacity would be diminished. The 'stock replenishment cycle' moves constantly round the stock - debtor - stock circle, in such circumstances the maintenance of not only fixed non-monetary assets but also the maintenance of 'stock replenishment cycle' has its connection with maintenance of the operating capacity of the enterprise.

An enterprise could not be recognised as deriving a profit until the operating capacity of all its assets has been maintained. In our view, all assets, and not just non-monetary assets, have an operating capacity. A monetary asset

has an operating capacity of its own, in other words it has a job to do in enabling the enterprise to operate. If because of inflation the monetary assets are not able to do their job as effectively as before, or the enterprise has to carry more monetary assets to maintain the same level of operating capacity, then this should be recognised in arriving at the current cost profit.

In saying that the monetary assets has operating capacity and must be maintained to preserve the value to the business, the question arises whether they should be maintained as like non-monetary items in entirety or in different form as they are changing. Monetary assets differ and unlike non-monetary assets they are not static but constantly changing form; from stock to debtors and back to stock or even converting to non-monetary assets. Moreover, there cannot be any optimum level of 'monetary assets' or 'monetary liabilities' --- to be kept intact to maintain the scale of operations. They would change with change in financing policies, price changes and business conditions.

To endeavour to maintain individually a figure of free cash or debtor in entirety would be a very difficult proposition. As such it would be practicable to find out the total balance or 'net' balance of monetary items in an enterprise and find out whether net monetary assets or net monetary liabilities is the result of the operations. These amounts would be taken to be maintained to keep intact the operating capacity of the business taking the view that as a going concern it is the optimum situation and would be repeated in the ensuing years as a going concern business.

There exists a close relationship as pointed out in the London Society of Chartered Accountants submission on ED-18 <sup>1</sup> between total monetary assets and liabilities. There is a link between the extent to which credit is taken and is given and the period over which debts are collected will affect any overdraft financing which exists; and the availability of overdraft finance may affect credit terms given and thus the level of debtors. It has been argued that trade accounts payable relate to stock and trade accounts receivable, and that

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1 London Society of Chartered Accountants, Submission on ED-18, London 1977, pp 52-53.

secured liabilities to the assets over which they are secured. <sup>1</sup>

It is convenient that the total monetary position of an organisation would be viewed as a whole. The most important approach to monetary items appears to be to establish the net position based on all monetary items and to consider adjustment for the total amount. Thus a company will either have :

- (a) Net monetary assets: Cash and debtors will be greater than creditors and loans. Some enterprises and in particular the financial institutions may have net monetary assets.
- (b) Net monetary liabilities: The loans and creditors will be greater than cash and debtors. As a general rule most companies have net monetary liabilities.

For a consistent treatment of monetary assets, it is necessary to quantify the deductions which should be made in the profit and loss account to provide for the increasing amount of money needed to retain the value to the business of the net monetary assets. As we have followed earlier, the problem with monetary assets in the current cost accounting system is that it may not be possible to identify the extent to which they are being eroded in inflationary conditions as they are constantly changing forms.

Net monetary assets should be adjusted when the appropriate price change can be clearly identified, for example, where they form part of the stock replenishment cycle or can otherwise be related to specific non-monetary assets. Thus items such as debtors can be adjusted because they can usually be seen to relate to the replenishment cycle of cash being used to buy stock. The adjustment for debtors again; which is turned into cash and used to buy stock. The adjustment for debtors to be made by reference to an index of price changes which relate to purchases of stock items or to manufacturing costs for finished goods, has been suggested by the London Society of Chartered Accountants. <sup>2</sup> The adjustments become more speculative when part of the

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1 Ibid, p. 53.

2 Ibid, p. 55.

net monetary assets being free cash is involved. In principle if the business is to be enabled to maintain its existing level of activity, an adjustment should be made. But this means it is necessary to identify the purpose for which the balances are held, so that a specific adjustment can be made.

Purchasing power in relation to any specified assets may be either rising or falling; but to make any entry in the accounts would merely be to speculate on what the company might do or might have done with the cash. Changes in the general level of prices (say RPI) or in some other unrelated index have no relevance to the company. As Reid has observed in this situation --- 'It is too simple an approach to say 'when in doubt adjust by the RPI'<sup>1</sup> This problem is hard to resolve. In practice, fortunately, the situations when 'free' and 'replenishment cycle cash' would exceed creditors and debtors are likely to be few in manufacturing and trading companies. For practical convenience and as a compromise solution --- we would favour a wide general index to be used to adjust for such net monetary items.

In most instances companies are likely to be holders of net monetary liabilities. In net monetary liability situation, the circumstances are different. In this situation there is no problem of maintaining increased monetary assets as monetary liabilities surpass the monetary assets. Net monetary liabilities represent no problem of operating capacity maintenance, as there is no question of maintaining the same amount of liabilities. Unlike monetary assets they do not represent any operating capacity, rather they represent burden to the enterprise.

Inflation has the effect of shifting purchasing power from lenders to the borrowers. In other words, the purchasing power loss which has been sustained by lenders should be a gain to the shareholders. As such capital gearing or financing is very important in a period of changing prices. In the circumstances of a net monetary asset situation, we burden the equity shareholders with an additional charge to reflect the impact of inflation on the monetary assets financed by them. In a net monetary liabilities situation, if the company operates on other people's money, this is a bonus for equity

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1. Walter Reid, 'Picking up the pieces of CCA' The Financial Times 13 July 1977, p. 15.

shareholders to the extent that the assets are financed from external sources. In most companies finance will be provided by creditors, bank loans and other borrowings; it is the finance from external sources in a net monetary liabilities situation which is needed to be considered in calculating the profit of the period and the amount that can be distributed.

Revaluation surpluses arise when prices are increasing because of the changing relationship between money and non-monetary assets. In these circumstances more funds must be retained if the value to the business of its assets is to be maintained. If a company has part of its assets financed by net monetary liabilities, then part of its revaluation surpluses are being financed by non-equity funds. There should be a credit to reflect the fact that some of the finance needed to maintain capital has been made through borrowing and to that extent there is no need to restrict profits by charging the full amount of capital maintenance which includes the cost of sales and depreciation adjustment. The adjustment to remove this restriction is known as 'gearing adjustment' following Hyde guidelines.<sup>1</sup>

The gearing adjustment is derived from the principle that part of the finance needed to maintain capital, which has been charged in arriving at the profit of the business has been provided by borrowings and not by equity funds. To the extent that the finance has been provided by borrowings, the distributable profit available for the holders of equity need not be restricted. Without some credit to profit for the net monetary liability financed surpluses, the profit of the year is very much suppressed. The two adjustments of additional depreciation and cost of sales on their own can be needlessly harsh and might even prevent dividends being declared.

In gearing adjustment credits are given in the profit and loss account the portion of the amounts charged against profit to maintain capital intact, which relates to assets financed by net monetary liabilities. The assumption is that the profit attributable to the shareholders should be charged with the current

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1 Hyde Guidelines, Op, cit., para. 5.

cost of assets consumed to the extent that the entity funds are financing these assets. Part of the extra depreciation and cost of sales adjustment can be safely attributed to equity. The gearing adjustment restricts the amount of the additional depreciation and cost of sales adjustment to the extent to which we assume that the items consumed were financed other than by equity shareholders. Thus we reduce the burden of 'value' consumption to be carried by equity shareholders.

We would support an approach to gearing adjustment to reflect the proportion of cost of sales and additional depreciation written back on the proportion of the average debt to equity ratio during the year and adjustment being made in revaluation surpluses in the balance sheet. This is the approach suggested by Reid <sup>1</sup> and London Society of Chartered Accountants<sup>2</sup>. The Hyde Guidelines are similar in approach in this respect but as it only concentrates on profit and loss account it is incomplete.<sup>3</sup>

The formula for calculating the gearing adjustment emanating from the above discussion is:-

Gearing Adjustment =

$$\begin{array}{rcl} \text{The cost of sales adjustment} & & \text{The net balance of monetary} \\ & & \text{liabilities} \\ & + & \hline \text{The additional depreciation} & \times & \text{The net balance of monetary} \\ & & \text{liabilities + equity share} \\ & & \text{capital and reserves} \end{array}$$

This gearing adjustment is relatively simple to calculate and it is conservative in that it does not allow the gearing gain to exceed the amount deducted from the conventional profits for depreciation and stocks. Moreover, the sums would be established after deducting the interest on part of the extra finance required. The credit taken is for the 'realised' revaluation surpluses in the sense that depreciation and cost of sales represents items already 'consumed'

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1. Reid, Op. cit., p.15.

2. London Society, Submission, Op. cit., p.31.

3. There are differences in treatment of preference shares and other operational aspects, but basically they follow the same basic principles.

in historic cost accounts terms. The measurement of profit is intended to reflect the average ratio of debt to equity in the year and assumes that the same gearing situation would prevail in the ensuing years on a going concern basis. The credit taken for the period show the result achieved on the basis of the existing financial structure. For years following, the continuance of the same pattern of gearing becomes speculative; so any anticipated changes in the proportion of assets which will be financed by equity funds is a matter to be considered in determining the amount available for distribution.

The question of gearing adjustment is very crucial in the context of developing economies. We have followed in chapter 11 p262 that following CCA principle of charging depreciation and cost of sales in terms of value it would have different repercussion to the various sectors of the economy. That discussion led us to apprehend the situation where it appears that the effect would be most unfavourable to highly capital intensive manufacturing industries. As most capital intensive manufacturing companies have slow stock turnover rate and high depreciation charges, following current cost accounting they will have to charge higher operating costs and reduce profit substantially. In turn this reduced profitability would have adverse effect on capital market and resource allocation process. The capital intensive manufacturing industries form the 'industrial infra-structure' of an economy and on growth of these industries the future industrial advancement of the developing economies depend --- the depressed profitability in this sector would have unfavourable repercussion in resource allocation and capital formation in this sector of the economy. As gearing adjustment would take effect of adjustment on cost of sales and depreciation, it seems that they would relieve the burden of the high ratio of depreciation to operating profit type of industries, of the additional charge required to be made in current cost accounting. Even if we envisage prevalence of common pattern of gearing leverage in different sectors of the economy and do not favour any tax or subsidy for these industries, credit given to reduce the depreciation and cost of sales adjustment would lighten the gloomy prospect of their profitability.

As we have discussed earlier in chapter 2 p 35-37, governments in developing nations has to play a key and leading role in the industrial development process



and inevitably therefore, the primary and basic industries are financed by a relatively large proportion in the form of industrial development assistance, long term loan or other types of financing through various government channels. As a result of these factors, basic and growth industries (as a matter of fact many manufacturing enterprises) if not totally sponsored by the government or being nationalised, are financed by a relatively large proportion by borrowed funds. The favourable gearing leverage would lead these industries to show better profitability prospects. The better profitability prospects of these industries would attract private capital and they would be highly competitive in the capital market. As such, once sponsored or assisted by the government they would not have to be dependent in perpetuity for subsidy or tax concessions to be viable. The high gearing profit may balance the high cost of sales and additional depreciation required to be made following current cost accounting principles.

Statement of the adequacy of liquid resources and financing arrangement:

The purpose of CCA accounts is to record the results of the current period and to calculate a profit attributable to the shareholders after considering the factors which relate to the current period. The problem of maintaining adequate liquidity in a period of inflation relates essentially to the future and not the past. Profit determination on a CCA basis would not ensure that adequate liquidity would be maintained in the ensuing year.

We have recommended that current cost profit of the period should include an adjustment for the net monetary items calculated on the basis of the financing experienced by the company during the current period. But with changing credit and financing situation, the current experience may not be a good indicator of the future in terms of liquidity, and this implies that, the proportion of assets which are currently being financed by loan and credits may not continue to be available, and the extent to which it may change, can only be determined by a consideration of the future events.

In calculating the adjustment in respect of monetary items, consideration is needed to be given to factors which are not only related to the accounting figures but also affect changing business environment. Whilst the changing

relationship between money and specific non-monetary assets can be quantified with some accuracy, the effect of inflation on debtors, creditors and loan is not quite so predictable. The same level of business might be carried on with a much lower investment in debtors (by reducing the credit period given) and the funds supplied by credit and loans may be affected by interest rates and by the credit periods given as well as by the changing prices of goods supplied.

Maintenance of adequate liquidity involves the consideration of future events. As such, as an important piece of information for investors and other users of accounts; the directors have to inform of any likely changes in the gearing proportion and credit requirement in the ensuing year. The directors should make it clear in a 'Statement of the adequacy of liquid resources and financing arrangement' whether they believe or not that sufficient resources are likely to be available in order to meet the company's cash needs in the following year. Companies need not publish forecasts of future cash flows and other projections with their annual accounts as this is objected on the grounds of competition and practicability. What they have to do is to take into consideration the likely changes in financing policies, future cash requirements, and any changes in business conditions, and give in the liquidity statement a futuristic dimension which is not evident in the current cost accounts.

Valuation of plant and machinery:

According to CCA principle, plant and machinery should be shown in the accounts at their value to the business at the balance sheet date. Plant and machinery will normally be valued on the basis of their net current replacement cost i.e. gross current replacement cost less accumulated depreciation. In some exceptional cases it would be necessary to value plant and machinery at present value or net realisable value. As in the context of developing countries, we have favoured to eschew present value,<sup>1</sup> plant and machinery would need to be shown at net realisable value in such circumstances.

Following our earlier discussion on 'The basis of valuation of assets'<sup>2</sup>

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1. See earlier discussion in pp. 297-298

2. pp. 303-308

we reached agreement that where the loss of the asset would materially impair the operating capability of the business, its value to the business would be net replacement cost; since continuing replacement of its operating capacity is implied. Where the loss of the asset would not impair the operating capability of the business its replacement cost would not normally be relevant to determine the value to the business of the asset; since the business can continue its normal operations without this particular asset. Consequently net realisable value would be the most appropriate base of valuation. Examples of plant and machinery which may be valued at net realisable value following the criteria of 'continuation of use' or 'termination of use' established earlier are:

- (a) Plant and machinery in surplus to operating requirement;
- (b) Machinery reaching or has reached the end of their useful working lives;
- (c) Machines decided to be disposed of before the expiry of their useful working lives

Following CCA principle, in the great majority of cases the appropriate basis of estimating value to the business of plant and machinery would be net replacement cost. Achievement of a fair balance between accuracy and objectivity, without incurring undue cost in showing plant and machinery at net replacement value is a hard task. Complexities in showing plant and machinery at net replacement cost arises due to quantity and diversity of items, specification changes, wide time lag, technological changes etc. The Sandilands committee concluded that specific price index attempts to deal adequately with the above complexities and recommended the extensive use of indices in calculating the net replacement cost of plant and machinery from indices specific to particular industries.<sup>1</sup> The Committee expected that specific indices should be the basic valuation basis and required that any other basis used to value plant and machinery has to be disclosed in a note with information about valuation procedure, differences from indexed valuation etc.<sup>2</sup>

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1. Sandilands report, para. 573.

2. Ibid, para. 579.

Later, the Sandilands committee's recommendation of strict application of indices has been relegated to the bottom of preferences by the Morpeth committee. The order of preference in ED-18 for valuation of plant and machinery is:

- (a) suppliers' official price lists, catalogues etc., with appropriate deductions for trade discounts;
- (b) the company's own replacement cost estimates, based on expert opinion;
- (c) an index compiled by the company from its own purchasing experience;
- (d) authorised external price indices analysed by assets type;
- (e) authorised external price indices analysed by using industry <sup>1</sup>

ED-18 also introduced complex 'modern equivalent asset' method to deal with technological changes. The guidance given for estimated of modern equivalent asset where a similar alternative asset will incorporate current technology reads as:

"To estimate the cost of the modern equivalent asset, the gross capital cost of the modern alternative asset should be adjusted by:

- (a) the present value of any material differences in operating costs over its whole life;
  - (b) any material differences in output capacity, as long as any increased output from the modern machine is usable by the company; and
  - (c) material differences in the total life of the modern machine;
- compared with the substantially identical replacement.<sup>2</sup>

This particular aspect of ED-18 has been much criticised in the accounting circles as being most impracticable, complex and wildly subjective.

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1. ED-18 Op. cit. para. 42.

2. Ibid, para. 278.

ED-18 has been rejected by the members of ICAEW. Among criticisms made against ED-18, common was that, it asked too much too soon.<sup>1</sup> On demise of CCA, the Hyde guidelines re-introduced the adjustment of fixed assets by industry specific or asset specific indices for depreciation calculation; including the recommendation that --- "if suitable indices for overseas assets could not be obtained, a general price index for the country concerned may be used".<sup>2</sup>

These changes in accounting thinking the British Isles should be an important lesson for the developing countries. The important point emerges from following CCA development in U.K. and Ireland is that, for any CCA standard; not only the theoretical perfection but also the practical application of such theory is of utmost importance to be acceptable and practicable. It is no use to recommend complex theoretical procedures while the implementation in reality is fraught with rejection. It cannot be denied that in particular situations there may not be any easy solution, but in the context of developing economies, we would recommend that approximation to current cost principles should be sought after and not complete and complex theoretical perfection. It has to be appreciated that to strive to change from familiar conventional practice itself is a great endeavour which needs great strides forward. Any change must start from the scratch and consolidate advancement through familiarity and experience. Any standard on CCA should not contain ingredients to be repulsive to those in actual practice.

Following from experience gained in U.K. and Ireland, it is very much evident that adjustment in respect of plant and machinery could be done objectively, economically and conveniently through the use of specific indices. We would very much welcome the introduction of specific indices in developing countries, as this would be the best way of making any CCA standards practicable. We recommend strongly that at least the major industry group indices be prepared in the initial stages of CCA practices and be broaden up to include other industries as experience gained. The objective should be to publish indices of as broad as possible of specific

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1. See discussion earlier pp. 252-253.

2. Hyde Guidelines, Op. cit., para. 9

assets or group of assets, so that indices could be very much useful for current cost accounting practices. We envisage that provided a sufficient minimum number of specific industry group indices are available, a start could be made in developing countries in implementing CCA standards.

In the context of developing countries it seems that the availability or non-availability of specific indices for plant and machinery may be a matter of anticipation and expectation. The individual governments attitude and willingness in this respect could not be foretold. With a view that such specific indices would not be forthcoming or need long persuasion or may not be available at all, CCA standard without complete reliance on the availability of indices has to be suggested.

In the absence of any specific indices for plant and machinery, as a practicable and economic step towards establishing approximate replacement cost in the context of developing countries, we would recommend the following procedures in situations where:-

- (a) Substantially identical plant and machinery are available: Where a substantially identical new asset can be purchased at the market, the current replacement cost of the asset should be ascertained with the aid of:
- (i) suppliers' official price lists, catalogues etc;
  - (ii) specific asset price indices, if available in the country from which plant and machinery are normally imported.<sup>1</sup>
  - (iii) the company's own replacement cost estimates, based on expert opinion;
  - (iv) as a last resort with the aid of wholesale price index.
- (b) Active second hand market exists: Where an active second hand market exists for industrial plant and machinery approximate replacement cost could be established. This type of situation may not be very common but it may be appropriate for motor vehicles and other small appliances.

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1. As discussed earlier, the developing countries has to import most of their plant and machines from advanced economies. For example for an importer of British machinery the specific price indices developed there would be very much relevant.

Trade papers, price lists of specialist dealers in second hand goods and enquiries made for insurance purposes may yield re-sale prices or evidence of their approximate amounts.

- (c) Technologically advanced machinery superseded existing ones: Technological development creates real problem for calculation of gross current replacement cost of an existing machine owned by a company. Several years after the purchase of a machine it may be difficult to calculate the current replacement price of a similar machine because the one available may be substantially different in specification, output capacity, running cost etc. If there has been marked technological advancement; the cost of an available replacement would give unrealistically high value for the existing one. To illustrate the situation; it is possible that the new improved machine available can replace the capacity of existing two or more machines; or one new machine represents improved capacity, improved quality or other technical changes. It may be true in certain circumstances that a modern piece of machinery may have similar capacity to that of a battery of existing machines. Hence technological change is likely to be a serious factor in valuation of plant and machinery and due allowance needs to be given for the inferiority of old assets to modern ones.

This problem is likely to be more serious where plant and machinery are held for a long time. In developing countries, this is a very real problem. As we have discussed earlier, due to various reasons older technology is as much profitable as the improved ones and as such the enterprises hold an existing piece of machine till it is physically worn out. There is no simple solution to this problem of technological changes and we could not suggest the recommendation made in ED-18 of comparable 'modern equivalent asset' mentioned earlier. Simpler approach has to be made to establish an approximate basis to value an existing machine on the basis of an equivalent modern one.

One solution may be to pro-rate the current equivalent ones on the basis of the capacity of the presently held item. For example, where the nearest equivalent machine for which a current cost is obtainable has,

say, double the capacity of the present machine; the replacement cost of the machine held would be half the cost of the technically superior one. In other instances the enterprise may have to look at the overall utility of a particular asset to the entity. For example, even if a motor lorry has been technologically improved, the relevant factor may be that the enterprise is using a unit of transport. If a new motor lorry is the closest comparable vehicle, no consideration should be given to the technological improvements. The issue of technological development in valuing plant and machinery highlights the point that valuations require subjective judgment from the enterprise. The sooner appropriate indices could be developed in developing countries, which remove this element, the better.

The quantity and diversity of plant and machinery in a business may make it difficult to estimate the current replacement cost on an individual basis. When assets are used in an integrated or interdependent manner, it may be necessary to consider them as one item for the purpose of determining their value to the business. In particular circumstances the assets of a whole segment of a business may have to be treated as one item. In selecting one source for a particular item it is necessary to weigh the cost of obtaining the information against the significance of the information in the overall context of the financial statements. In many entities a comparatively small number of items will be found to make up the greater proportion of the total value of the entity assets. The source of higher preference should be selected in relation to those items. In most cases the 'difficult' assets including old assets and those subject to unusual technological change will be a small proportion of the total; and where a significant element of judgment is involved, the valuation approach used should be set out clearly in notes to the accounts.

An approximation to value is likely to be much more relevant than out of date historic cost. Provided the basis of valuation is clearly disclosed, users of accounts will be able to use the results with an appropriate degree of care. It cannot be denied that problem would exist in



valuation of plant and machineries and for some categories of assets, valuation rules will have to be developed over a period of time. However, if a clear statement of principle is made, namely that plant and machinery must be shown in the balance sheet at their value to the business, company accountants, auditors and directors will be able to arrive at satisfactory solutions --- even if this is done simply by adjusting through the wholesale price index.

In conclusion, we reiterate the words of the Sandilands report:

"A valuation is by nature an approximation, since it is unusual for the value of an asset on any basis to be known precisely. The principle underlying the valuation process should be to provide the best estimate of the 'value to the business' of the company's assets that can be achieved within a reasonable outlay of resources (both of manpower and money) by the company. There can be no hard and fast definition of 'reasonable' in this context. It will depend on individual circumstances and on the resources available to individual companies. While no valuation can be a precise figure, an approximation to a valuation, even if subject to a margin of uncertainty is likely to provide more useful information when prices are changing rapidly than a precise figure of historic costs.<sup>1</sup>

#### Depreciation on plant and machinery:

There is a debate as to whether the depreciation charge following current cost accounting should be based on average or end of the year value to the business of assets held. It is argued that the general approach to profit determination under CCA is based on the principle of charging the revenue for the period with the current cost of the assets consumed in earning that revenue and the consumption of depreciable assets is a progressive process, continuing throughout the period, thus the appropriate accounting treatment should be to base depreciation charges on average current costs for the period.<sup>2</sup>

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1. Sandilands report, op.cit., para-528.
  2. Support for this approach has been shown in ED-18 and Australian provisional standard.

It has also been argued that to base depreciation on end of year value is to restrict unnecessarily the depreciation provision which cannot be extended to monthly or other periodical management accounts.<sup>1</sup> On the other hand, the Sandilands committee recommended that depreciation be based on values at the end of the year, as this, of the various alternatives, was the easiest to calculate. The Sandilands committee envisaged that "If the depreciation provision in the profit and loss account is calculated on average for the year values, the conventional double-entry connections between depreciation and asset valuation would be broken".<sup>2</sup>

The use of average value would give rise to complications in depreciation calculation. The first complication arises from the fact that the amount of depreciation charged in the profit and loss account is dependent on both the value of an asset and its expected useful working life. Under CCA gross current replacement cost alter and the requirement to show assets in the accounts at realistic current values may require a company's original estimate of the useful life of an asset to be revised in the light of subsequent experience. This makes the calculation of average depreciation more difficult.

The other complication which arise through basing depreciation on average values concerns backlog depreciation. When the depreciation charge is based on average values, backlog depreciation will also be required for the current period. This backlog depreciation is necessary to record the difference between depreciation computed on end of period value and that computed on the average of the asset value.

The Sandilands report points out that, the effect of basing the depreciation charge on the value to the business at the end of each year will be to err on the side of prudence.<sup>3</sup> The Richardson committee in New Zealand have tested empirically both alternatives of depreciation calculations and their

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1. Inflation Accounting Steering Group, Background Papers to the Exposure Draft on Current Cost Accounting, London, Tolley and ICAEW, 1976 - P.12
  2. Sandilands report, op. cit., para-608.
  3. Ibid, para-611.

findings suggest that if the current cost during the period increased by 20%, the depreciation charge computed on end of period current cost would be only about 9% higher than that computed on average current cost. When the current cost increased by 5%, the depreciation charge were about 2.4% higher.<sup>1</sup>

There are arguments in favour of both approaches. Theoretically the average value approach is much more consistent with CCA ideals and would be much suited for management accounting purposes. As such this would be an ideal method. But we have to consider that in the context of developing economies --- this ideal method cannot be applied because of the operating and economic problems involved. In this case the next best method, i. e. , end-of-period adjustment should be taken as it is convenient and practicable in an economic way. We, therefore, would favour the easier approach to take the end of the period values for depreciation calculation in external reporting in developing countries.

A matter requiring some consideration is the treatment of backlog depreciation which arises whenever depreciable assets are restated in terms of increased or decreased current costs. In times of rising prices, the amounts charged in the profit and loss account for depreciation will not be sufficient to accumulate a total provision for depreciation equal to the asset's gross current replacement cost at the end of its useful working life. The accumulated depreciation at the beginning of each year and the charge for depreciation for the year are both likely to be based on values which are lower than the value at the end of the year. The sum of the accumulated depreciation brought forward and the charge for the year will therefore not equal the accumulated depreciation required at the end of the year. The shortfall is backlog depreciation.

When a depreciable asset is to be restated on the basis of current cost, the amount actually being restated is its written down current cost and two entries therefore are necessary. Firstly, the gross cost of the asset needs to be adjusted, upward or down-ward as applicable, with a corresponding credit or debit to revaluation reserve account. Secondly, after including the current period' depreciation entry, there must be an upward or downward adjustment of accumulated depreciation, so that the total of this account

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1. Richardson report, op. cit. , para-17.13.

will properly reflect the value of asset consumed at the time of restatement. This adjustment makes good the backlog in accumulated depreciation.

Views differ as to the account to which the adjustment to accumulated depreciation should be taken. Three options exist, namely debiting either:-

- (1) Operating profit; or
- (2) Retained profits of prior periods; or
- (3) The asset revaluation reserve.

Both the first and second alternatives involve additional charges against profits. The first implies that an incorrect charge has been made for the use of the asset during the period; the second that the charges in previous years were incorrect. Neither of these implications is valid, accordingly we recommend that the backlog should be charged to the asset revaluation reserve so that, effectively, it is the net book figure that has been revalued. This procedure also acknowledges that the prime purpose of depreciation charges under CCA is to match against revenue the current value of resources used up.<sup>1</sup>

For assets to be shown at realistic current values, changes in expected asset lives may need to be made more frequently in current cost accounting. After an asset has been in use for some time, it may be found that in the light of new information of changing technology, marketing environment or other relevant factors mis-estimates of the useful life of an asset may become apparent. In any event, it would be incorrect to continue with the existing depreciation charges, unless, the difference is not material. If a change is warranted, the alternatives are:-

- (a) Accumulated depreciation and backlog charges should be adjusted to the amount which it would have been made if depreciation had originally been based on the estimates which now seem correct

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1. It is important to appreciate that the revaluation reserve is not a provision for the additional cost of replacement of fixed assets; this can only satisfactorily be provided for by charging the backlog depreciation to the profit and loss account, or against existing free reserves. Although the procedure recommended above, does not result in the retention of funds to provide for the full replacement cost of an individual asset, if assets are replaced on a regular 'revolving basis' --- it may well achieve the desired result. See Sandilands para. 480-482.

and subsequent depreciation charges continued to be based on the revised estimates; or

- (b) Undepreciated amount should be spread over a remaining useful life of the asset by revised depreciation without changing the current balance in the accumulated depreciation or backlog adjustment.

To illustrate both the approaches, let us assume that an asset which was originally expected to last for 10 years has a gross replacement cost (GRC) after 5 years of £1,000 and a net replacement cost (NRC) of £500. At the end of the 5th year, the directors decide that the remaining useful life of the asset is only a further 3 years. The change in life could be treated in the accounts, following the alternatives:-

- (1) based on revised service life, NRC should be written down to £375 (NRC is 3/8th of the GRC of £1,000).
- (2) the existing NRC of £500 is not written down in year 5 but should be written off over the expected 3 years remaining life.

The first alternative gives the theoretically correct value for the asset and the subsequent charge to the profit and loss account for depreciation. Also, it would not create a situation where mis-estimates made in past operating charges are rectified by creating errors in other direction for future operating charges as the case may be when only future depreciation charges are revised.

The adoption of the first alternative would give rise to complica cy in accounts. If it is adopted, it would be necessary to re-work the depreciation figures for the previous years as if the life considered to be appropriate had applied throughout the lifetime of the asset, in order to obtain an analysis of the amount required to be adjusted to NRC. Part of this amount should be adjusted in profit and loss account as depreciation under (or over) provided in prior years; part should be adjusted in revaluation reserves as backlog charges under (or over) provided in prior years. Alternatively, as has been

suggested in the Background Papers, the whole of the above adjustment should be made in the profit and loss account and designate if necessary as an exceptional item.<sup>1</sup>

It may not be theoretically correct in the particular circumstances but as a simple expedient procedure and as a continuation of historic cost accounting practice that costs once identified and absorbed through depreciation charges should not be subject to further accounting and correction of estimates affecting the allocation should be reflected in revised charges during the remaining useful of the asset --- we would favour the second alternative of spreading over the remaining useful life of the asset by revised depreciation.

The principles of CCA require that all assets in use are attributed a value until the end of their useful lives.<sup>2</sup> Only if asset values are immaterial, nil values will be acceptable. On the introduction of CCA there may be assets still in use which has been fully written off; this may be common in developing economics, where companies usually carry on with fully depreciated assets as unexpected obsolescence is seldom a problem and due to abundance of low cost labour, scarcity of capital, older technology may be as profitable as the improved ones. In such cases values should be established, on the appropriate basis of valuation, which reflect, inter alia, the estimated remaining useful life of the asset at the date of the introduction of CCA. If a net current replacement cost valuation basis is appropriate, the net current replacement cost should be determined by:-

- (i) estimating the gross current replacement cost;
- (ii) estimating the future and therefore the total useful working life of the asset;
- (iii) calculating that proportion of the gross current replacement cost that relates to the future useful working life;

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1. Background Papers, op. cit., P.7.

2. Inflation Accounting Steering Group, Guidance Manual on Current Cost Accounting, London, Tolley and ICAEW, 1976, Para-7.25.

The requisite net adjustment to the gross value of the asset and its accumulated depreciation should be treated as a revaluation surplus.

So far we have assumed that the depreciation assets are stated at current replacement cost. As we have indicated there may be some occasions when the correct end of period value will be net realisable value and according to CCA principle, depreciation has to be charged to reflect value consumed during the period. The treatment of depreciation of such net realisable value is a controversial issue. The Sandilands Committee recommended that "where the basis of valuation is changed during the year, we recommend that the depreciation provision should be calculated on the basis of the value shown in the balance sheet at the end of the year."<sup>1</sup> On the other hand ED-18 stated that "In a period when the basis of valuing an asset is changed from its net current replacement cost to its economic value on net realisable value, depreciation should first be calculated by the normal method adopted by the company on the assumption of the continuing application of a net current replacement cost basis of valuation."<sup>2</sup>

In situation where net realisable value should be the proper value to the business of an asset - the 'Background Papers' to ED-18'<sup>3</sup> recommends that situations prevailing for continued use of net realisable value should be taken into consideration in determination of depreciation charges. In the situation where an asset has been taken out of service but still held to be gained from the movement in prices, the asset should be treated "more in the nature of a stock item than as fixed asset, and any profits or losses eventually resulting from its sale, should be credited or charged to the profit and loss account."<sup>4</sup> In other circumstances, where an asset

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1. Sandilands report, op. cit. , Para-606.
  2. ED-18, op. cit. , Para-12.
  3. Background papers to ED-18, Op. cit. , P. 14.
  4. Ibid, P.14.

is taken out of active service but retained as a stand-by, the 'Background Papers' suggest that "where the operations of the business require stand-by facilities, such assets should not normally be valued at their realisable value, but at their net current replacement cost and they should be depreciated according to the company's normal policy for depreciating assets so value".<sup>1</sup>

In practice, net realisable value will be adopted only for depreciating assets where they are to be disposed of and their operating capacity not replaced. Following the criteria of continuing on termination of use of an asset, it is not envisaged that net realisable value would be used for more than one period. In this case the value at the beginning of the period, in the period of change, would normally be net current replacement cost and in these circumstances the difference between the two would represent the depreciation charge. However, if for some reason, the asset is still held at the end of the following period and net realisable value is being used at both the beginning and end of the period, the depreciation charge should be the difference between the two. If an asset is recorded at net realisable value at the beginning of the period and at current replacement cost at the end of the period, depreciation for the period would be computed on end of period cost. This could happen where the enterprise changes its decision about disposing of the asset and it becomes 'essential' to the business again.

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1. Ibid, P.14.



Valuation of land and buildings:

Unlike the situation with plant and machinery there can not be an identical replacement for a property; unless the existing building is actually demolished and re-built in its existing state. On the other hand there is usually a fairly active market for comparable replacements and the market probably provides a better indication of the current value to a business of its property than would the net replacement cost of the existing property. The open market value of a property plus acquisition costs can therefore be regarded as equivalent to the net replacement cost of the property. Similarly, the net realisable value of the property is equivalent to its open market value less costs of disposal.

In CCA the value to the business of land and buildings in general is equated with 'existing use' basis. Existing use does not necessarily require that the property be valued on the basis of the actual trade being carried on in the buildings. Many buildings are general purpose structures capable of being used, virtually unaltered for a number of different trades, such buildings should be valued on the basis of their common use, e.g., as a light industrial factory, or as office accommodation. The net current replacement cost of land and buildings should not normally be considered to be the cost of rebuilding in the existing state the existing buildings on the same plot of land, but should be regarded as the cost of building a similar property on the open market; since this would be the likely course of action if the owner were to be deprived of the property.

In most circumstances three main methods are available for assessing the open market existing basis of valuation of land and buildings. These are:

- (a) professional independent valuation;
- (b) internal management valuation;
- (c) through the use of specific index.

In U.K. and Ireland, ED-18 recommended full scale independent professional valuation for land and buildings held by non-property companies at least at intervals of not more than five years.<sup>1</sup> In New Zealand, the Richardson committee recommended adjustment of the value of land and buildings through the use of official price indices for that purpose.<sup>2</sup>

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1. ED-18, op. cit., para. 37.

2. The Richardson report, op. cit., para. 15.44.

Local circumstances and conditions play so large a part in the valuation of land and buildings that an index based valuation would give very unrealistic valuation and particularly with valuation of land in which case the local demand and supply situation dominates fluctuation in value. There is also very significant geographical differences in costs of materials and labour in respect of buildings. The professional independent valuation of property as such appears to be the ideal solution. But it is important to appreciate that professional valuations could be very expensive. In the context of developing countries it is also important to appreciate that independent valuation as a separate profession may be non-existent or may be inadequate to undertake large number of valuation assignment within a short period.

Land and buildings constitute a major item of fixed assets in many enterprises and they usually represents an asset which has been acquired long ago. Value of land and buildings can change very dramatically due to time-lag, usage, development of the region, industrial development, planning permission etc., --- in these circumstances it would be very unrealistic to recommend the continuation of historic cost figure for land and buildings in the context of developing countries due to the complexity and expenses involved in showing land and buildings at a valuation. Even allowing for slow and gradual development and imprecision in valuation in the early stages of CCA practice, we believe that an estimated figure of land and buildings would be more useful than a precise figure of their historic cost.

To be practicable in the context of developing countries, valuation of land and buildings should be undertaken without great expenditure of resources at the same time be reasonably approximate to the realistic value. We would recommend that in the initial stages of CCA development, internal management should be given the task of valuing properties, with due regard to evidence of current open market transactions in similar property. But where land and buildings represents a material element of a company's assets, the precision required would be much more important and we recommend valuation should be carried out by independent valuers --- at least within a period of five years. In the years between full scale professional valuation, in the above case, internal management should estimate the value of land and buildings after consultation with their professional valuers, taking into account, inter alia, market

variations in property prices and change in construction costs. If full scale professional independent valuation of land and buildings is not feasible; at least the major items of land and buildings should be professionally valued or internal management valuation be substantiated by full scale valuation of samples by independent professional valuers.

We stress that any CCA standard must compromise between practicability and expenses involved; beginning with simple guidelines and let management be acquainted with valuation process. Nevertheless, effort should be taken to show land and buildings at a valuation rather than at a historic cost.

Whilst open market value will be the normal method of valuation for property, there will be some properties for which no open market value can be established because, for example, their special nature or location is such that no market, or only a severely restricted market, exists for them. A large works complex, a specialised chemical processing factory, factories located in a remote area for particular reasons may be examples giving rise to special situations. These properties, are rarely (if ever) sold, except by way of sale of the business as a whole.

In these cases existing use valuation should be calculated as the sum of:

- (a) the open market value plus costs of the bare land for its existing use, and
- (b) the depreciated replacement cost of the building.<sup>1</sup>

The depreciated replacement cost of the buildings will be based on the valuers estimate of the current replacement cost of the buildings and of the extent to which this should be reduced to take into account the age, physical wear and tear of the existing buildings and their obsolescence. An estimate will need to be made of the remaining economic useful life of the buildings, and to this end the valuers will need to consult with the directors because the maximum physical life of the buildings might be greater than the technological life of the process being carried out within them; in such cases the shorter life should be used in the calculation of the depreciated replacement cost.

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1. Guidance Manual, Op. cit., Para. 6.22 to 6.24.

Any land and/or building which has become surplus to the company's requirements and for which there is an intention to sell, should be valued at their net realisable value i.e., their open market value less disposal expenses. Any land and building owned by companies but not for their own occupation, should be valued at their open market value, which will include their value for any potential use, plus acquisition costs. These holdings will include income producing properties and properties acquired against possible but uncertain future requirements.

Depreciation of land and buildings:

It is accepted that land is not consumed except in special circumstances such as in the case of a mine or quarry, or where it has a high existing use value for a limited period of time such as a chemical waste dump; as such it is not normally necessary for land to be depreciated in current cost accounting.

Since buildings do not have an infinite life, value must be consumed each year and the amount consumed should be charged against the operating profit. The amount of depreciation charged against the operating profit should be the estimate of the decline in value attributable to operations. Depreciation should be provided on all freehold buildings based on their future economic useful life. The economic useful life should be the period of time arising from a number of circumstances, after which it is unlikely to be economic to maintain the building. The relevant circumstances needs to be considered which will include functional and economic obsolescence; costs of maintenance and repairs; the likelihood and practicability of alternative uses etc.

A major difficulty in calculating depreciation on the value of the building only, rather on the aggregate value of the land and buildings, is in determining a split of a total value between the land and buildings. In the short term a direct relationship may not exist between the aggregate value of the land and buildings and the net replacement cost of the buildings. The Background Papers to the Exposure Draft on CCA states that "... the open market value of an existing property is unlikely to be the sum of the open market value of the bare land (i.e., the land without the building) and the net (or depreciated) replacement cost of the buildings. In some instances, when the local property market is depressed, it is even possible for the open market value of the land buildings together to be lower than the depreciated replacement cost of the buildings, although

this does not imply that land without the buildings would have no value."<sup>1</sup>

There are two ways in which the problem of segregation of value of land and value of building can be viewed. The first is to ascertain the open market value of the bare land and treat the value of the buildings as being the difference between the open market value of the land and buildings together and the open market value of the bare land. The second viewpoint is the opposite, namely, to ascertain the depreciated replacement cost of the buildings, and to treat the residual value as being attributable to the land. The nature of an open market valuation is such that it is not possible to arrive at a valuation for buildings as distinct from the site on which the buildings are situated. There is need, however, for a value of the buildings on which to base the charge for depreciation.

The major influences on the value of most properties are local forces of supply and demand, rather than building costs. Thus, while the market value of a property may fluctuate, changes in building costs tend to move relatively consistently --- in recent year, upwards. These costs cannot therefore be considered to be the cause of the fluctuations in market prices which have been observed in recent years. Within a fluctuating market value, therefore, the depreciated replacement cost of the buildings is a relatively stable factor.

"Although in a CCA balance sheet it is right that land and buildings should be shown at their current value --- i.e., their open market value --- rather than the depreciated replacement cost of the buildings and the open market value of the bare land, the influences on market value may be short term factors, while the replacement of the buildings is a long term feature of a company's policy. Eventually a building has to be replaced and the depreciated replacement cost of the buildings is a better figure on which to base depreciation than a figure which may fluctuate with the market value of the property".<sup>2</sup> It is for the above reasons that the second of the two possible

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1 Background Papers, Op. cit. p.14.

2 Ibid. p.15.

ways i.e. from the total value of land and buildings replacement cost of the buildings are ascertained first and the residual value is being attributed to the land.

Depreciation on buildings should be provided on an amount advised by the internal management or by the independent professional valuer as the case may be. The amount on which depreciation on buildings is to be charged is called 'the depreciable amount' following the terminology of ED-18 which has been defined as --- "The depreciable amount is that part of the value of land and buildings which should be subject to depreciation. It is normally equal to the depreciated replacement cost of the buildings, but there the land and buildings are valued at their open market value, the depreciable amount is equal to the lower of:

- (a) the depreciated replacement cost of the buildings: and
- (b) the open market value plus acquisition costs of the land and buildings together"<sup>1</sup>

The depreciable amount of a property will be advised by the internal management or professional valuer when they carry out their valuation for balance sheet purposes.

In the years between full scale valuation either by the internal management or professional valuers, as the case may be, the directors will need to estimate the depreciable amount for depreciation calculation. In U.K. and Ireland ED-18 recommended that depreciable amount may be estimated by the application of an authorised index of construction costs to the latest figure for the depreciable amount advised by the professional valuer.<sup>2</sup> We understand that in many developing countries, price index number on construction costs is regularly available. These are published mainly to assist in fixing government contracts, cost plus construction projects and standard reference for tender quotation and therefore reflects price movement all over the country. For the purpose of restatement of the building

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1. ED-18, Op. cit. para. 111.

2. Ibid, para. 151.

value, it will usually be possible to adjust by the type of space which make up the building. For example, office space, warehouse space, factory space and an estimate of the construction cost per square feet or cubic feet of the space of the building.

For calculation of depreciation charges it will be necessary to determine the expected economic useful life of the building. The charge for depreciation depends on the depreciable value of the buildings and its expected future economic useful life. One of the difficulties in calculating the charge for depreciation on buildings is determining their future economic useful life, since most buildings have potentially long and uncertain lives. Due to the fact that both 'depreciable amount' and economic useful life of building would be totally revised with full scale valuations at intervals of several years; whereas in the years between full scale valuation; only the depreciable amount would have to be revised by directors without any change in the estimated economic life of the buildings leads to a situation where calculation of depreciation would follow two different ways.

- (a) When there is a full scale valuation: Example 6.3 in the Guidance Manual to CCA demonstrates the situation as below:

ABC Limited owned freehold land and buildings at 31st December 1977 which were recorded on the company's accounts at that date at an open market value of £500,000. The depreciable amount at 31st December 1977 was estimated at £360,000. At 31st December 1978 the company's valuer placed a value on the land and buildings at £575,000 and estimated the depreciable amount at £390,000. The valuer considered that at 31st December 1978 the remaining economic useful life of the building was 40 years.

The depreciation charge therefore is to be based on 40 years (i.e.  $2\frac{1}{2}\%$ )

The depreciation charge for the year is therefore:	£	£
£390,000 X 2½%		9,750
The valuation at 31st December 1977 was		500,000
The valuation at 31st December 1978 was		575,000
The movement during the year was therefore		75,000

Made up of:

Depreciation	Dr	9,750
Revaluation surplus	Cr	84,750

The accounting entry is therefore:

Dr Freehold land and buildings	75,000	
Dr Profit and loss account	9,750	
Cr Revaluation surplus		84,750

- (b) Depreciation in years between full scale valuation: In years between professional or managerial full scale valuations, the charge for depreciation on buildings in the profit and loss account is arrived at by dividing the directors' estimated depreciable amount at the balance sheet date by the remaining economic useful life of the building at the date of the last full scale valuation. The reason for this is that the directors' estimated depreciable amount, unlike the full scale depreciable amount, does not take into account depreciation since the last valuation.

Continuing the above example, the directors' estimate that the depreciable amount (before depreciation) at 31st December in the years 1979 to 1981 are:

	£
1979	400,000
1980	420,000
1981	450,000



In 1982 a professional valuation is carried out the results of which are that the depreciable amount at 31st December 1982 is £400,000 and the remaining economic useful life of the building at that date is 36 years.

The depreciation charge for 1982 is therefore:

$$£400,000 \div 36 = £11,111$$

Valuation of stock and work in progress:

In the balance sheet, according to CCA principles, stock and work in progress should be stated at its value to the business at the end of the period. The value to the business of an item of stock and work in progress could normally be measured as the lower of the cost at which it could be replaced (current replacement cost) and its net realisable value.

The Sandilands report envisaged that the normal FIFO convention will provide a reasonable approximation to the value of stock on a current replacement cost basis, if the company concerned turns over its stock fairly quickly and if the rate of change in price of the stock concerned is not excessively high.

The Sandilands report recommended that in the initial stages of implementation of CCA, the value of stock and work in progress is to be shown in the balance sheet using FIFO convention, with the current value shown by way of note where it is materially different. No adjustments therefore is required in the Sandilands recommendation, to the amounts determined in conventional FIFO values, at which stocks are stated in the balance sheet.

On the other hand, the Morpeth committee did not accept the contention in the Sandilands report that in the majority of cases a FIFO method of valuation would provide a sufficiently close approximation to the value to the business of stock and work in progress at the balance sheet date.

The Committee argued that the normal valuation rules under CCA should also be applied and that no exception should be made from those rules for stocks and work in progress.

The Background Papers to the Exposure draft contended that in reaching the view of extending the CCA valuation rule to stock and work in progress the practical difficulties of determining the value to the business were considered. The Morpeth committee concluded "... in normal circumstances the additional work required to be undertaken to determine such a value should not be excessive before the techniques which will be required to be developed to calculate the cost of sales on a current cost basis should also enable the value to the business of stock and work in progress at a balance sheet date to be calculated using the same approach".<sup>1</sup> In saying that, they mean, as replacement cost figures would be required to calculate current cost of sales adjustment as formulated in ED-18 in preference to the official stock price indices favoured in the Sandilands report, the balance sheet figure for stock and work in progress can be gathered from that process.

As we have favoured in line with the Sandilands' proposals that in the calculation of cost of sales, the conventional method should be followed at the end of the period, a cost of sales adjustment made to update the cost of sales to a figure of current cost of sales as such evaluated stock records would not be readily available. In these circumstances; to show the end of period stock at lower of current replacement cost or net realisable value would be a difficult proposition; though we agree that in accordance with the CCA principle; stock figures need to be shown at a 'value' and not at approximated FIFO figure. But we favour that in initial stages of CCA practice, simplification and practicability need to be stressed and refinement and standardisation should gradually be expected. We would recommend that, where stock and work in progress represents continuing line on item, conventional FIFO figure of stock and work in progress should be shown in the balance sheet. If individual companies would have sophisticated stock recording and accounting practice, or use standard costing or are ready to show the replacement cost figure in the balance sheet, they should be encouraged to do so.

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1. Background Paper, Op. cit p.23.

The availability of official price indices for stock items would be a great step forward towards making CCA a practicable method of inflation accounting. The use of specific indices would substantially reduce the work required and the scope for subjective judgement in calculating stock adjustment. A large manufacturing company, for example, carrying hundreds or even thousands of items of stock, may not in practice ascertain the latest incurred cost of purchases of each item without unreasonable effort --- the use of official indices would be a great help in this respect to make cost of sales adjustment calculation.

In the context of developing economies, it seems that the availability or non-availability of specific price indices for stock items would be a major factor in implementing any inflation accounting standards on CCA principle. The individual governments attitude and willingness to supply stock price indices is a matter of anticipation. With a view that such indices would not be forthcoming and may not be available at all, CCA standards without reliance on the availability of published indices should be favoured. We envisage that adjustment involving actual price movement should be considered in a current cost of sales adjustment involving the same procedure as taken in the Sandilands report in 'cost of sales adjustment'.

With the recommendation that actual price movement of specific stock items should be used as official indices on stock items may not be forthcoming, we envisage the problems of practicability of such recommendation. The problem with stock and work in progress is that, the general principle of CCA applicable to stock is essentially straightforward, i.e. charging for the value consumed during the period which is generally replacement cost of goods sold; nevertheless the wide variety of stocks held and the number of methods of trading employed by industry would need considerable effort to produce a suitable and practicable stock adjustment system. Added with that, the problem in the context of developing economies is that the implementation of CCA would be expensive as it would need proper and additional record keeping of stock and price movement.

It has to be envisaged that on the introduction of CCA many companies would not wish to depart from long established stock accounting routines designed to meet the particular requirements of the enterprise. More important is the fact that; if the requirement is that the enterprise has to implement a very new and untried radical system which it finds to be unnecessarily complex and impracticable; it may be hard to persuade the business enterprises or the accounting and business community to accept any inflation accounting standard on a CCA principle.

The recent experience in U.K. with CCA development may be an important lesson for developing economies. The Sandilands committee recommended the essential guidelines for cost of sales adjustment on the conventional FIFO based stock accounting procedure. On the availability of indices and on particular complex issues like work in progress, the stress was on refinement of standards through practice. On the other hand ED-18 came out with solution to every possible situations, stressed much on theoretical refinement and required specific replacement cost on current cost of sales adjustment, relegating the adjustment through official indices of a secondary choice.

Attack on ED-18 was made, inter alia, that it was too complex and trying to achieve too much in too short a time. On demise of ED-18, we find that in the Hyde guidelines, the concept of specific replacement cost has largely been abandoned in favour of an index adjustment --- the 'averaging method' which is in fact is straight back to the Sandilands with only a minor difference in presentation. The important lesson for developing economies from the British experience in this respect is that --- if the sheer complexity and complications of computation are initially put forward in any inflation accounting standard, it would be a deterrent factor and accountants and management may wish to fall back to known deficient conventional practice.

It cannot be denied that problems exist in computation of cost of sales adjustment in specific circumstances and there may not be any easy solution to a complex problem. To many companies, the purchase, manufacture and sale of trading stock represents the essence of their business. To these

business, relatively small errors in stock valuation and adjustment can have disproportionate effect on reported results. The important point is that adjustment rule will have to be developed over a period of time starting with most common and immediate problems. In determining the approach to be taken, management will need to assess the extent and accuracy of the CCA information they require and weigh the cost of obtaining that information against its usefulness. The degree of precision with which stock and work in progress adjustment need to be established in practice will vary from enterprise to enterprise and will depend on the length and time for which stocks are held, the timing of purchases, the pattern of movement in the price of the particular stocks covered and the overall importance of the stocks to the business.

The primary issue concerns the degree of accuracy which should be sought, valuation of individual items of stock and work in progress will in many cases impose an unacceptable and unnecessary burden. The relevant question then becomes whether the margin of error following the common and accepted practice is great and if they need to develop special adjustment methods. Individual concerns should be encouraged to experiment with new approach to cost of sales adjustment on the basis of CCA principles. We would therefore favour an initial standard on cost of sales based on the Sandilands' type of cost of sales adjustment and adapted to meet the particular requirement of the enterprise according to its established practice.

There are countless obstacles to the introduction of a radical accounting system like CCA. Any deviation from the familiar conventional accounting practice would entail complexity and newer problems to tackle in the process of its implementation. It has to be admitted that in some cases no easy solution to a complex problem may readily be available and it should follow a path of gradual development and standardisation. It has taken many years for the accounting profession to develop acceptable compromise solutions to the more complex problem of conventional accounting. In meeting the new problems raised by a system of CCA, it is necessary to accept that compromise solutions are typical of accounting and that it is better in the interest of meeting the information requirement of users of accounts to be approximately

'right' than be precisely 'wrong' in financial reporting.

The cost of sales adjustment:

The principles of CCA require that the charge for cost of sales in the profit and loss account should reflect the value to the business of stock consumed during the year. The value to the business of stock would be equal to the loss suffered by the business if it were deprived of its line of stock. As a result of charging the current replacement cost of stock consumed, a company will provide adequately for the costs which will be incurred in replacing the stock and continuity of the business. In CCA the profit and loss account for the period will normally be charged with the replacement costs which would be incurred in replacing the stock and work in progress consumed. A change in the value to the business of an item of stock and work in progress resulting from the change in replacement cost should be treated as a revaluation surplus or deficit and not a part of current profit. This adjustment in respect of historic cost of sales necessary to measure profit in current cost terms and to exclude stock appreciation from profit calculation.

Under CCA, cost of goods sold needs to be calculated in terms of the current cost of the particular goods, at the time of their sale. The actual method to be used for determining the cost of goods sold will depend on the particular circumstances and will be affected by such factors as :

- whether detailed stock records are maintained and the extent to which they are integrated with the financial accounting records;
- the volume and variety of stock lines;
- the pattern of stock movements;
- the frequency of price changes, affecting the particular stock;
- the availability of, or facility for constructing suitable indices.

Where a perpetual stock record is maintained and updated to record current cost and is integrated with the financial records, the actual current cost of the stock sold can be readily determined and the charge against revenue made on that basis. If a standard costing system is in force it may be possible to derive the current value to the business by updating the standard costs to

current costs by reference to the current level of cost variances from the standard. Where the current value of stock and work in progress can be determined accurately at the time of consumption and is charged to cost of sales no further adjustment to the cost of sales is necessary. The difference between the current value and the recorded value of stock and work in progress consumed normally are recorded as a revaluation surplus or deficit.

Where records are not maintained in sufficient detail to enable the current cost of each specific item to be ascertained at the time of its consumption, as for instance where stock includes a large number of different items or where work in progress comprises numerous different elements of material, labour and overhead, the detailed valuation of each item at current replacement cost may cause considerable difficulties. In these circumstances, it will be necessary to use some simpler method of calculation giving a reasonable approximation to the current cost of sales. The use of approximate figures in such a situation is justified, if they yield significantly useful information. Recognising that few companies will have the resources or ability to adjust for current costs, the Sandilands committee recommended an averaging technique to calculate a 'cost of sales adjustment'.<sup>1</sup> which when added (or deducted) to the conventional figure for cost of sales, would lead to an approximation to the current cost of stock sold during the period.

The cost of sales adjustment, using the 'averaging method' is obtained by subtracting:-

(i) The change during the year in the average value of stock held, determined by adjusting the book values of opening and closing stocks by reference to the average price of stock during the year,

from

(ii) The unadjusted change during the year in the book value of stocks held

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1. Sandilands report, Op. cit. para. 596-97.

Where (i) is less than (ii), the cost of sales adjustment will be positive and will lead to a higher charge for stock consumed than would be made in the conventional historic profit and loss account. The opposite situation would apply in times of falling prices.

More simply put, the cost of sales adjustment is such that when set against the stock movement in the trading account it will reduce that movement to an amount equivalent to the increase or decrease in the quantity of stock multiplied by the average price for the year. If there is no increase in quantity there will be no net credit to trading account for stock movement. If there is a reduction in quantity but an increase in price, the stock amount will reflect quantity at average price.

The steps in the calculation of the cost of sales adjustment by the averaging method are as follows:-

- (i) The closing book value of stocks in the balance sheet is multiplied by the average price of stocks held during the year and divided by the average price of stock held at the end of the year.
- (ii) The opening book value of stocks in the balance sheet is multiplied by the average price of stocks held during the year and divided by the average price of stocks held at the beginning of the year.
- (iii) The difference between the opening and closing valuations of stock on an 'adjusted' basis i.e., after carrying out the calculations at (i) and (ii) above is then subtracted from the difference on an 'unadjusted basis' (i.e. the balance sheet figures).
- (iv) The result of the calculation at (iii) above is the 'cost of sales adjustment'<sup>1</sup>

The cost of sales adjustment is more clearly understood by considering an example given in Table 28 in the Sandilands report.

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1. Ibid, para. 597.



TABLE-24

The cost of sales adjustment

A. Assumptions:

- (a) The opening book value of stocks in the balance sheet is £200
- (b) The closing book value of stocks in the balance sheet is £300
- (c) The price of stock at the beginning of the year is £100
- (d) The price of stock at the end of the year is £110
- (e) The arithmetical average price for the year is £105

B. Calculation of cost of sales adjustment:

- (i) The closing stock value is multiplied by the average price and divided by the closing price:

$$300 \times 105/110 = 286$$

- (ii) The opening stock value is multiplied by the average price and divided by the opening price:

$$200 \times 105/100 = 210$$

- (iii) The difference between the opening and closing balances on the adjusted basis is subtracted from the difference on the unadjusted basis:

$$\text{(Unadjusted)} \quad 300 \text{ less } 200 = 100$$

$$\text{(Adjusted)} \quad 286 \text{ less } 210 = 76$$

$$\begin{array}{r} \text{---} \\ 24 \end{array}$$

- (iv) The cost of sales adjustment is 24

C. Entries in current cost profit and loss account:

	£	£
Sales (say)		2,000
Opening stock	200	
Purchases (say)	1,500	
	<u>1,700</u>	
Closing stock	300	
	<u>1,400</u>	

	£	£
Cost of sales adjustment	<u>24</u>	
Total cost of sales (current cost basis)		<u>1,424</u>
Current cost Profit before tax		<u>576</u>

For the purpose of the above example, two assumptions were made:-

- (1) That the average price of stocks held at the beginning and end of the period is equivalent to the prices of stocks at the beginning and end of the period respectively;
- (2) That the average price of stocks purchased during the period is given by the arithmetical average of the prices at the beginning and end of the period

The assumptions were necessary, for the fact that, the average price of stock held at the beginning and end of the period will depend on the age of stock held at these dates and on the movement of prices of the stock during the time when the opening and closing holdings of stock were purchased. Where unusual circumstances apply, for example:-

- (i) Where stock is turned over very slowly;
- (ii) Where large fluctuations in the price of stock occur over relatively short periods; or
- (iii) Where stock is held in varying quantities at different times at the period;

It may be necessary to establish these figures more precisely. The more frequently the necessary calculations are made i.e., the shorter the time periods covered by each calculation, the more accurate the results are likely to be.

Since in most cases a company's stocks will consist of a great variety of items, measured in a number of different units, it will be virtually impossible

to arrive at a figure for the average price and hence any measure of the quantity or volume. The use of price indices, where available, is a way of overcoming the problem. The Sandilands committee recommended that where the average price of stocks held cannot be ascertained by a more precise means, a company would be required to use an official price index appropriate to the industry. In the Hyde guidelines also an index adjustment of the 'averaging method' has been favoured.

Revaluation surpluses and deficits:

Since the assets are carried at their value to the business, the distinction made in historic cost accounting between realised and unrealised gains and losses, loses much of its significance under current cost accounting . The application of valuation principles in the preparation of financial statements for the enterprise results in the reporting of revaluation surpluses and deficits.<sup>1</sup> The revaluation surpluses (deficits) arising in the year show how the business has been affected by the changing relationship between money and the particular assets held by the business. As such proper treatment of revaluation surpluses and deficits is important in CCA.

The difference between the value to the business of an asset at any to dates is a revaluation surplus or deficit. Revaluation surpluses (deficits) need not involve the consumption or disposal of the particular asset to which the surplus (deficit) is attached, so that revaluation surplus (deficits) can be realised or unrealised. Revaluation surpluses (deficits) are recognised as they accrue instead of when they are realised. Presentation of the revaluation surpluses and deficits in current cost financial statements varies. These surpluses and deficits have been recommended in various exposure drafts, provisional standards and discussion papers.<sup>2</sup> to be disclosed in an Appropriation account, as part of a statement of changes in shareholders equity or as changes in a non distributable reserve. The approach outlined in the Sandilands report is that, the distributable profit

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1. The terminology we use in this discussion follows that of ED-18. In the Sandilands report revaluation surpluses and deficits have been known as holding gains and losses respectively. The terms 'holding gains' and 'holding losses' are misleading in the context of CCA, because the object of revaluation in CCA is to express the assets of the entity in current values, and as such the notion of regarding such items as gains or losses would be incompatible with CCA principles.

2. See Appendix A in chapter 11 .

would be established by adding to or subtracting from the current cost profit any transfer to or from the various 'reserves' shown in a separate 'Statement of total gains' immediately following the profit and loss account.<sup>1</sup> This approach has been endorsed by the Morpeth committee in its proposal for an 'Appropriation account' which brings together, inter alia, the net surpluses arising from the revaluation of assets and the amount which the directors have decided to appropriate to 'revaluation reserve'.<sup>2</sup>

The net surplus for revaluation of assets comprises of :

- Revaluation of fixed assets
- Revaluation of investments
- Revaluation of stock and work in progress
- Exchange translation differences

The net balance is transferred to the consolidated Appropriation account shown as follows:-

Consolidated Appropriation Account

Current cost profit/ (loss) for the year	X
Net surplus for the year on revaluation of assets	X
Appropriated to revaluation reserve	(X) <u>X</u>
Available for distribution and general reserve	X

Only the balance of 'Revaluation reserve' is shown in the balance sheet following ED-18 which differs from the Sandilands approach of showing individual balances of "Fixed asset revaluation reserve" "Stock adjustment reserve" etc. As an explanation, ED-18 states that, the surpluses or deficits arising in the current cost accounts are of significance because:-

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1. Sandilands report, Op. cit., para. 624.
  2. 'Revaluation reserve' has special meaning in ED-18. As explained in footnote to Appendix - 1 'Example of presentation of set of CCA statements' --- it is "... the amount of the net surplus that the directors consider should be retained having regard to the needs of the business: it may exceed or be less than the net surplus. The directors should explain the basis and the reasons for amounts transferred.

- (a) the amounts of revaluations significantly affect the costs used in the calculation of current cost profit;
- (b) some companies may be more successful than others in anticipating changes in prices;
- (c) the amounts of revaluations will vary in different industries and according to the types of assets held;
- (d) gains or losses on foreign exchange translations are included in revaluation changes.<sup>1</sup>

"These considerations" Morpeth committee states, "suggest that the surpluses or deficits in question should be shown as prominently in the accounts as the current cost profit".<sup>2</sup>

In the Appropriation account the directors are given the discretion to transfer more or less from the net revaluation surpluses (deficits) shown in the Appropriation account. The Morpeth committee were apprehensive that "There will be occasions when to distribute the whole of the current cost profit would be to erode the capacity of the business to continue on its existing scale, before, for example, this profit measure makes no allowance for the effect of inflation on monetary assets. There will be other occasions when to restrict dividend distribution to the current cost profit would be unduly conservative, because, for example, a company has its stock effectively financed wholly or partly by trade creditors so that the stock revaluation adjustment is in excess of that required to finance the replacement of stock!"<sup>3</sup>

The Morpeth committee envisaged that the disclosure of the transfers to and from the 'revaluation reserve' together with the director's explanation of the reasons, was sufficient to alert shareholders to any imprudent diminution in capital of the entity.

By dividing profit into two parts, the distributable profit of the year of historic cost accounting has been lost in ED-18 and critics have asked where is the distributable profit, the 'bottom' line? The appropriation approach has also been criticised as permitting too much discretion in establishing

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1. ED-18, Op. cit., para. 134.

2. Ibid para. 134.

3. Ibid para. 136.

the distributable figure. The current cost operating profit figure of the year, unlike historic cost profit cannot be used following ED-18 as the figure to compute earnings per share. Since earning per share is the figure which provides the major basis for comparison between companies, it has caused much controversy.

The debate following ED-18 signifies that a clear wish exists that CCA should identify one line as the 'profit of the year' and that this amount should be quantified by clearly defined rules.<sup>1</sup> The approach to deal with revaluation surpluses and deficit within CCA principles requires that agreement should be reached on the extent to which revaluation surpluses and deficits should be shown in the profit and loss account and balance sheet and avoid any appropriation account altogether.

- (a) Unrealised gains: If the value to the business of non-monetary assets supporting the operations of an entity has increased, the capital requirement of the entity, in money terms, will also have increased by an equal amount. To include an increment arising from a restatement of non-monetary assets in determining current cost profit would result in running down the entity's operating capability if such profit were distributed in full. As such revaluation surpluses or deficits should normally be taken direct to the revaluation reserve at the end of the period. Revaluation surpluses or deficits arise from revaluation of unrealised assets and as these surpluses (deficits) represent the further amounts necessary to maintain the existing operating capability of the business they should be normally treated as capital reserve and they should not be regarded as available for distribution to shareholders other than as capital issue.

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1. London Society, Submission Op. cit., p.51.

Exceptions to the above procedure may be made in the following specific cases when profit and loss account should be credited or charged with revaluation surpluses or deficits which can be clearly shown to have arisen as a result of:-

- (a) the purchase or holding of an asset solely with a view to gaining the benefit of an increase in its market value.
- (b) a decision to make a significant departure from a normal buying pattern by purchasing stock in advance of normal requirement in order to avoid an expected increase in price.
- (c) the purchase of stock at a price substantially different from the relevant market buying price at the date of purchase.
- (d) provision for backlog depreciation where the company operates a limited number of major assets and the nature of replacement cycle of those assets results in amounts set aside by way of depreciation insufficient for their replacement.
- (e) conscious decision to scale down the level of operations or the opposite i. e. , to finance the growth of the business.

In above exceptions, it would be desirable that, the composition of amounts so treated and the reason for including the amounts as part of the operating result should be disclosed in a note to the accounts.

- (b) Unrealised losses: The treatment of unrealised losses on revaluation is a controversial matter. The stands taken in various exposure draft, provisional standards and academic writings vary widely. The Australian Provisional Standards on CCA states that "... if the current cost of non-monetary assets supporting the operations of the entity has decreased, this will merely mean that a small amount of capital in money terms will be required to sustain operations at the same level. To bring to account a decrement arising from a restatement of non-monetary assets, as a loss in determining CCA profit could result in a retention of funds which would effectively

represent additional operating capability."<sup>1</sup> Exposure draft No. 14 'Accounting in terms of current costs and current values' in New Zealand is of the opinion that "Unrealised losses of significant amounts on the revaluation of assets should be charged to Asset Revaluation Reserve Account" and "Any adverse balance in Asset or Inventory Revaluation Account should be deducted from shareholders' funds."<sup>2</sup> The Canadian Discussion Paper 'Current value accounting' is in favour of "Disclosure of the unrealised component of income would provide useful information . . . cannot safely be paid out in dividends"<sup>3</sup> Gynther<sup>4</sup> in a very detailed chapter on this aspect suggests that attitudes on the treatment of revaluation surpluses and deficits depend on whether the affairs of the business organisation are viewed from the point of view of the shareholder or the firm itself. "If through technological or other improvements in production methods (for example) the specific costs of inventory items held by a firm decrease, there is a reduction in capital and the write down in inventory values should be debited to a revaluation reserve. The facts of the matter are that it now takes less capital to be in this kind of business. To treat the write down as a loss against profits could seriously understate the profits of the firm for the period."<sup>4</sup>

The Sandilands report recommended that, "Unrealised losses arising from revaluation of fixed assets (and stock where applicable) should be written off against revaluation reserves or, when these are exhausted, against free reserves (but not against the stock adjustment reserves). If all such

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1. Australian Provisional Standards, Op. cit., para. 12.99.
  2. ED-14: New Zealand, Op. cit., para. 5.17.
  3. Canadian Discussion Paper, Op. cit., p. 70.
  4. R.S. Gynther, Accounting for Price-Level Changes: Theory and Procedures, Oxford, Pergamon, 1966, pp. 171-180.



reserves are exhausted such losses will need to be written off against the profit and loss account and ultimately against capital.<sup>1</sup> " In the Sandilands report, where the basis of estimating value to the business of an asset is changed, say from current replacement cost to economic value, it is required to be made only after consultation with the company's auditors and needed to be stated in a note to the accounts.<sup>2</sup> ED-18 on the other hand required that changes in the value of an asset, other than changes resulting from a movement in the GRC of the asset, to be credited or charged to the profit and loss account, disclosed if appropriate as exceptional or extra ordinary items.<sup>3</sup> In the Background Papers to Current Cost Accounting, the explanation given is, "It was agreed that when assets are written down from their net current replacement cost to their economic value the write down should be charged to the profit and loss account, mainly because the Steering Group wanted to avoid the writing down of assets being 'concealed' by writing them down against reserves."<sup>4</sup>

We would favour the recommendations made by the London Society of Chartered Accountants in their submission on ED-18, on treatment of revaluation surpluses and deficits in the context of developing economies. Revaluation surpluses or deficits should normally be taken direct to the revaluation reserve at the end of the period. If the total of revaluation deficits exceeds the total of the revaluation surpluses for similar assets, then that excess should be disclosed and charged in calculating the current cost operating profit. A subsequent revaluation surplus arising in respect of similar assets should reverse any previous revaluation deficits charged in calculating the current cost operating profit and the amount should be disclosed.<sup>5</sup>

Revaluation deficits which arise from changing the basis of valuing an asset on to a new basis of valuation should be charged against operating profits as an exceptional item. Any subsequent revaluation surplus which arises on changing back to a former basis of valuation should be taken firstly to

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1. Sandilands report, Op. cit., para. 621.
  2. Ibid. para. 580-81.
  3. ED-18 Op, cit., paras 175-78.
  4. The Background Papers, Op, cit., p.13.
  5. London Society, Submission on ED-18, Op, cit. p.23.

reverse the deficit which arose on the original charge in basis of valuation and any excess to the revaluation reserve.

Revaluation surpluses which arise as a result of the changing relationship between money and non-monetary assets, with the exception mentioned earlier, should appear in the balance as 'revaluation reserve' and need not be taken first to any appropriation account as proposed in ED-18. Movements in the 'revaluation reserve' should be shown by way of a prominent note to the accounts.

Appendix 2, "Guidelines for Appropriations to or transfers from revaluation reserve" to ED-18 in recommending that in situations, where:

- (a) Replacement of assets are made by creditors financing
- (b) Replacement of assets by long term and/or short term borrowing;

directors may consider that amounts less than the net revaluation surpluses should be transferred to revaluation reserve --- were in fact, we feel, indicating of gains and losses arising in terms of 'monetary items' held in a period of rising prices. The discretionary element in the Appropriation account as such is an indirect treatment of changes in 'monetary items' in CCA accounts. As we have favoured a direct treatment of gains and losses arising through holding 'monetary items' in a period of changing prices, there would be no need of such discretionary indirect treatment and the importance of an Appropriation account thus diminished.

Transfer to and from the revaluation reserve:

Under CCA, revaluation surpluses and deficits arising from the adjustment of asset balances to their value to the business should be credited to a 'revaluation reserve account.' The 'revaluation reserve account' would represent the final balances arising from:

- revaluation of fixed assets;
- revaluation of stock and work in progress;
- adjustment in respect of net monetary items.

The following may be examples of situations which call for transfer to 'revaluation reserve' of amounts greater than net surplus on revaluation of assets having regard to the directors assessment of the needs of the business:

- (a) Provision for backlog depreciation. This is the sum needed to increase the cumulative depreciation from the sum of amounts charged in the profit and loss account in the current and previous years to the fraction of the current cost of the asset which has been consumed to date. Directors may take the view that the backlog depreciation set against revaluation surpluses is insufficient for the year and greater amount should be transferred to revaluation reserve. This may be considered necessary in the case of a company operating a limited number of major assets and where the nature of the replacement cycle of those assets results in amounts set aside by way of depreciation being insufficient for their replacement.
- (b) Net monetary adjustment. A lower level of credit or gearing may apply in future. The adjustment in respect of net monetary items would be calculated on the basis of financing experienced by the company during the current period and that situation may not be repeating in the ensuing years due to changes in business conditions, liquidity preferences or changes in financing arrangement in the business.
- (c) Additional provision for the replacement of seasonal agricultural produce. The stock revaluation adjustment in any one year may not provide for the anticipated replacement cost of seasonal agricultural produce.
- (d) Maintenance of shareholders' equity. The directors may wish to show that retentions would be consistent with the maintenance

of the purchasing power of the shareholders' equity. In this case the total amount to be transferred to revaluation reserve should be equal to the figure as the amount required to compensate for the change in the value of money during the year.

(e) Decision to make further retentions to finance the growth of the business. The following may be examples of situations in which the directors may consider that amount less than the net revaluation surpluses should be transferred to 'revaluation reserve':

(i) When an overall contraction of the business is planned. In such circumstances the transfer to revaluation reserve can be restricted, or that part of the amount transferred earlier no longer required can be transferred to current profit and loss account.

(ii) For some types of business; which trade in order to make revaluation surpluses as well as operating profit; significant transfers may be made from the 'revaluation reserve account' to the profit and loss account. In the case of commodity dealers and property companies, the substantial amount of the profit may come in the form of a transfer from revaluation reserve.

'Revaluation reserve' indicate the balances of revaluation surplus/deficits regarded by the directors as not being currently available for distribution having regard to their assessment of the needs of the business. Because this reserve represents the further amount necessary to maintain the existing operating capability of the enterprise, it is generally taken to be kept intact and not to be distributed.

The 'revaluation reserve' is not to be regarded as a 'legal' reserve, which has to be kept intact. This should rather be treated as an 'economic' reserve; representing the additional sum needed to maintain the operating

capability of the business. While there is an initial presumption that the surplus on the revaluation of assets will need to be retained in the business, the directors may sometimes decide to transfer more or less than the total of revaluation surplus figure to the 'revaluation reserve account'.

The directors should consider whether a transfer should be made from the revaluation reserve to the profit and loss account if they believe that the funds retained are greater than those required for the future operations of the business. Any distribution made from revaluation reserve should be fully disclosed. If such a transfer is made, the directors must explain the reason for doing so and shareholders will judge whether the distribution meets their requirements of balancing current and future revenue, with the need to maintain capital intact.

Whilst the current cost profit provides a more realistic indicator than historic cost profit of the result of the business and of the amount that could be distributed without eroding the capital of the business, it cannot be the final determinant. There will be occasions when to distribute the whole of the current cost profit would be to erode the capacity of the business to continue on its existing scale. There will be other occasions when to restrict dividend distributions to the current cost profit would be unduly conservative.

It is therefore the directors to indicate the extent, if any, by which the revaluation surpluses fall short of or exceed the amount needed to be retained for the maintenance of the business at the level they consider appropriate, augmenting or restricting the appropriation to revaluation reserve accordingly and explaining the reasons behind the decision. It will remain, as at present, for the directors to decide how much it is appropriate to distribute as dividends to shareholders of CCA profit. A number of factors would influence the directors' decision to transfer more or less to transfer to revaluation reserve or in certain circumstances to transfer from existing balance of revaluation reserve to CCA profit.

#### Valuation of intangible assets:

The theory of CCA would require that all assets including intangible assets should be shown in the balance sheet at their value to the business. Intangible

assets are among the most difficult assets to measure. The difficulty in showing intangible assets at value to the business arises from uncertainty as to their nature, verifiability and estimated life. As the complexity of showing intangible assets at a valuation in the business sheet is formidable; at least in the early stages of CCA practice in the context of developing economies; we take the view that it is better to show such assets at their historic cost in the balance sheet.

Valuation of liabilities:

Following the principles of CCA, it could be argued that all items should be carried at their current cost. There is logic in the suggestion that if assets are measured at current values, liabilities should also be measured at current values and it would be inconsistent with the underlying concepts of CCA if liabilities were valued on a basis different from that used for assets. Therefore, in principle, liabilities should be valued at their negative value to the business in just the same way as assets. It is more difficult to visualise how, say, the net replacement cost of liability should be assessed; but nevertheless the principle is exactly the same for liabilities as it is for assets. While the arguments about the treatment of the liability items are relevant to CCA, the theoretical and practical implications are complex, and have wide ramifications.

Moreover, the majority of liabilities are already expressed at their value to the business in historic cost accounts, because their value cannot change in terms of the monetary unit of measurement. We conclude that liabilities should be recorded in the balance sheet at their face value.

Historic cost information:

We recommend CCA to be the basic accounts in an enterprise. As CCA would be a radical system, the status of historic cost information and statements during the transitional period is a relevant question. It is very much needed that historic cost information should also be provided along with CCA until complete switchover to CCA.

We would recommend a two stage arrangement for historic cost information dissemination until complete transformation to CCA. The first stage would be that historic cost financial statements should be given equal prominence as CCA accounts. When introducing a radical accounting system like CCA it is necessary to have a period of parallel running during which figures under the old and new system are both produced. This should be continued for a short period of time. The period of parallel running should be kept to as short a period as possible in order to minimise the work load of companies and the possible confusion as to which are the true figures. During this period, we recommend, all published references to profits should clearly indicate whether the figures have been calculated in accordance with historic cost or current cost principles.

The retention of historic cost figures is desirable in the short term in order to provide some degree of continuity for the comparison of company performance during the period of transformation until CCA is fully understood.

Moreover, in the context of developing economies, the educational process of training management and accounts would be a time consuming factor. It is unlikely that in any developing countries, the new financial statements would be accepted readily for tax purposes, at least in the near future. An enterprise would therefore in any case be required to maintain at least two sets of records. Users should not be expected to give up an approach with which they are familiar until they become more conversant with alternative approaches. The lack of historic cost financial statements would prevent readers of financial statements from following the continuity of amounts of previous years.

But long term retention of historic cost figures is considered undesirable for the following reasons:

- (a) Companies would be involved in additional work to provide the historic cost information;
- (b) the disclosure of two sets of figures may confuse readers; since they will not know the degree of significance to attach to the alternative figures;

- (c) the retention of historic cost figures may reduce the emphasis to be placed on the introduction and understanding of CCA;
- (d) too much information may confuse readers of financial statements and lead to differing calculations of such measures as profit or loss, financial ratios, rates of return etc.

In the second stage, the historic cost information should be given a secondary position mainly in the form of a supplementary statement or a prominent note to the accounts. The supplementary statement or the note to the accounts should disclose:

- (a) the profit as determined under both historic cost and current cost systems;
- (b) stocks and fixed assets valued on the principles of historic cost convention;
- (c) the historic cost of any other item which is stated in the CCA at a different value.

The periods over which fixed assets are being depreciated should be the same in both the historic cost and current cost accounts. No revaluation of fixed assets should be reflected in the historic cost accounts except for those already incorporated at the date of first preparing CCA.



Chapter 15: Recommendation of an inflation accounting approach in the context of developing economies

Basic recommendations:

1. Financial statements should be based on the current cost accounting method.
2. Assets in balance sheet should be shown at their 'value to the business' or at least an approximation thereto, on the basis of 'continuity' and 'termination' of use of an asset in particular circumstances.
3. The calculation of the operating profit of the enterprise should be based on charging the current costs of resources consumed in earning the revenue.
4. The profit attributable for distribution should be that arrived at after including an adjustment in respect of net monetary items.
5. Certain historic cost figures should be published for limited period, but the basic accounts should be those produced using the principles of current cost accounting.
6. The final accounts should comprise of the following:-
  - (a) a profit and loss account;
  - (b) a balance sheet;
  - (c) a 'Statement of the adequacy of liquid resources and financing arrangement';
  - (d) notes to the accounts stating adequacy of current depreciation charges, transfer to and from revaluation reserve, valuation procedures adopted.

Profit and capital maintenance concept:

The profit and capital maintenance concept is that, 'profit' should be determined after charging:

- The value of the business of the assets which have been consumed to the extent to which those assets were financed by equity shareholders' funds; and

- The historical cost of assets which have been consumed and which are financed by non-shareholders' funds (this will aggregate to the amount of finance provided by loans and other creditors).

The resultant profit will, in our view, represent profit for the period, but it will not be equivalent to the distributable profit for the period if:

- (a) fixed assets are not replaced regularly enough to justify the charging of back log depreciation against the revaluation surpluses,
- (b) the company does not propose, or is unable to continue to finance the same proportion of its assets out of non-shareholders' funds;
- (c) the company will be unable to pay any increase in the rate of interest on the borrowings that finance the share of the replacement of assets;
- (d) additional amount would be required to finance the growth of the business.

Any accounting standard should clearly state the procedure to deal with the above situations in determining distributable profit of the enterprise.

The valuation of assets:

The value to the business of an asset should be determined on the basis of continuing use or termination of use. Assets which in a broad sense are essential to the business should be valued at current replacement cost; but this does not assume that the particular asset would be replaced by an identical asset; rather it means that in the use of the asset in the normal course of business its worth to the enterprise is the cost of replacing the operating capacity which it provides. The appropriate valuation base to use in the case of assets which are in this sense essential to the business is the current cost of replacement, taking into account the age of the particular asset.

In some cases, assets are not essential to the business of the entity. In those cases they are worth no more than their net realisable value and should be valued on that basis. In terms of the relevance of financial statements, a current cost accounting method based solely on replacement cost or solely on net realisable value would be too restrictive. In the

great majority of cases, assets would be essential to the business and accordingly would be valued at current replacement cost. In the limited number of situations, where net realisable value is adopted as the valuation basis, and the amount is material, this should be disclosed and the reasons given.

The criteria which we consider should be applied in arriving at a suitable valuation procedure are:

1. the relevance of the valuation obtained;
2. the availability of valuation data;
3. the verifiability of valuation data;
4. the reliability and objectivity of relevant data; and
5. the cost involved to the enterprise

Basically, there are two types of valuation procedures to arrive at current replace cost --- individual valuations and the use of indices. We recommend the development of a series of indices to provide the most acceptable compromise between verifiability, relevance and cost to the enterprise. Because of the uncertainty of availability of appropriate indices in developing nations, efforts should be taken that best estimate can be achieved with reasonable effort and cost. What is reasonable should depend upon individual circumstances and on the resources available. An approximation, reasonably derived, to a current cost than a precise figure of historic cost should be the guiding force on initiation of any current cost accounting standard. We are optimistic that acceptably precise and objective valuation techniques could be developed with experience gained in the valuation process.

The statement of accounting policies should disclose the bases on which the company has valued its fixed assets. In respect of each major category of fixed assets, the notes to the accounts should show separately:

- (a) the balance brought forward from the previous period;
- (b) the cost of any additions during the period;
- (c) the book value of any disposals during the period;
- (d) the depreciation charge for the period;
- (e) the revaluation surpluses and back log depreciation for the period;
- (f) the balances carried forward at the end of the period

Publication of official indices:

The most important and crucial factor in implementing any CCA standard in developing nations would be the availability of official price indices relevant to industrial enterprises. We, therefore, recommend that governments should publish a series of price indices specific to particular industries for raw materials and fixed assets initially and expand gradually to cover individual specific assets and raw materials. Such a series of indices should be designed to provide a 'standard reference' for making reasonable approximations to current replacement cost including adjustment arising for technological changes.

The availability of such a series of specific indices should be a significant objective in the developing countries, where individual valuation may be a difficult proposition for enterprises in general. Indices should be produced by the government and deemed to be an important instrument in the drive for industrial development and better resource allocation through improved financial report. It has to be emphasised that, it is a very important part of our recommendation that a series of official price indices should be published by the government and should progressively be expanded and refined.

Statement of the adequacy of liquid resources and financing arrangement:

We recommend that the directors should be required to include in their annual reports, a 'Statement of the adequacy of liquid resources and financing arrangement. This statement should explain as to whether the directors believe that sufficient liquid resources are likely to be available in order to meet the company's cash needs in the ensuing year. The directors should also give a general indication whether they anticipate any major change in the level of gearing or availability of loan and credit in the following year. In making these indications the directors should have to explain relevant facts and business policies; so that the users of accounts get an adequate picture of the future dimension of the operations of the business along with the current profitability figure.

Historic cost information:

We recommend CCA to be the basic accounts in an enterprise. A two stage

programme for historic cost information dissemination until complete transformation to CCA should be favoured.

The first stage should be that historic cost financial statements are given equal prominence as CCA. When introducing a radical accounting system like CCA, it is necessary to have a period of parallel running during which figures under the old and the new system are both produced. The period of parallel running should be kept to as short a period as possible in order to minimise the work load of companies and the possible confusion as to which are the true figures. During this period, all published references to profits should clearly indicate whether figures have been calculated in accordance with historic cost or current cost principles.

In the second stage, the historic cost information should be given a secondary position mainly in the form of supplementary statement or a prominent note to the accounts. The supplementary statement on the note to the accounts should disclose:

- (a) the profit as determined under both historic cost and current cost systems;
- (b) stock and fixed assets valued on the principles of historic cost conventions;
- (c) the historic cost of any other item which is stated in the current cost accounts at a different value.

The periods over which fixed assets are being depreciated should be the same in both the historic cost and current cost accounts. No revaluation of fixed assets should be reflected in the historic cost accounts except for those already incorporated at the date of first preparing CCA.

#### The profit and loss account

The profit and loss account should show, inter alia:

- (a) the operating profit or loss for the year <sup>1</sup>

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1. The operating profit or loss is arrived at after charging depreciation and the cost of sales on the basis of the current value to the business of the physical assets consumed during the year.

- (b) the net amount of interest payable less receivable;
- (c) the adjustment in respect of net monetary items;
- (d) the current cost profit or loss before taxation;
- (e) taxation on the current cost profit;
- (f) the current cost profit or less before extra-ordinary items;
- (g) extra-ordinary items;
- (h) the amount of transfers to or from the 'revaluation reserve';
- (i) the amount available for distribution;
- (j) the amount of any dividends declared for the period;
- (k) the amount transferred to or from the general reserve.

A format of profit and loss account is given in Appendix - A.

Depreciation of plant and machinery:

The charge to the profit and loss account for depreciation should equal the value to the business of the assets consumed during the period.

Depreciation should be calculated on the basis of year end value to the business of an asset and not on the average value of assets held during the period.

The proportion of the estimated useful life of plant and machinery which has not been exhausted should be reviewed regularly. Periods over which assets are being depreciated should only be changed when they are materially different from those estimated in previous years.

Back log depreciation is the amount required to update the depreciation charge for the period in terms of the gross replacement cost at the end of the period. Back log depreciation should be charged or credited against the related revaluation surplus or deficit, and not to the profit and loss account.

Where depreciable assets are stated at net realisable value at the beginning and end of the period, the depreciation charge for the period in respect of those assets is the difference between the net realisable value at the beginning and end of the period. Where an asset is recorded at net realisable value at the commencement of the period and at current

replacement cost at the end of the period, the depreciation charge for the period should be computed on the end of the period current cost. Where an asset is recorded at current replacement cost at the commencement of the year and at net realisable value at the end of the period, the depreciation charge for the period is the excess of the opening figure over the closing figure.

Fully depreciated assets still in use should be given a value, until the end of their useful lives, and depreciation should be provided accordingly on remaining expected useful life. When the estimate of the life of an asset is revised, the accumulated depreciation at the beginning of the period should be re-calculated on the basis of the revised estimate of the life of the asset. This adjustment should be treated as an exceptional item.

#### Depreciation of land buildings:

Depreciation is not normally required for freehold land, but is required for freehold buildings.

Depreciation should be provided on all freehold buildings based on their future economic useful life. The economic useful life should be the period of time arising from a number of circumstances, after which it is unlikely to be economic to maintain the building.

Depreciation on buildings should be provided on an amount advised by the internal management or by the independent professional valuers as the case may be. The amount on which depreciation on building is to be charged is 'depreciable amount', this will normally be equal to the depreciated replacement cost of the buildings; but where the land and buildings have been valued at their open market value plus costs; the depreciable amount is the lower of the open market value for the land and buildings together and the depreciated replacement cost of the buildings.

In the years between full scale valuation, the directors will need to estimate the depreciable amount for depreciation calculation. This may be estimated by the application of an authorised index of construction costs to the latest figure for the depreciable amount advised by the internal management or professional valuer as the case may be.

The cost of sales adjustment:

The charge in the profit and loss account for 'cost of sales adjustment' should reflect the current cost of stock at the time it is consumed during the year. Where stock records are maintained on a perpetual stock system, stock should be updated to current replacement cost as price changes occur and the value changes treated as revaluation surplus or deficits. In other cases, enterprises should continue to use the conventional historic cost method of calculating the charge for cost of sales in their profit and loss account and in addition should make a cost of sales adjustment through the 'averaging method' which when added or deducted from the conventional figure for cost of sales should give an approximation of the current cost of stock sold during the period.

The objective of the averaging method of calculating the current cost of sales would be to charge stock consumed at the average current cost during the period. For this purpose the value of opening stock should be converted to the average current cost during the period; the total of purchases and other costs incurred during the period left unaltered; the value of closing stock should be converted to the average current cost during the period. By using the converted values to calculate the cost of sales any increase, or decrease in stock volume between the beginning and end of the period should be credited or charged to the cost of sales for the period at the average current cost during the period.

Where stock is bought and sold regularly during the year, the cost of sales adjustment may be determined by subtracting:

- (i) the change during the year in the average value of stock held, determined by adjusting the book values of opening and closing stock by reference to the average price of stock purchased during the year,  

from
- (ii) the unadjusted change during the year in the book value of stocks held.



Where (i) is less than (ii) the cost of sales adjustment will be positive and will lead to a higher charge for stock consumed than would be made in the conventional historic cost profit and loss account.

The average current cost during the period may be estimated as the average of the unit cost at the beginning and end of the period, however, where the change in unit costs has not occurred evenly throughout the period; it would be more appropriate to calculate the average current cost during the period more accurately.

Interest payable and receivable:

The amount of interest payable and receivable should be shown as a deduction from or an addition to the current cost operating profit for the period. If the net amount is shown, a note should disclose the respective amounts of total interest payable and receivable.

Adjustment in respect of net monetary items:

Before calculating the current cost profit of the period an adjustment should be made in respect of net monetary items.

An organisation should identify whether it has held, during the period, net monetary assets or net monetary liabilities.

If an organisation holds net monetary assets during the period, an adjustment in respect of net monetary assets should be calculated. If there is an excess of net monetary assets over liabilities, it reflects that additional amounts are required to maintain the same level of activities in the ensuing year.

The adjustment in respect of net monetary assets should be calculated in the following way. The average net monetary assets during the period should be multiplied by the change in the general retail price index. If an organisation has an excess of cash over liabilities, then no adjustment should be made for that excess. The adjustment in respect of net monetary assets should be charged as a separate item in the profit and loss account and taken to the 'revaluation reserve' in the balance sheet. Two examples are given in Appendix - B.

If there is an excess of liabilities over monetary assets then the adjustment should be the proportion of the cost of sales adjustment and the additional depreciation which can be written back because it relates to assets financed by outside sources of capital. Where the total liabilities exceed its total monetary assets, a calculation should be made of the proportion of:

- (a) the net balance of monetary liabilities, to
- (b) the net balance of monetary liabilities plus the equity share capital and reserves.

In computing the amount of reserves to be used in this calculation, the difference between the current values and historic cost amounts for fixed assets, and if material, for stocks, should be added to the reserves shown by the historic cost accounts. The adjustment will be ---

The cost of sales adjustment			The net balance of monetary liabilities
	+		
the additional depreciation		X	-----
			The net balance of monetary liabilities + the equity share capital and reserve**

\*\* The difference between the current values and historic cost amounts for fixed assets and (if material) for stocks, should be added to the reserves shown by the historic cost accounts.

The amount of the monetary liabilities, the monetary assets, the issued equity share capital and reserves; for simplicity and practicability should be based on the closing balance sheet figures. Brief note to this adjustment should disclose the method used. An example to illustrate this form of calculation of the adjustment is given in Appendix - C.

#### The balance sheet

##### Plant and machinery:

Plant and machinery should be shown in the accounts at value to the business on the balance sheet date.

Where the loss of the plant and machinery would materially impair the operating capability of the business, its value to the business would be net

replacement cost. Where the loss of the asset would not impair the operating capability of the business, but realisable value would be the value base.

Where the gross current replacement cost of plant and machinery is estimated by reference to the cost of a substantially identical asset, that cost should be calculated by reference to one or more of the following sources of data. The choice would depend on particular circumstances.

(a) When substantially identical plant and machinery available:

- (i) suppliers' official price lists, catalogues etc;
- (ii) specific asset price indices, if available in the country from which plant and machinery are normally imported;
- (iii) the company's own replacement cost estimates, based on expert opinion;
- (iv) as a last resort with the aid of wholesale price index.

(b) Where an active second-hand market exists:

Trade papers, price lists of specialist dealers in second-hand goods and enquiries made for insurance purposes may yield re-sale prices or evidence of their approximate amounts. An active second hand market may be relevant for motor vehicles and some other small machinery

(c) When technologically advanced machinery superseded existing ones:

One solution may be to pro-rate the current equivalent ones on the basis of the capacity of the presently held item. For example, where the nearest equivalent machine for which a current cost is obtainable has double the capacity of the present machine; the replacement cost of the machine held would be half the cost of the technically superior one. In other instances, the enterprise may have to look at the overall utility of a particular asset to the entity. For example, even if a motor lorry has technologically been improved, it still represents a unit of transport and no consideration should be given to the technological improvements.

The appropriate source of data in each particular case will depend on the circumstances. The basis on which the company has valued its plant and machinery should be disclosed. There should be separate disclosure of plant and machinery valued at current replacement cost and net realisable value. Separate disclosure of asset values should be made in two categories. The first category should include the total of assets valued on the reasonably objective basis of suppliers' current price lists and indexed costs. The second category should include the total of assets valued in a less objective way, using for example second hand prices or pro rated modern equivalent assets.

Land and buildings:

The value to the business of land and buildings in owner occupation will normally be the open market value for their existing use, plus estimated attributable acquisition costs.

Internal management should be given the task of valuing properties; with due regard to evidence of current open market transactions in similar property and should normally reflect the existing use of the property. But where land and buildings represent a material element of a company's assets, valuation should be carried out by independent valuers at least within a period of five years. In the years between full scale professional valuations; internal management should estimate the value of land and buildings after consultation with their professional valuers, taking into account, inter alia, market variations and changes in construction costs. If full scale professional independent valuation is not feasible, at least the major items of land and buildings should professionally be valued or internal management valuation be substantiated by full scale valuation of samples by independent professional valuers.

In case of properties, whose special nature or location is such that no open market, or only a severely restricted market exists for them, should be valued as the sum of (a) the open market value plus costs of the bare land for its existing use and (b) the depreciated replacement cost of the buildings.

The depreciated replacement cost of the buildings should be based on the valuers estimate of the current replacement cost of the buildings and the extent to which this should be reduced to take into account the age, physical wear and tear of the existing buildings and their obsolescence. An estimate will need to be made of the remaining economic useful life of the buildings.

Any land and/or building which has become surplus to the company's requirements and for which there is an intention to sell should be valued at their net realisable value i. e. , their open market value less disposal expenses. Any land and buildings owned by companies but not for their own occupation should be valued at their open market value, which will include their value for any potential use plus acquisition costs.

Stock and work in progress:

Where stock and work in progress represents continuing line or item of stock, we would recommend that conventional FIFO figure of stock and work in progress should be shown in the balance sheet without further adjustment at the end of the period. If individual companies would have sophisticated stock recording and accounting practice, use standard costing, or ready to show the replacement cost figure in the balance sheet, they should be encouraged to do so.

Where items or line of stock and work in progress would be discontinued for production, on sale, should be be valued at net surplus to the enterprise realisable value. Example of such items may be:

- (a) goods which are defective, damaged or which have deteriorated;
- (b) materials and parts for use in the manufacture of goods, the production of which has ceased;
- (c) materials and parts for use in manufacture but considered to be in excess of foreseeable future production requirements;
- (d) materials and parts for use in manufacture affected by substitution of some other materials and parts.

Transfers to and from the revaluation reserve:

Revaluation surpluses/deficits arising from the adjustment of asset balances to their value to the business should be credited to a 'revaluation reserve' account. The 'revaluation reserve' account would represent the final balances arising from:

- revaluation of fixed assets;
- revaluation of stock and work in progress;
- adjustment in respect of net monetary items.

The directors should consider whether a transfer should be made from the profit and loss account to the revaluation reserve account or a greater amount needed than calculated, for:

- (a) fixed assets are not being replaced sufficiently regularly to justify charging backlog depreciation against revaluation surpluses;
- (b) a lower level of credit or gearing will apply in future;
- (c) additional provision for the replacement of seasonal agricultural produce;
- (d) maintenance of shareholders' equity;
- (e) decision to make further retentions to finance the growth of the business.

Amounts less than net revaluation surpluses or transfer from revaluation reserve account to current cost profit may be considered by the directors, if:

- (a) an overall contraction of the business is planned;
- (b) the business operate in order to make revaluation surpluses as well as operating profit, like property and commodity dealers.

The directors should consider whether a transfer to or from the revaluation reserve should be made to the profit and loss account; if they are satisfied that funds retained or needed are greater or smaller than required for the future operations of the business.

Any transfers between the profit and loss account and the revaluation reserve should be clearly explained by the directors in the accounts.

APPENDIX - A

A LTD. (A COMPANY WITH NET MONETARY LIABILITIES)

CURRENT COST PROFIT AND LOSS ACCOUNT FOR THE YEAR ENDED

31ST DECEMBER 1978

	<u>£'000</u>	<u>£'000</u>
Turnover		<u>128,000</u>
Profit before taxation and interest as in historic cost accounts		6,000
Less: Adjustments		
--- Depreciation	600	
--- Cost of sales	<u>1,000</u>	<u>1,600</u>
Current cost operating profit		4,400
Interest payable less receivable		<u>400</u>
		4,000
Net monetary adjustment		<u>870</u>
Current cost profit before taxation		4,870
Taxation		<u>2,470</u>
Current cost profit after taxation		2,400
Minority interests		<u>150</u>
Adjusted profit before extra-ordinary items		2,250
Extra-ordinary items		<u>600</u>
Current cost profit after extra-ordinary items		1,650
Transfer from revaluation reserve		<u>250</u>
Adjusted profit attributable to the shareholders		1,900
Dividends declared		<u>1,300</u>
Adjusted retained profit		<u>600</u>

APPENDIX - B

ADJUSTMENT IN RESPECT OF NET MONETARY ASSETS

	<u>Example - 1</u>	<u>Example - 2</u>
	(End of 1978)	(End of 1978)
	£	£
Current liabilities	2,200	2,200
Long term loans	<u>1,600</u>	<u>1,600</u>
Total liabilities	3,800	3,800
Deduct cash	<u>1,000</u>	<u>5,000</u>
Excess (shortfall) of cash over liabilities	(2,800)	<u><u>1,200</u></u>
Monetary assets other than cash		
--- Debtors	<u>4,000</u>	<u>4,000</u>
Net monetary assets for purposes of calculating the gearing adjustment	<u><u>1,200</u></u>	<u><u>4,000</u></u>
Increase in RPI during the year	10%	10%
Net monetary assets adjustment	<u><u>£120</u></u>	<u><u>£400</u></u>



APPENDIX - C

ADJUSTMENT IN RESPECT OF NET MONETARY LIABILITIES

	<u>End of 1978</u>
	£
<u>Liabilities</u>	
Current liabilities	12,700
Long-term liabilities	<u>8,300</u>
Total liabilities	21,000
<u>Monetary Assets</u>	
Debtors	8,700
Cash	<u>3,100</u>
Total monetary assets	<u>11,800</u>
Net monetary liabilities	<u>£9,200</u>
Ordinary shareholders' funds	16,000
Preference share capital	1,000
General Reserve	<u>400</u>
Total equity capital and reserves	<u>£17,400</u>

Adjustment in respect of net monetary liabilities =

The cost of sales adjustment	The net balance of monetary liabilities
+	X
the additional depreciation	_____
9,200	The net balance of monetary liabilities +
= £2,500 X _____	equity share capital and reserves
9,200 + 17,400	
Gearing adjustment = <u>£865</u>	

## Chapter 16: CONCLUSION

In developing countries, inflation is highly unlikely to disappear. It is not the job of the accounting profession to cure inflation; but accountants do have a contribution to make: they have a duty to measure, and to interpret the effects of inflation. The stage of argument for inflation accounting has come to an end, now the accounting profession all over the world is coming up with professional standards to recommend a standardised and coherent way of accounting for inflation. Now is the most opportune time for developing countries to recognise that, accounting has to be a more effective force in the economic development process and greater efforts taken to improve the accounting link internationally.

The utility which would be provided to all users of financial information by some form of CCA as the basis for information dissemination in the context of developing economies has been evaluated in the preceding discussions. We are convinced that an inflation accounting method based on CCA principles would be the right choice for developing countries to live with inflation. We have suggested the approach on the basis of CCA principles, which we feel developing countries should follow to live with inflation and be abreast with international development in inflation accounting. The very high rate of inflation in recent years in most of the developing countries has produced a situation where the conventional historic cost accounting method would produce a distorted picture and misled in vital issues of industrial development and resource allocation, and constitute a situation of consumption of scarce capital. CCA, we envisage, would be a dynamic information measurement and reporting system, and would be of most use both for micro and macro economic decision making.

The approach we have suggested points the way, what we believe, should be the basis of an accounting standard in the context of developing economies. We have discussed the major conceptual and basic issues on a CCA basis and touched upon various issues emanating from adoption of CCA principle as the inflation accounting method. We have analysed the basic principles and has given broad guidelines on the major concepts and issues of implementing such a method without giving a full working drawings required for practical application of the recommended approach.

Our endeavour does not resolve all the theoretical and practical problems which will arise from the recommendation of an approach based on CCA principles. We have tried to represent a workable system dealing with basic issues of theory and practice keeping close to CCA principles and tried to bear in mind the basic objective of achieving acceptance in the context of developing countries by balancing the theoretical exactitude, practicability and keeping down the cost of account keeping.

We do not under-estimate the magnitude of the practical problems of implementing the fundamental accounting changes brought up by CCA, which we are recommending. Because our recommendations involve the extraction and use of information not formerly required; it is certain that much long debates, persuasion and familiarity is needed to make any CCA standard implementable. Factors such as inertia, tradition, vested interests in the traditional ways, fear of unknown, as well as the cost; effort and confusion of making changes will constitute formidable obstacles to substantive changes to CCA.

CCA would not be immediately or easily be established in developing nations. To a large extent, CCA, represents a way of considering the multitude of problems of conventional accounting practices mingled with price level changes. We fully recognise that, even with the most careful planning, the period of changeover would involve the expenditure of much time and effort and will be accompanied by a period of major re-adjustment. The technicalities of CCA practice would need a long time to be familiarised and need to go a long way to be implemented as standards. The quest for improvement will not be plain sailing, and it must be accepted that success may at the beginning be very slow and partial.

Despite the obvious difficulties, CCA should be the goal in inflation accounting in developing countries. Once set about reforming accounting in earnest, we are optimistic that, practical aspects of implementation would be possible with discussion, familiarity and experience. The technicalities at the start may be hard to resolve but with discussion and development of approximation -- they could be overcome. The developing countries would be fortunate in one

way that with initiation of CCA in advanced economies; the standards, the guidance manual, study guides, enormous literature, company accounts and expertise through the international auditing firms would ease much of their difficulties in implementing CCA standards there.

CCA should be seen as a long term goal for developing economies. There are many obstacles to the introduction of a radical accounting system like CCA. Any deviation from the familiar conventional accounting method would entail complexity and newer problems to tackle in the process of its implementation. It has to be admitted that in some cases no easy solution to a complex problem may readily be found and as such it should follow a path of gradual development and standardization. The implementation programme should follow an evolutionary process ---- consolidating implementation through understanding and move step by step. It has taken many years for the accounting profession to develop acceptable compromise solutions to the more complex problem of conventional historic cost accounting. In meeting the new problems raised by a system of CCA it is necessary to accept that compromise solutions are typical of accounting practice.

Further investigation is required to develop detailed guidelines on accounting standards which will be required for application of CCA in the circumstances of business enterprises in developing countries. Attempts should be made to foster current cost accounting development by starting with fairly simple standards and then gradually improve these standards. It seems probable that only particular aspects of the advocated approach may become established as standard. As a start we would suggest that companies may be asked to show adjustment only in the profit and loss account in respect of cost of sales and depreciation, leaving balance sheet valuation to be dealt with later standards. It is not possible, we envisage, to implement CCA by companies of all sizes, in developing countries in the near future. The medium and small companies normally would have lower expertise and should need longer orientation towards CCA. Any CCA standard should follow a period of phased introduction, that is to say, the implementation requirement may be based on the criteria of the size of the firm or volume of turnover.

There is the vital need for a comprehensive programme designed to ensure

that the requirements of all those affected by the changes have been attended to and that the change over takes place in an orderly manner. Such a programme would require careful planning and the co-operation of government, professional bodies, business groups and educational establishments.

Educational aspects constitute a vital element in implementing any CCA standards in the context of developing countries. Academics and professionals should come forward to assess the detailed impact and function of CCA and to delineate specifically the implementation needs, procedures and means of assistance to materialise a CCA standard. The accounting profession should come forward to take a great drive to educate accountants and users of accounts in that direction. As in many countries the introduction of Metric system has been preceded by a long planned process of education and public understanding; so the accounting curriculum of prospective accountants can be oriented towards CCA and the post qualification education of accountants can also be moulded in that direction.

There is the task of educating those who prepare financial statements - the accountants, so that they understand the objective and implications of the new basis of accounting and recognise their value for various aspects of information needs of the business. Other users like management, shareholders, investors should also be enlightend on the basic CCA principles and accounts preparation which would be different from the familiar conventional historic cost accounts.

The most important and crucial factor in implementing any CCA standard in developing countries would be the availability of official price indices relevant to business enterprises. The availability of such a series of specific price indices should be a significant objective in the developing countries, where individual valuation may be a difficult proposition for business enterprises in general. It must be emphasised that such indices should be produced by the government statistical departments and deemed to be an important instrument in the drive for industrial development and better resource allocation through improved financial reporting.

We recognise the obvious difficulties of developing the desired range of indices appropriate to every industry within a very short period of time. The development of a sufficient range of suitable indices will take considerable time having

regard to all the preparatory work involved. We hope that users of accounts will be prepared to accept what may be regarded as an imperfect index provided it is a start towards refinement and standardisation within a reasonable time period. Nevertheless, indices should be made available if only for major group of industries for a short period to be expanded with experience gained to other industries.

It must be emphasised that it is a very important part of our recommendation that a series of official price indices should be available to the business enterprises, if at all any CCA standard is going to materialise in the developing countries. In the context of developing countries, the very practical issues of asset valuation, cost of sales adjustment, adjustment for technological development, long asset use etc., presents insurmountable problems which can be effectively dealt with specific indices. Without any indices available, we are apprehensive; CCA may become a very difficult and costly accounting method, if not totally impracticable.

Accounting is a means towards an end and not an end in itself. Any method of accounting is essentially an information system designed to produce relevant and useful information about the enterprise and the economic reality. The truth being that, it is not how we account that really alters the course of the economy; but the underlying economic realities which we are attempting to report upon. As in an inflationary period, the underlying realities are unfairly reported in financial statements, following conventional historic cost accounting, the enterprise and the economy suffer and fails to accord with realities. As economic relevance is of prime importance, as the economic environment of an enterprise has changed with inflation; it means that existing structures to provide relevant information is inadequate and must be changed.

In conclusion, we are firmly of the view that, the introduction of a CCA standard would be of substantial long-term benefit to the developing economies. If users needs and economic relevance are of primary concern in any accounting system, the accounting profession in developing countries without further delay should endeavour to implement a CCA standard.

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